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**The Role of Interpersonal Intelligence in  
Vocabulary Retention Via Peer Tutoring: A  
Quasi-Experimental Study with Haider Belkacem  
Middle School Learners, Sidi Aissa, M'sila.**

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## **Dedication**

We wholeheartedly dedicate this achievement to our beloved families, whose unwavering support, patience, and encouragement have been the foundation, after Allah, of our strength throughout this academic journey. Their constant belief in our abilities, their sacrifices, and their emotional and moral guidance has carried us through every challenge and moment of doubt. Without their presence, love, and prayers, this accomplishment would not have been possible. This work is a reflection of their faith in us, and we are forever grateful for their inspiration and unconditional support.

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*In the name of ALLAH, the most Gracious, the most Merciful*

*All praise to ALLAH, the source of every blessings*

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## **Abstract**

It is of paramount importance for middle school EFL learners to retain vocabulary. This research examines the influence of interpersonal intelligence on the retention of language during peer tutoring sessions. Skills associated with interpersonal intelligence, such as collaboration, communication, and support, are crucial for the success of socially-driven peer tutoring. A quasi-experimental study conducted at Haider Belkacem Middle School in Sidi Aissa, M'sila, involved one group receiving peer tutoring while another group was subjected to teacher-led sessions. The structured peer tutoring sessions comprised interactive assignments, collaborative learning, and reciprocal feedback over a span of six weeks, aimed at enhancing vocabulary acquisition in the experimental group. The assessment of short-term improvement and long-term retention was conducted through vocabulary pre-tests and delayed post-tests. The findings indicated that peer tutoring significantly boosted language memory within the experimental group, which attained an average score of 11.88 in contrast to 9.59. Qualitative research suggests that interpersonal intelligence serves to raise learner motivation, engagement, as well as social and communicative competencies. This study substantiates the notion that peer tutoring not only enhances vocabulary retention but also fosters interpersonal skills in English as a Foreign Language (EFL) environments, thereby advocating for its incorporation into middle school language curricula.

**Keywords: interpersonal intelligence, vocabulary retention, peer tutoring, EFL, middle school learners, quasi-experimental study.**

## List of Abbreviations

<b>CWPT</b>	Class Wide Peer Tutoring.
<b>CG</b>	Control Group
<b>EFL</b>	English as a Foreign Language.
<b>EG</b>	Experimental Group
<b>MI</b>	Multiple Intelligence.
<b>MKO</b>	More Knowledgeable Other.
<b>PALS</b>	Peer-Assisted Learning Strategies.
<b>PWIM</b>	Picture Word Inductive Model.
<b>QEDs</b>	Quasi-Experimental Designs.
<b>QEM</b>	Quasi-Experimental Method.
<b>RPT</b>	Reciprocal Peer Tutoring.
<b>SLD</b>	Second Language Acquisition.
<b>STD</b>	Self-Determination Theory.
<b>ZPD</b>	Zone of Proximal Development.

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# **General Introduction**

## **1. Background of the Study**

The process of language acquisition, namely English as a Foreign Language, includes the learning and retention of vocabulary, which are essential components. Vocabulary acquisition is vital for middle school students' language proficiency and greatly aids in the development of critical abilities such as reading comprehension, writing, and oral communication. Mastery of vocabulary is a crucial component of language, allowing pupils to express themselves accurately, comprehend written information, and form meaningful connections with others. Nation (2001), Stahl and Nagy (2006), and others have found that vocabulary knowledge is a reliable predictor of reading comprehension and academic progress. Many students struggle to retain vocabulary, especially in circumstances where English is not the primary language of conversation.

Conventional teaching approaches, which emphasise rote memorisation and teacher-centered education, have proven inadequate in accommodating students' different learning demands. These approaches usually fail to generate appropriate contexts for vocabulary application, resulting in poor memory and restricted use of new terms in everyday circumstances. According to research, language provided without context has a lower chance of being recalled over time. Students may memorize word lists for exams but struggle to recall and use these terms in discussions or writing assignments. The discrepancy between learning and application emphasizes the need for more effective teaching methods that encourage active involvement and substantive practice.

To address these issues, educators and academics have looked at alternative approaches, such as peer tutoring, which enhances vocabulary retention through collaborative learning. Peer tutoring allows students to learn together in an organized setting. This encourages active participation, reciprocal support, and a shared feeling of accountability among students. A considerable amount of research shows that peer tutoring enhances academic attainment and

linguistic skills (Topping, 2005; Ghaith, 2002). This strategy is consistent with sociocultural learning theories, particularly Vygotsky's (1978) idea of the Zone of Proximal growth (ZPD), which emphasizes the role of social interaction in cognitive growth. Students can improve their understanding by practice and repetition, address any questions or concerns, and help each other comprehend through peer tutoring. According to King, Staffieri, and Adelgais (1998), this collaborative strategy improves students' language memory, self-confidence, and communication skills.

Interpersonal intelligence, as defined by Howard Gardner's Theory of Multiple Intelligences in 1983, is one of the most important factors influencing the effectiveness of peer tutoring. This intelligence includes understanding other people and managing relationships effectively. Empathy, communication, intra- and inter-team interactions, negotiation, and conflict resolution are all addressed. In peer tutoring, students with strong interpersonal skills tend to provide better explanations, commendable critiques, and create motivating instructional environments. Such language skills are necessary in teaching any foreign language in which contact and communication play an important part in vocabulary acquisition (Armstrong, 2009). Learners with social intelligence, for example, can guide conversations, get participants involved, and re-teach in a group-appropriate format.

Whether in the setting of English as a Foreign Language (EFL), there is still a lack of study into the combined effects of peer tutoring built on interpersonal intelligence on vocabulary retention. Most research have focused solely on vocabulary learning or peer tutoring, failing to account for tutoring efficacy within the context of the interpersonal intelligence paradigm. This study aims to fill a gap by investigating the extent of impact of interpersonal intelligence on peer tutoring and vocabulary retention among middle school students at Haider Belkacem Middle School Sidi Aissa M'sila. Through these characteristics, the study seeks to make a

good contribution to collaborative learning methods and the application of interpersonal skills in advanced vocabulary retention and language proficiency.

## **2. Statement of the Problem**

Language learning is not limited to mastering grammar rules or spelling conventions; it also involves acquiring a substantial amount of vocabulary that allows learners to express themselves clearly and understand others. Vocabulary retention is critical because without a strong and active vocabulary, learners are unable to communicate effectively, comprehend reading materials, or succeed academically. Consequently, academics and educators have exhibited increased interest in identifying the elements that enhance vocabulary learning, namely the impact of social interaction and interpersonal skills on promoting profound, long-term retention. Theories of multiple intelligences, particularly Gardner's (1983) concept of interpersonal intelligence, highlight the importance of social collaboration in education; nonetheless, its application in vocabulary acquisition remains inadequately explored.

Despite the acknowledged significance of vocabulary in second language acquisition, conventional educational practices in Algerian middle schools, exemplified by Haider Belkacem Middle School in Sidi Aissa, predominantly emphasize teacher-centered instruction and rote memorization, frequently overlooking the interpersonal aspects of learning. Vocabulary training often takes the form of disjointed lists and rote memorization, rather than engaging in meaningful interactions with peers (Benzerroug, 2022). Additionally, many learners seldom receive formal opportunities to participate in peer tutoring activities, which could improve interpersonal intelligence and increase vocabulary retention. Consequently, vocabulary retention poses a significant challenge, as numerous students find it difficult to remember and apply newly acquired terms in real-world situations.

Although there is a growing body of research supporting the positive effects of peer tutoring in language learning, there is still a lack of focused studies investigating the specific role that interpersonal intelligence plays in vocabulary retention among middle school learners, particularly in Algerian settings. The lack of research in this area results in a deficiency of clear strategies for educators to leverage interpersonal strengths to enhance vocabulary outcomes. Failure to address this gap may result in students experiencing low vocabulary retention rates, restricted communicative competence, and diminished motivation in learning English.

Many educational theorists assert that language learning is a social process (Vygotsky, 1978), and while it is accepted that interaction plays a role in language acquisition, assuming that all learners will automatically benefit from interaction without structured support is misleading. A significant number of pupils are unable to realize their full potential in terms of vocabulary acquisition because they do not have access to deliberate peer tutoring tactics that actively develop and exploit interpersonal intelligence. Therefore, the purpose of this study is to investigate the impact that interpersonal intelligence plays in increasing vocabulary retention through peer tutoring among students at Haider Belkacem Middle School. The ultimate goal of this research is to bridge this gap and provide more effective, interaction-based ways to the training of vocabulary.

### **3. Research Questions and Hypotheses**

#### **3.1. Research Questions**

1. Is there a statistically significant difference in middle school EFL learners' vocabulary retention before and after implementing peer tutoring compared to teacher-led instruction?

2. Does a peer tutor's interpersonal intelligence affect how well tutees retain vocabulary?
3. How satisfied are learners with peer tutoring for vocabulary learning, and do they find it effective?
4. Does a peer tutor's interpersonal intelligence influence tutees' satisfaction with the tutoring sessions?
5. How do tutees perceive the connection between their tutor's interpersonal skills and their own learning experience?

### **3.2. Research Hypotheses**

**1.H1:** Peer tutoring significantly may improve vocabulary retention among middle school learners.

**2.H2:** Learners with higher interpersonal intelligence may help the other learners to perform better in peer tutoring contexts.

#### **3.2.1. Null Hypothesis**

**1. H0<sub>1</sub>:** Peer tutoring does not significantly improve vocabulary retention among middle school learners compared to traditional instruction.

**2. H0<sub>2</sub>:** Learners with higher interpersonal intelligence do not significantly help other learners to perform better in peer tutoring contexts.

### **4. Aim of the Study**

The primary objectives of this study are:

- To evaluate how effective it is to use peer tutoring, grounded on interpersonal intelligence, as a teaching strategy for enhancing vocabulary retention compared to teacher-led traditional teaching methods.
- To investigate the impact of interpersonal intelligence on vocabulary retention among middle school learners. This aim focuses on how the tutors' interpersonal intelligence effects the vocabulary retention of the tutees.
- To understand learners' perceptions of peer tutoring, including its benefits, challenges, and impact on motivation.

## **5. Significance of the Study**

### **5.1. Academic Significance**

- This study can contribute to the growing body of research on vocabulary acquisition and retention by investigating the role that interpersonal intelligence and peer tutoring play in the process of vocabulary learning.
- The goal of this study is to provide empirical evidence for the efficacy of peer tutoring approaches based on interpersonal intelligence in English as a Foreign Language (EFL) environments, particularly middle school setting.
- Previous research has not clearly examined the association between interpersonal intelligence, peer tutoring, and vocabulary retention has not been clearly examined, and this study seeks to fill a gap in the existing literature on this topic.

### **5.2. Practical Significance**

- The potential benefits that are gained from the study of incorporating peer tutoring and interpersonal intelligence into language teaching strategies, especially vocabulary acquisition, in EFL classrooms can inform educators and policymakers about effective

ways to enhance student engagement, improve language skills, and foster collaborative learning environments.

- This study offers some practical recommendations for teachers and curriculum designers to implement peer tutoring programs. This strategy that is based on peer tutoring led by learners with high interpersonal intelligence can enhance learners' vocabulary retention and acquisition.
- Through enhancing vocabulary retention, student engagement and collaborative learning environments, this study can help learners achieve greater language proficiency and academic success.

## **6.Overview of the Methodology**

This study employs a quasi-experimental design with two intact groups. The first group, known as the experimental group, receives vocabulary lessons through structured peer tutoring sessions. The second group receives the same vocabulary lessons through traditional teacher-led instruction. In addition, an interpersonal intelligence questionnaire and a teacher observation checklist are both used to assess learners' interpersonal intelligence, upon which the peer tutoring subgroups are formed during the intervention phase. Besides, a post-intervention satisfaction scale is employed to evaluate participants' engagement and perceptions of the peer tutoring experience.

An assessment through pre- and post-tests is employed to measure the intervention's impact, with vocabulary retention as the primary outcome and the dependent variable that evaluates learners' ability to recall and use the input vocabulary over time. A quantitative approach will be employed through utilizing the quasi-experimental design. As this design facilitates group comparisons while also addressing real-world constraints, such as pre-existing groups, it is well-suited to this educational context. On the other hand, the

employment qualitative questionnaires, such as the satisfaction scale, provide comprehensive insights into the role of peer tutors' interpersonal intelligence in enhancing tutees' vocabulary retention.

## **7. Organization of the Dissertation**

This dissertation consists of two main chapters, a general introduction and a general conclusion. Firstly, the general introduction including: the background of the study, research questions, objectives, significance of the study, methodology, and the structure of the dissertation. Secondly, Chapter One is the Literature Review dealing with: Interpersonal intelligence, peer tutoring, and vocabulary retention are thoroughly examined in what concerns the existing research related to the establishment of the theoretical and conceptual frameworks for the study. Thirdly, Chapter Two, Research Methodology and Data Analysis, that details the research design, population and sampling, data collection instruments, and procedures followed throughout the study. In addition, it presents the data analysis and interpretation by using appropriate statistical methods that best address the research questions and hypotheses. Finally, the dissertation is concluded with a general summary of findings, implications, and recommendations, along with suggestions for future research. The dissertation also includes references and appendices.

## **Chapter One: Literature Review**

## **Introduction**

A literature study is essential for developing the theoretical framework and providing a robust foundation for the ongoing investigation. This chapter aims to deliver a comprehensive examination of the concepts surrounding interpersonal intelligence, peer tutoring, and vocabulary retention within the framework of English as a Foreign Language (EFL). This approach aims to establish a comprehensive framework for the upcoming fieldwork and analysis by integrating existing research and relevant theoretical perspectives related to the topic of the study.

### **1.1. Vocabulary Acquisition and Retention**

When it comes to the study of second language acquisition (SLA), the acquisition of vocabulary and the ability to remember that vocabulary are two of the most important aspects of language learning (Vygotsky, 1978). Because they make a direct contribution to the ability of learners to successfully communicate in the language that they are learning, this is the reason why they are so important (Vygotsky, 1978). Both gaining an understanding of the meanings of words and incorporating them into one's verbal repertoire are essential steps in the process of extending one's vocabulary (Vygotsky, 1978). Retention is the capability to remember and retain information that has been taught over a period of time (Vygotsky, 1978). Retention means the ability to remember and remember information (Vygotsky, 1978). For the purpose of enhancing fluency and competency through the process of study, the development of this capacity is absolutely necessary (Vygotsky, 1978). To improve

vocabulary acquisition and retention, this section lays an emphasis on the significance of instructional strategies, such as peer tutoring, in the process of enhancing vocabulary acquisition and retention (Vygotsky, 1978). The methods and components that are associated with the learning and retention of language shall be the subject of our investigation in the next section (Vygotsky, 1978).

### **1.1.1. Processes Involved in Vocabulary Acquisition**

#### **1.1.1.1. Vocabulary acquisition**

is a complex process including several stages, from first exposure to words to their eventual integration into a student's vocabulary system. Numerous models have delineated this technique; one such model is Nation's (2001) framework, which emphasizes three key phases: word encounter, word processing, and word integration into long-term memory.

#### **1.1.1.2. Encountering the Word**

The first phase in vocabulary enhancement is the introduction of pupils to novel lexicon. Reading, listening, speaking, and direct instruction are but a few of the many contexts in which one may encounter words. The efficacy of pupils' retention of a new language is significantly influenced by the frequency and context of exposure. Studies indicate that students must encounter a phrase repeatedly in many contexts to fully comprehend its meaning and use it accurately (Hirsh & Nation, 1992).

#### **1.1.1.3. Processing the Word**

To grasp their meaning, pronunciation, and use, students have to analyze words. The depth of processing determines much of vocabulary learning. Craik and Lockhart's (1972) Levels of Processing Theory holds that the more in-depth cognitive processing needed in learning a word, the more probable it is to be recalled. Deeper processing—e.g., creating

links between the word and other known words or employing the word in a phrase—has a higher recall rate than shallow processing.

#### **1.1.1.4. Incorporating the Word**

Incorporating the word into the learner's long-term memory and incorporating it into their active vocabulary in a way that allows it to function, this is the final phase of the process. According to the findings of study that was carried out by Schmitt (2000), pupils are more likely to remember the word if they use it more frequently in situations that are relevant to their life.

#### **1.1.2. The Role of Peer Tutoring in Vocabulary Retention**

Peer tutoring has an important role in the retention of vocabulary. The process of acquiring and remembering language through the use of peer tutoring is a dynamic and participatory method. In a manner that is both individualized and encouraging, peer tutors are able to help their students through the process of vocabulary acquisition. This is especially true for people who possess high levels of interpersonal intelligence. Through the use of peer tutoring, both the tutor and the tutee are able to engage in genuine discussion, which increases the possibility that language will be utilized in a meaningful manner and kept over time. Peer tutoring, which is characterized by its collaborative nature, creates an atmosphere that is conducive to active learning and reciprocal teaching, both of which have been demonstrated to improve vocabulary retention (Duran, 2007).

A further benefit of peer tutoring is that it fosters social contact, which is essential for the successful application of newly acquired terminology. Language learning is inherently a social activity, as Vygotsky (1978) noted, and the most efficient way for learners to acquire vocabulary is when they engage in social interaction with other people. Learners are provided

with numerous opportunities to utilize new vocabulary in conversation through the process of peer tutoring, which helps to reinforce both the form and meaning of the respective terms.

### **1.1.3. Factors Influencing Vocabulary Retention**

Several factors contribute to the retention of vocabulary, each of which can either enhance or hinder the process. These include the **depth of processing, repetition and review, contextual usage, and personal relevance** of the words.

#### **1.1.3.1. Depth of Processing**

The amount of cognitive processing a learner engages in regarding new terminology significantly affects retention. Superficial processing, exemplified by the mere repetition of a phrase without comprehending its context, is less efficacious than more profound and meaningful processing ( Craik & Lockhart, 1972). Significant processing include tasks such as forming connections, constructing mental imagery, or using words in genuine situations. This corresponds with semantic elaboration, indicating that vocabulary retention improves when linked to existing knowledge or experiences (Snow, 2010).

#### **1.1.3.2. Repetition and Review**

Repetition enables the learner to remember the word. The spaced repetition studies showed that revisiting words at increasing intervals over time significantly improves retention (Nation, 2001). This gives an opportunity for the learner to consolidate knowledge about the word and move it from short-term memory into long-term storage.

#### **1.1.3.3. Contextual Usage**

The use of vocabulary in meaningful, real-life situations is the best predictor of retention. Words learned in isolation or to some degree outside of context are far less likely to be remembered. As Laufer (2005) observes, reading a story or having a dialogue gives the learner the ability to understand the nuance and how to appropriately use a word.

#### **1.1.3.4. Personal Relevance**

As per the self-reference effect, learners tend to remember words better if they are personally relevant or have some emotional connection (Rogers, Kuiper, & Kirker, 1977). The new word becomes easy to remember when a learner associates it with his own experience.

#### **1.1.4. Key Theories and Perspectives on Vocabulary Learning**

Language acquisition depends on the development of one's vocabulary, which is a fundamental building component (Nation, 2001). It is not only necessary for academic performance; it is also necessary for the growth of cognitive and communicative abilities (Vygotsky, 1978; Snow, 1999). Over the years, many theories and perspectives have been put up in an attempt to illuminate the mechanisms behind the processes of language acquisition, processing, and retention (Chomsky, 1965; Piaget, 1972; Vygotsky, 1978). These ideas, which collectively provide significant insights into the mechanisms behind language development, assign varying degrees of importance to the cognitive, social, and emotional components of language acquisition (Bruner, 1983; Vygotsky, 1978). This book offers a thorough examination of the most significant theories and viewpoints on language development (Lightbown & Spada, 2013). Peer tutoring helps one to understand language retention, so this study is pertinent (Topping, 2005; Vygotsky, 1978).

#### **1.1.4.1. The Social Interactionist Perspective**

The social interactionist perspective, which emphasizes the significance of social interaction in language creation, was primarily inspired by Lev Vygotsky's work from 1978 (Vygotsky, 1978). According to Vygotsky, language is acquired through social mediation and is deeply embedded in communicative exchange situations. As a result, the process of learning vocabulary is not a solo cognitive activity, but rather one that benefits from interaction with others.

Vygotsky's Zone of Proximal Development (ZPD) allows children to complete activities with the help of a more competent person, such as a teacher, a peer, or a consultant. Peer tutoring is one environment where this ZPD is very visible (Vygotsky, 1978). The social interactionist theory lays a strong emphasis on scaffolding, which was first proposed by Wood, Bruner, and Ross (1976). Learning scaffolding is the technique of providing learners with temporary assistance so that they can complete tasks that they are unable to do on their own. As learners continue through the learning process, the scaffolding is gradually removed, allowing them to become more independent (Wood, Bruner, & Ross, 1976).

The participative character of peer tutoring creates a rich social setting for vocabulary development, promoting the process. Learners develop their understanding of a new language through a collaborative process that includes explanation, meaning negotiation, and feedback throughout. This process supports Vygotsky's hypothesis that language acquisition is essentially social and occurs through dynamic exchanges (Vygotsky, 1978). When learners employ vocabulary in relevant and communicative contexts, it is more probable that they will remember and internalize it. Social connection plays a very significant role in vocabulary retention.

#### **1.1.4.2. The Sociocultural Theory**

Vygotsky (1978) is the one who founded the sociocultural theory, which places an emphasis on the significance of social interaction and cultural background in the process of language acquisition. Within the sociocultural paradigm, the learning of language is regarded as a tool for the development of cognitive abilities, and vocabulary is acquired through interaction with other people. The sociocultural paradigm emphasizes the idea that learning takes place within a social and cultural environment, and that learning vocabulary is not merely an individual

cognitive activity but rather a social one.

Peer tutoring is a perfect example of the sociocultural method since it gives students the opportunity to engage in social contact, collaborate with one another, and co-create their own learning experiences simultaneously. Learners have the opportunity to gain vocabulary not just through direct instruction but also through social activities, discussions, and the sharing of knowledge when they participate in peer tutoring. According to Vygotsky's theory, mediated learning takes place when students collaborate during the learning process, with one student serving as a more knowledgeable individual (the tutor) and leading the other student through the process of learning.

#### **1.1.5. Importance of Retention for Language Proficiency**

When we talk about language competence, we are referring to the capacity to communicate in a language in a manner that is not just efficient but also correct (Canale & Swain, 1980). Retention is one of the fundamental aspects of language proficiency, and it refers to the ability to remember and recall information about a language over a period of time (Nation, 2001). Retention refers to the capacity to retain and retrieve information. It is not just memory that determines retention; memory is also an indicator of how thoroughly and successfully learners

have assimilated linguistic features (Schmitt, 2000). Memory is not the only factor that determines retention. Memorizing words or rules is not the only thing that contributes to retention. However, if they are unable to remember the material that they have learned, language learners will have a difficult time correctly using the vocabulary and grammatical structures that they have acquired in their everyday conversation (Baddeley, 1990). There is a complex and significant relationship between retention and language competency, which is important for the development of both receptive and productive language skills (Richards, 2006). It plays a crucial role in the linguistic abilities that are being developed.

#### **1.1.5.1. Vocabulary Retention as a Cornerstone of Proficiency**

- When it comes to linguistic proficiency, vocabulary serves as the foundation upon which it is formed. It is crucial for efficient communication that a learner be able to utilize a wide range of vocabulary in a way that is both accurate and fluent (Nation, 2001; Schmitt, 2000). The ability to recall and recover words over a period of time is that which is referred to as vocabulary retention. When it comes to learning a language, retention is extremely important for the following reasons (Nation, 2013).
- **Fluency:** When learners are able to retain information, they are able to employ words and expressions in a natural and effortless manner when speaking and writing.
- **Comprehension:** The ability of the learner to remember language is a significant factor in the development of receptive abilities such as reading comprehending and hearing comprehension.
- **Contextual use:** The retention of vocabulary ensures that students are able to correctly utilize words in context, which is an important aspect of language learning. Learners may generate sentences that are correct in terms of grammar but lack meaning or relevance in certain settings if they do not have this, which hinders their ability to communicate successfully.

### 1.1.5.2. Grammar Retention for Accurate Communication

- The capacity to preserve grammar, in addition to the ability to recognize words, is essential to having a competent conversational language. Students are able to construct sentences that are syntactically correct and that clearly express concepts with the assistance of grammar rules (Ur, 1996; Larsen-Freeman, 2001). By bearing in mind the principles of grammar, which include the arrangement of words, sentence structures, and verb tenses, one is able to construct language that is both logical and grammatically accurate (Thornbury, 1999). In order to drive home the point that grammatical retention is extremely important, the following examples are made available:
- **Grammatical Accuracy:** Students are able to compose correct sentences without having to take into account each individual one if they adhere to grammatical conventions.
- **Sentence Complexity:** As students progress, they need to be able to employ sentence patterns that are increasingly difficult to understand.
- **Fluency in Writing:** Another factor that contributes to writing skill is the ability to remember good grammar.

### 1.1.5.3. Cognitive Processes and Retention in Language Learning

One of the fundamental connections between retention and cognitive skills like attention, memory, and metacognition is that retention is a cognitive function. According to these cognitive theories of language acquisition, the manner in which students have the ability to take in, organize, and recall information is a crucial element in determining how well they are able to remember language. Several cognitive factors, including the ones listed below, have an impact on the ability to remember information (*Anderson, 2010; Schmidt, 1990*).

- **Attention and Focus:** In order to efficiently retain knowledge, it is necessary to pay attention to the details. Focusing and paying attention are also essential. According to the

noticing hypothesis that was established by Schmidt (1990), in order for learners to remember new language items and use them in conversation in the future, it is necessary for learners to actively notice new language objects.

- **Memory Consolidation:** Memory consolidation is a process that includes both repetition and spaced retrieval, which are two crucial methods for boosting retention. Both of these strategies are part of the process.
- **Metacognitive Awareness:** Acquiring metacognitive awareness, which is defined as the capacity to monitor, evaluate, and exert influence over one's own learning, is beneficial to one's ability to retain information. Student retention of vocabulary can be evaluated through the utilization of metacognitive strategies such as self-testing and reflection, which allow students to concentrate on areas in which they are lacking (*Flavell, 1979; Vandergrift, 2003*).

#### **1.1.5.4. The Role of Motivation in Retention**

- Motivation plays an important role in language retention because it influences learners' engagement and tenacity in language learning. Intrinsic motivation (internal drive to learn) and extrinsic motivation (external rewards or results) both influence retention rates (Deci & Ryan, 1985; Dörnyei, 2001). Motivated learners are more likely to engage in retention-promoting activities such as frequent study, practice, and exposure to the target language. Motivation boosts learners' ability to retain words and structures and inspires them to persevere in difficult learning tasks (Dörnyei & Ushioda, 2011).
- **Self-Determination Theory (SDT) :** According to Deci and Ryan's Self-Determination Theory (SDT), learners who feel autonomous, competent, and connected have higher intrinsic motivation and retention rates. Peer tutoring, as an interactive learning style, can help learners develop intrinsic motivation by providing a more personalized and less threatening learning environment.

- **Task-Based Learning:** Motivation is linked to the relevance of learning tasks. Peer tutoring involves learners in meaningful tasks such as problem solving or explaining concepts to one another, which pushes them to remember vocabulary and grammar that will be useful in performing these tasks.

#### **1.1.5.5. Social Interaction and Retention**

Interaction with other people is an essential component in the process of retaining vocabulary and language. Within the framework of Vygotsky's sociocultural theory (1978), the process of language acquisition takes place through social interaction with other people.

- **Peer Feedback:** When learners participate in peer feedback and conversation, they frequently show a greater capacity to remember words. The process of explaining new terms to other people or accepting corrections from peers is beneficial to the learner since it helps to reinforce their comprehension of language and their ability to remember it.
- **Scaffolding:** Peer tutors offer scaffolding, also known as interim help, which enables tutees to retain language more successfully by progressively transitioning from assistance to independence on their own (Wood, Bruner, & Ross, 1976). Learners frequently remember words that have been debated, corrected, or used in a communicative context. This is because the social character of this interaction makes it more likely that learners will remember these terms.

#### **1.1.5.6. Emotional and Affective Factors in Retention**

In the process of language retention, factors that are emotional and affective, such as anxiety, confidence, and self-esteem, are also vitally significant. These factors include the ability to remember vocabulary. An individual with a low affective filter, which is characterized by lower anxiety and more motivation, is said to have superior language learning and retention,

according to the Affective Filter Hypothesis, which was developed by Krashen in the year 1982 (Krashen, 1982).

- **Anxiety Reduction:** kids are more likely to recall and use new language when they are under less pressure or when they are less afraid of making mistakes. This is because kids experience less anxiety. They are able to learn more efficiently as a result of this.
- **Self-Efficacy:** Students who have a strong feeling of self-confidence in their ability to perform tasks are more inclined to participate in activities that help them retain language. According to Bandura's (1997) theory of self-efficacy, students who have a high level of self-belief in their linguistic abilities are more persistent and concentrated in their learning tasks, which ultimately leads in increased retention from the content.

### **1.1.6. Techniques for Vocabulary Teaching in the Classroom**

Teaching vocabulary in the classroom greatly improves students' language ability. Different strategies are used to guarantee that students are actively involved in meaningful activities, hence guaranteeing that they keep and can apply new terms in context, which is absolutely vital for good vocabulary instruction (Nation, 2001; Schmitt, 2000). Documented here are several classroom vocabulary teaching techniques rooted in both conventional and modern ideas.

#### **1.1.6.1. Direct Vocabulary Teaching**

Direct instruction is the clear presentation of new terms to students, usually by definitions, example sentences, and context. Teachers underline providing exact definitions of word meanings and contextual word use.

Explicit instruction introduces new terminology via definitions, synonyms, and antonyms. Teachers can include the word into a phrase, define it, say it, and write it on the board. Key

words that are required for understanding the material being taught gain much from this method.

Contextual Sentences: Provide students with example sentences using the new phrase so they may understand its useful uses (Coady & Huckin, 1997).

### **1.1.6.2. Using Visual Aids**

By connecting new words with visual representations, visual aids include photos, flashcards, diagrams, or mind maps can greatly improve vocabulary development. Used with examples, this approach is very helpful for visual learners, concrete nouns, and abstract ideas as well.

The Picture Word Inductive Model (PWIM) teaches vocabulary via images. Labelling the images and then using the words in phrases helps students to offer a tangible link between the vocabulary and meaning (Cameron, 2001).

### **1.1.6.3. Contextual Learning and Incidental Learning**

Incidental learning takes place when students acquire vocabulary through participation in activities like reading, listening to discussions, or viewing videos. This approach is founded on the principle that language acquisition is most effective when contextualised. When learners are exposed to vocabulary consistently within relevant scenarios, they inherently grasp the meanings of the words (Nation, 2001).

Promote the articulation of texts incorporating unfamiliar vocabulary among students. Reading immerses individuals in contextual language, hence enhancing vocabulary retention (Beck, McKeown, & Kucan, 2002).

Students may participate in role-playing activities or construct narratives to personify words and use them contextually. This approach encourages engagement and enhances educational outcomes (Wilhelm, 2004).

#### **1.1.6.4.4. Word walls**

A word wall serves as a visible representation of vocabulary terms, commonly positioned within the classroom environment. Lexical items accumulate over time and can be categorised by themes or concepts. This technique functions as a reference for students and promotes regular exposure to new vocabulary.

Interactive word walls allow students to engage by adding new vocabulary, constructing sentences with these words, or categorising them according to synonyms, antonyms, or parts of speech (Fisher & Frey, 2008).

#### **1.1.6.5. Collaboration and Peer Interaction**

Collaborative learning practices, such as peer tutoring, group discussions, and pair work, are effective for vocabulary development. Through peer interactions, students can improve one another's learning by clarifying meanings, using vocabulary in context, and providing constructive feedback.

Peer Instruction by assigning students the role of tutors to share vocabulary knowledge with their peers. This method integrates knowledge and improves interpersonal skills, allowing learners to solidify and articulate vocabulary in their own language (Topping, 2005).

Students begin by reflecting on the vocabulary in relation to a question, then engage in dialogue with a partner, and finally share their perspectives with the whole class. This method encourages verbal practice and provides immediate feedback (Lyman, 1981).

#### **1.1.6.6. Word Maps and Semantic Mapping**

Word maps, also known as semantic maps, serve as visual frameworks that illustrate the connections between a particular word and its associated words or concepts. This approach

fosters a profound comprehension by assisting learners in establishing connections among vocabulary, their definitions, and associated ideas.

**Semantic Mapping:** Learners create a visual representation in which a central term is encircled by associated words or phrases that elucidate or expand upon its significance. This method enhances semantic processing and aids learners in retaining vocabulary (Nagy, 1988).

### **1.1.6.7. Vocabulary Games**

Games serve as an effective method to enhance vocabulary acquisition while maintaining student engagement. Educational games provide students with an opportunity to engage with new vocabulary in a fun and supportive setting (Wright, Betteridge, & Buckby, 2006; Uberman, 1998).

**Vocabulary Bingo:** An engaging method for reviewing vocabulary, in which students associate definitions or images with the vocabulary words displayed on their cards. In this activity, students perform actions to convey a word for their peers to identify, thereby promoting comprehension through kinesthetic learning and contextual engagement (Gardner, 1993; Fleming, 2001).

### **1.1.6.8. Use of Technology**

Using digital tools and language-learning apps in vocabulary instruction can provide students with interactive and engaging ways to learn vocabulary. Online dictionaries, vocabulary games, and platforms such as Quizlet can help to reinforce learning (Godwin-Jones, 2011). Quizlet is a popular platform for generating digital flashcards and playing vocabulary games, which can help reinforce word meaning and spelling with repetition (Ducate & Lomicka, 2008).

**Language Apps:** Apps such as Duolingo, Memrise, and Babbel provide interactive vocabulary acquisition through contextual use and repetition (Loewen et al., 2020).

## **1.2. Multiple Intelligences Theory**

In the book *Frames of Mind*, which was published in 1983, Howard Gardner gave a presentation that was considered to be a landmark on his Theory of Multiple Intelligences (MI), which posed a challenge to the conventional understanding of intelligence (Gardner, 1983). Prior to the publication of this groundbreaking study, the majority of intelligence was evaluated through the limited lens of intelligence testing. Certain cognitive talents were the subject of these examinations, with a special emphasis placed on verbal and logical thinking for the purpose of identity identification. Gardner's various Intelligences theory, on the other hand, maintains that intelligence is comprised of a wide variety of cognitive capacities and spans various dimensions. This is in contrast to the reductionist approach that is taken. These intelligences are not distinct from one another or unchanging; rather, they are tightly interwoven with one another and complement one another in a variety of different ways (Gardner, 1999). It is worth noting that this particular approach has had a significant influence on educational practices, particularly in the domains of language acquisition and collaborative education through the utilisation of peer tutoring. Gardner eventually added an eighth intelligence to his theory, which he had initially proposed to be comprised of seven distinct intelligence models. Each of the many distinct varieties of intelligence represents a unique approach to interacting with and comprehending the surrounding world. There are a great number of various types of intelligence. Listed below are the intelligences that are generally acknowledged (Gardner, 1983; Gardner, 1999):

### **1.2.1. Linguistic Intelligence**

Verbal intelligence is the ability to communicate effectively in writing, speaking, and reading. This includes understanding complex meanings, communicating coherently, and creating coherent narratives and dialogues. Verbally intelligent people use storytelling, writing, and

language to improve their understanding. This cognitive type is crucial for language acquisition, vocabulary preservation, and use (Gardner, 1983).

Verbal intelligence students excel at reading, writing, and problem-solving.

### **1.2.2. Logical-Mathematical Intelligence**

One of the characteristics that distinguishes Logical-Mathematical Intelligence from other types of intelligence is the capacity to engage in logical thinking, effectively tackle issues, and recognise connections or patterns among various aspects. This type of intelligence comprises the ability to handle complex ideas, as well as the ability to think in a practical manner and for abstract reasons. Logical intelligence is typically associated with positions that require dealing with numbers, patterns, sequences, and classification systems (Gardner, 1983).

Those students who have a high level of logical intelligence are more likely to be able to recognise word families, recognise relationships between words, and apply rules for the production of words. For example, they are able to understand the fundamental forms of words such as "action," "act," and "reaction."

### **1.2.3. Spatial Intelligence**

Navigation, the interpretation of maps, and the comprehension of spatial relationships are all activities that are associated with this sort of intelligence ability. When it comes to the formation and management of mental images, people who have a high spatial intelligence are exceptional. The capacity to do so is particularly valuable in industries such as art and design. When learning a new language, one can improve their spatial intelligence by making use of visual tools like mind maps, flashcards, and organised charts. These tools help in organising and showing terminology so that the learner can better understand the language. Students that have a significant amount of spatial intelligence frequently benefit from the use of a variety of visual representations when they are learning a language (Gardner, 1983).

#### **1.2.4. Bodily-Kinesthetic Intelligence**

Bodily-kinesthetic intelligence refers to the degree to which an individual is able to make use of their bodies in order to accomplish tasks, find solutions to issues, or communicate their thoughts. People who are exceptionally skilled in this type of intelligence typically thrive in occupations that need them to move their bodies and are able to convey a great deal of information through their actions and gestures. It is possible to bring forth this kind of intelligence in a learning environment by incorporating activities such as role-playing, active games, and hands-on work. Having a high bodily-kinesthetic intelligence can be extremely beneficial for individuals who are learning a new language (Gardner, 1983).

#### **1.2.5. Musical Intelligence**

Musical intelligence is the capacity to recognise, create, and assess various components of music, including sounds, patterns, and rhythms. It is sometimes referred to as musical intelligence. The ability to have a significant sensitivity to tone, pitch, and sound is included in this type of intelligence. An additional connection exists between it with abilities such as singing, composing, and playing musical instruments. Musical intelligence is a skill that assists individuals in improving their vocabulary abilities via the use of rhymes, songs, and rhythmic patterns. This is especially helpful when it comes to learning languages. Individuals who are musically skilled frequently discover that it is simpler for them to recall new words when they are accompanied by melodies, jingles, or rhythms. According to Gardner (1983), students are considerably helped in their ability to memorise words through sound when they are able to link knowledge to both melody and rhythm.

#### **1.2.6. Interpersonal Intelligence**

In the context of interpersonal relationships, intelligence is defined as the capacity to perceive and engage with other individuals in a manner that allows for productive interaction. In addition to being able to engage with others in a productive manner, individuals who possess

strong interpersonal skills are able to display competence in the areas of communication, empathy, and social awareness. This type of intelligence is incredibly helpful in the process of language acquisition, particularly in the context of peer tutoring, because it encourages collaborative learning and successful discourse by fostering successful communication. Students who have developed their interpersonal skills are able to thrive in social settings and are able to easily coordinate their efforts with those of their classmates. Through the stimulation of conversations between individuals of comparable ages, the provision of social context, the provision of quick feedback, and the introduction of sophisticated language, peer tutoring helps to improve comprehension. Additionally, it assists in the development of communication skills that are essential for learning a language, such as the ability to negotiate meanings and participate in discussions. These skills are essential for learning a language. According to Gardner (1983), when it comes to the retention of vocabulary, interpersonal intelligence encourages students to employ new words in social interactions, thereby verifying their comprehension through involvement and feedback. Going through this process results in the formation of a relationship with the word that is both more profound and more unique to the individual.

### **1.2.7. Intrapersonal Intelligence**

Intrapersonal intelligence is a person's ability to understand their own emotions, motivations, and cognitive processes. Those that thrive in this subject frequently practice profound self-reflection and are conscious of their inner thoughts. This form of intelligence is very useful while learning a new language because it allows students to connect unfamiliar words to their own personal experiences, values, and beliefs. According to Gardner (1983), individuals with high intrapersonal abilities often flourish in solitary learning contexts and devote time to thought, which improves their ability to remember new terms. For example, people may keep

notebooks, write down their views, or tell stories that tie new words to their personal experiences.

### **1.2.8. Naturalistic Intelligence**

Naturalistic intelligence is defined as the ability to recognize and classify items in nature, such as plants, animals, and environmental characteristics. It is commonly associated with courses such as biology and environmental science, but it may also be quite beneficial when learning new words, particularly those related to nature. If someone has a high level of naturalistic intelligence, they may be able to quickly learn nature-related terminology. In language classes, they can relate new terms to their own outside experiences, which can help them remember them better because they are connected to real-life circumstances (Gardner, 1999).

### **1.2.2. Relevance of Interpersonal Intelligence in Collaborative Learning**

Through his presentation in 1983, Howard Gardner was the first person to present the idea of interpersonal intelligence to the general public (Gardner, 1983). Having the ability to comprehend and engage with other people in a manner that is both effective and efficient has been defined as having this ability. The ability to successfully negotiate challenging social circumstances, find solutions to disagreements, and make meaningful connections with others is a characteristic of individuals who possess this type of intelligence. The ability to communicate effectively, empathy, and social awareness are all examples of important abilities that are included in this category of intelligence. Through the development of their interpersonal intelligence, students are able to collaborate with one another in order to achieve similar academic objectives. Students really need to be able to demonstrate that they have the ability to participate in collaborative learning circumstances since interpersonal intelligence plays a significant role in these kinds of situations. This is the reason why it is essential for the development of substantial connections among peers, the enhancement of group togetherness, and the development of abilities to deal with challenges through the utilisation of collaborative efforts. In light of the fact that it is able to assist successful communication, social negotiation, and the formation of vibrant group interactions, this type of intelligence has been demonstrated to be of utmost significance in the context of the situations that have been discussed above.

### **1.3. Peer Tutoring in Language Learning**

As a crucial educational technique in the development of second and foreign language acquisition, peer tutoring has gained popularity as a result of the numerous pedagogical, cognitive, social, and affective benefits that it offers (Topping, 2005; Rosen, 2014). These benefits have contributed to the rise in popularity of this strategy. It is important to note that the evolution of these languages has been significantly influenced by the practice of peer

tutoring. Peer tutoring is an instructional approach that is used in conjunction with the standard method of instruction that is carried out by the instructor. One kind of instruction is known as peer tutoring, which is a method in which students of similar ages or levels of aptitude work together to assist one another in completing academic assignments. The utilization of this tactic helps to contribute to the formation of an environment that is conducive to learning and encompasses both collaborative and inclusive learning environments (Cohen, 1994; Slavin, 1995).

### **1.3.1.1. Enhanced Academic Achievement**

There is a significant body of evidence suggesting that academic performance can be improved through the use of peer tutoring. Not only do students improve their understanding by tutoring their classmates, but they also improve their ability to analyse and explain things as a result of this activity. The ability to obtain, organise, and present information is essential for tutors to be able to teach effectively. This eventually helps tutors increase their command of the subject matter as well as their recollection of it (Topping, 2005). Students have enhanced clarity, comprehension, and practice when they receive personalised attention, which is very beneficial when it comes to learning languages. According to Nation (2001), the most effective method for acquiring vocabulary is for students to constantly meet terms in contexts that are relevant to their studies. Peer tutoring is a method that frequently encourages this way of learning (Nation, 2001; Topping, 2005).

### **1.3.1.2. Development of Metacognitive and Cognitive Skills**

Peer tutoring fosters the growth of metacognitive skills, including self-regulation, planning, and the oversight of learning activities. Particularly, tutors utilize higher-level thinking by contemplating their understanding to effectively communicate the material. Goodlad and Hirst (1989) state that tutoring environments enhance critical thinking, problem-solving abilities,

and metacognitive awareness, leading both tutors and tutees to become more strategic in their learning approaches. The reciprocal aspect of peer tutoring allows students to articulate their ideas, pose clarifying inquiries, and evaluate their understanding—factors that are crucial for deeper learning and the retention of vocabulary (Goodlad & Hirst, 1989; Topping, 2005).

### **1.3.1.3. Improved Communication and Interpersonal Skills**

In order to foster skills such as verbal communication, attentive listening, empathy, and constructive discourse, learners are required to participate in constant engagement with one another when employing the method of learning known as peer tutoring. In environments that are centred on language acquisition, which is an environment in which practice and constructive criticism play key roles in the development of language abilities, these kinds of interactions have been shown to be extremely beneficial (*Topping, 2005; Slavin, 1995*). Students gain social skills such as taking turns, negotiating meanings, and asking for clarifications, as stated by Gardner's concept of interpersonal intelligence, which was published in 1983 (*Gardner, 1983*). These skills are linked to the development of social skills in a correlational manner. Because of this greater participation, a genuine communicative environment is created in which language is used for reasons that are relevant to the actual world. This, in turn, leads to an improvement in both language skills and social development.

### **1.3.1.4. Increased Motivation and Confidence**

The motivation and self-assurance of learners are frequently improved when they participate in a learning environment that is supported by their peers. It is more likely that students will feel more comfortable expressing their worries and asking questions when they are interacting with one another rather than with their teachers. This results in a reduction in fear and the development of an environment that is nurturing. The Self-Determination Theory (Deci & Ryan, 2000) proposes that the factors of autonomy, competence, and relatedness have a

substantial impact on the level of intrinsic motivation that an individual possesses. Therefore, peer tutoring environments are conducive to the development of these elements. In addition, tutors have the opportunity to experience a sense of accomplishment and responsibility, which, in turn, helps them feel more confident and increases their desire to study (Deci & Ryan, 2000; Topping, 2005).

#### **1.3.1.5. Promotion of Learner Autonomy and Responsibility**

In peer tutoring scenarios, the focus that was once held by the instructor is redirected towards the students, who are now actively involved in their own educational journey. This transformation in roles empowers students to assume responsibility for their educational paths, thereby fostering a self-directed approach to learning. According to Falchikov (2001), the practice of peer tutoring inspires students to develop a greater feeling of self-sufficiency, enhances their ability to make decisions, and instills a sense of responsibility for their academic achievements. The tutees take an active role in their own education by actively participating in the process of inquiring and setting goals, while the tutors are tasked with the obligation of arranging their explanations and evaluating the degree of knowledge of their peers (*Falchikov, 2001; Topping, 2005; Slavin, 1995*).

#### **1.3.1.6. Personalized and Differentiated Learning**

It is feasible to provide customised education that is tailored to the specific needs of each student through the use of peer tutoring, which offers this opportunity. The course provides students with the opportunity to work at their own pace, review challenging material, and receive personalised explanations throughout the duration of the academic program. Due to the fact that children may benefit from getting support that is differentiated, this strategy is especially effective in classrooms that have kids with varying abilities. In their study, Topping and Ehly (1998) stress the adaptable character of peer tutoring, which enables the

modification of grouping and the pursuit of specific learning goals such as the growth of vocabulary. Through the use of peer tutoring, kids are able to expand their vocabulary (*Topping & Ehly, 1998; Topping, 2005*).

### **1.3.1.7. Social Inclusion and Cooperative Learning**

Peer tutoring facilitates social integration by introducing opportunities for collaboration among diverse student groups. Individuals facing challenges with conventional teacher-centered approaches, or those feeling marginalised due to language barriers, learning differences, or social anxiety, may engage more effectively through peer interactions. This method enhances the principles of cooperative learning by enabling students to collaborate in pursuit of common goals (Topping, 2005). This leads to an enhanced sense of respect among students and fosters academic unity.

### **1.3.2. Challenges of Peer Tutoring**

It is vital to recognise and address a variety of problems in order to improve the efficiency of peer tutoring, despite the fact that it offers a substantial number of benefits. The quality of instruction, the dynamics among students, the logistical concerns that arise within the classroom, and the comprehensive management of the peer tutoring system are all examples of these challenges (Falchikov, 2001).

#### **1.3.2.1. Variability in Tutor Expertise and Accuracy**

Peer tutoring presents a number of challenges, one of the most significant of which is the fact that the quality of instruction offered by peer tutors can vary greatly. Peer tutors, in contrast to more experienced teachers, frequently have just a fundamental understanding of the subject matter, which can result in the dissemination of information that is not accurate. According to Sato and Lyster (2012), this issue is especially troublesome in the process of language

acquisition, since mistakes in pronunciation, grammar, and vocabulary can become ingrained if they are not addressed as soon as they occur (*Sato & Lyster, 2012; Topping & Ehly, 1998*).

### **1.3.2.2. Unequal Power Dynamics and Interpersonal Conflicts**

It is absolutely necessary for there to be pleasant relationships between participants in order for peer tutoring to be successful. There are a number of factors that can hamper the success of the tutoring experience. Some of these factors include interpersonal problems, issues of dominance, and insufficient teamwork. Inappropriate pairings might result in discomfort, decreased engagement, or an inability to learn. These outcomes can be particularly detrimental. The authors Goodlad and Hirst (1989) assert that in order to establish an educational environment that is both courteous and productive, it is essential to make certain that appropriate matching is achieved and to implement procedures for conflict resolution.

### **1.3.2.3. Dependence on the Peer Tutor**

It is possible for tutees to develop an unhealthy dependence on their peer tutors, particularly if the tutor offers an excessive amount of support or carries out responsibilities on their behalf. It is possible that this dependence will hinder the development of independent learning capacities as well as critical thinking. Wood, Bruner, and Ross (1976) state that in order to increase the learner's autonomy and shift responsibility to them, it is necessary to have structured guidance.

### **1.3.2.4. Time Constraints and Implementation Challenges**

A careful planning, scheduling, and administration process is required in order to successfully incorporate peer tutoring into the educational program. It is necessary for teachers to schedule time in order to train, pair, monitor, and evaluate activities including peer tutoring. It may be challenging to implement a model of peer tutoring that is sustainable in situations where there is a limited amount of time for instruction or when there are huge class sizes (Topping, 2005).

### **1.3.2.5. Assessment and Accountability**

The evaluation of the effectiveness of peer tutoring is a challenging task due to the fact that it takes into account both intellectual development and interpersonal interaction. For the purpose of monitoring the learning results of both tutors and tutees, teachers are required to design straightforward assessment criteria and feedback mechanisms. In the absence of systematic assessment, the advantages of peer tutoring may remain unreported, thereby diminishing accountability (Topping & Ehly, 1998).

### **1.3.2.6. Teacher's Role in Supervision**

The role of the instructor is critical to the success of the program, despite the fact that students are the ones who are driving the process of peer tutoring. It is the duty of teachers to monitor the many interactions that take place between students, to offer constructive feedback, and to ensure that the learning objectives are being adequately addressed. There is a possibility that the instructor will not provide appropriate supervision, which may lead to behaviour that is unrelated to the task at hand, insufficient explanations, or the reinforcement of errors. It is vital for teachers to actively facilitate peer tutoring sessions, as stated by Topping (2005), in order to ensure that the sessions are conducted in an academically honest manner throughout the entire process (*Topping, 2005; Cohen, 1994; Slavin, 1995*).

### **1.3.3. Peer Tutoring Models and Their Application in Classrooms**

The phrase "peer tutoring" refers to a number of different types of instructive methods in which students offer assistance to one another while participating in activities that are designed to facilitate learning. These models are associated with a wide range of structures, objectives, responsibilities, and applications that can be used in the classroom. It is possible to modify each model to match the needs of a diverse range of students, classroom conditions, and instructional objectives. Each model has its own distinct set of pedagogical advantages.

The utilisation of an effective model of peer tutoring has the potential to dramatically improve vocabulary acquisition, student motivation, and overall linguistic competency when it is applied in contexts where language learning is taking place (*Topping, 2001; Greenwood, 2001; Davis & Lee, 2011*).

#### **1.3.3.1. Same-Age Peer Tutoring**

Tutoring for students of the same age helps students to help one another. Goodlad and Hirst (1989) found that this frequently leads to a learning atmosphere that is more comfortable and equal for all students.

#### **1.3.3.2. Cross-Age Peer Tutoring**

It is a form of instruction in which students of a more senior or more experienced age instruct students of a younger or less experienced age. According to Topping (2005), this idea not only sets an example for the tutee but also pushes the tutor to take responsibility for their actions.

#### **1.3.3.3. Reciprocal Peer Tutoring (RPT)**

According to Fantuzzo et al. (1989), reciprocal tutoring is a method of instruction in which students take turns acting as both the tutor and the tutee. This method allows for equal involvement and deeper engagement.

#### **1.3.3.4. Peer-Assisted Learning Strategies (PALS)**

PALS is a method of structured peer tutoring that was developed by Fuchs and Fuchs (2005) of the University of Florida. It combines instructional practices that are guided by the teacher

with collaborative peer engagement in order to produce a learning environment that is more successful.

#### **1.3.3.5. Class wide Peer Tutoring (CWPT)**

In Class wide Peer Tutoring, every student in a classroom engages in peer tutoring sessions, typically rotating through various roles. According to Delquadri et al. (1986), CWPT has proven advantageous across multiple academic disciplines, particularly in language acquisition. Implementing CWPT within classroom activities enables opportunities for continuous practice, peer evaluation, and greater familiarity with vocabulary terms.

#### **1.3.3.6. Supplemental Peer Tutoring**

Falchikov (2001) notes that supplementary peer tutoring enhances student independence and creates a versatile environment for focused vocabulary practice, particularly benefiting those who find the pace of the classroom challenging.

### **1.3.4. Application in Language Learning Classrooms**

Peer tutoring methods are effective in language learning classrooms for enhancing vocabulary acquisition, reading comprehension, speaking fluency, and grammatical accuracy. Research indicates that such benefits are maximized when tutoring programs are strategically implemented with well-matched peers, clearly structured tasks, and ongoing teacher supervision (Topping, 2005; O'Donnell & King, 1999; Ehly & Topping, 1998).

#### **1.3.4.1. Vocabulary Retention**

Second language learning focuses on vocabulary acquisition and retention. Peer tutoring, particularly reciprocal and same-age models, provides frequent, context-sensitive opportunities to interact with new vocabulary. Tutors assist peers in decoding meaning, exploring collocations, and using language in sentences, while tutees benefit from

repetition and feedback. Nation (2001) emphasizes the importance of active involvement and multiple exposures in language retention, both of which are incorporated throughout peer tutoring procedures.

#### **1.3.4.2. Speaking and Listening Practice**

Peer tutoring facilitates interactions that are authentically communicative, which is vital to the process of language acquisition because interaction is required to learn a language. Students develop their listening comprehension and speaking fluency by participating in role plays, interviews, and conversations. This helps students improve their speaking fluency, which in turn improves their listening comprehension. As a result of Krashen's (1982) Affective Filter Hypothesis, peer tutoring is a great strategy for improving oral competency. This is due to the fact that it reduces the amount of fear that learners have and improves the amount of participation that they have.

#### **1.3.4.3 Grammar and Writing Support**

There are a variety of tasks that can be done within the framework of peer tutoring, including sentence construction, grammar drills, and writing exercises. Correction of errors, arrangement of thoughts, and exposition of ideas are all areas in which peers work together to improve grammatical precision and literary fluency. Peers collaborate in these areas in order to achieve these goals. In 1978, Vygotsky proposed the Zone of Proximal Development, which focusses an emphasis on the significance of peer contact in the process of developing language abilities through the provision of scaffolded aid (Vygotsky, 1978). This was done in order to facilitate the development of language skills.

#### **1.3.4.4. Learner Engagement and Motivation**

All methods of peer tutoring are effective in boosting student motivation because they establish a sense of responsibility, belonging, and accomplishment in the students. It is easier

for students to feel empowered when they are given instructional duties, and interactions with their peers are a great way to foster intrinsic drive. The authors Deci and Ryan (2000) state that environments that encourage autonomy and competence are associated with increased levels of motivation and engagement, both of which are essential for the retention of language content.

#### **1.4. Studies in peer tutoring, vocabulary acquisition and multiple intelligences**

This literature review explores the intricate connections between three pivotal educational constructs: interpersonal intelligence, vocabulary retention, and peer tutoring, particularly within the framework of English as a Foreign Language (EFL) instruction for middle school students. While previous investigations have explored each of these components separately, there exists a notable deficiency in studies that consider them within a cohesive framework. The objective of this thesis is to investigate the impact of interpersonal intelligence as a mediating factor in vocabulary acquisition through peer tutoring, thereby exploring the current gap (Gardner, 1983; Topping, 2005; Nation, 2001). The reviewed studies offer important insights into the effectiveness of collaborative learning strategies, the role of social intelligence in educational contexts, and the impact of peer-led instruction. This literature review provides a robust theoretical and empirical basis for examining the potential of socially interactive learning environments to enhance language retention outcomes in young EFL learners, drawing on findings from various complementary disciplines (Vygotsky, 1978; Gardner, 1999; Oxford, 1990).

Farooq, Khalil, and Gul (2022) undertook an experimental investigation titled "Peer Tutoring and Social Intelligence: An Experimental Investigation," which scrutinized the efficacy of peer tutoring in augmenting social (interpersonal) intelligence among learners. The findings

of the research indicated that systematic peer tutoring significantly enhanced students' capabilities for collaborative interaction, conflict resolution, and empathetic expression. The improvements in social conduct were correlated with advancements in overall classroom performance, thereby suggesting a relationship between cognitive and interpersonal development. This study affirms the notion that interpersonal intelligence can be purposefully cultivated through interactive, peer-oriented pedagogical strategies. Moreover, it underscored the importance of tutor training and support as a vital component in improving learning outcomes.

In a similar vein, Afsharpour & Gohar (2014) executed a quasi-experimental study entitled "A Comparison of the Impact of Peer-Tutored Read-Aloud and Teacher-Guided Read-Aloud on Immediate and Delayed Vocabulary Retention." This research targeted English as a Foreign Language (EFL) learners and compared two instructional approaches—peer tutoring and teacher guidance—to assess their effects on both immediate and long-term vocabulary retention. The findings indicated that groups participating in peer tutoring significantly surpassed those receiving teacher-led instruction in both immediate and delayed post-assessments. The researchers ascribed this benefit to heightened engagement, reduced anxiety, and collaborative learning, which correspond with social constructivist theories. This study substantiates the vocabulary retention element of your thesis and provides empirical evidence that peer tutoring strategies can yield measurable improvements in retention over time.

Al-Harthy (2017) conducted a study in Oman entitled "The Role of Interpersonal Intelligence in Collaborative Learning Among Middle School Students," examining the influence of interpersonal intelligence on peer interactions and group-based educational activities. The results indicated that pupils possessing elevated interpersonal intelligence exhibited enhanced efficacy in collaborative environments, excelling in communication, empathy, and cooperation. These learners frequently assumed leadership roles, participated in conflict

resolution, and fostered inclusive group dynamics. Al-Harthy's research underscores the significance of interpersonal intelligence in fostering a supportive and effective learning environment, particularly in peer-oriented methods such as group discussions and tutoring. The findings align with the theoretical framework of the study, supporting the idea that interpersonal intelligence plays a significant role in language retention through peer tutoring.

Hajebi, Taheri, and Noshadi (2022) examined the correlation between interpersonal intelligence, reading engagement, and vocabulary development among Iranian EFL learners. Their correlational investigation revealed that those with elevated interpersonal intelligence had enhanced vocabulary learning and increased efficacy in reading tasks. The research indicated that these learners excelled in collaborative and interactive educational environments, highlighting a connection between social intelligence and the mastery of academic language. These data reinforce the theoretical basis of this assertion—that interpersonal intelligence is not only a dormant trait but a significant element that can enhance vocabulary acquisition, especially in collaborative learning contexts like peer tutoring.

Berrebeuh & Bentebba (2022) provided significant insights into vocabulary retention among middle school learners in Algeria in their study "Investigating the Impact of Brain-Based Learning Strategy in Enhancing Pupils' Vocabulary Retention," although they did not specifically focus on interpersonal intelligence. The study implemented brain-based learning principles, such as emotive engagement, pattern recognition, and multimodal learning, to improve vocabulary retention. The results of their study confirmed a statistically significant increase in word recall among the experimental group, suggesting that language retention objectives can be positively impacted by innovative, learner-focused strategies. Despite the fact that they did not prioritize social intelligence or peer mentoring, their emphasis on emotional-cognitive integration and learner engagement is indicative of the foundational pedagogical philosophy that underpins the pivotal role of interpersonal intelligence.

A relevant study by Sahraoui Benhamadi (2020), entitled "The Effectiveness of Group Work in Enhancing Vocabulary Acquisition: A Case Study of Second-Year Middle School Pupils at Boumerdes," examined the impact of collaborative learning on vocabulary retention in young EFL learners. The quasi-experimental study divided participants into two groups: the experimental group received vocabulary instruction through structured group activities and peer collaboration, whereas the control group employed traditional grammar-translation approaches. The pre- and post-tests demonstrated that the experimental group outperformed the control group in both vocabulary recall and the application of words in cohesive sentences. Observational studies demonstrated that learners had increased enthusiasm during peer collaboration, and that socially engaged learners often took on leadership roles in group activities. The results suggest that interpersonal dynamics facilitate language acquisition, providing indirect evidence that interpersonal intelligence improves vocabulary retention during collaborative activities.

Nassima Talbi (2021) conducted a similar investigation into "The Use of Peer Tutoring in Enhancing Vocabulary Retention among EFL Middle School Pupils: A Case Study at M'sila Middle School." The study sought to determine the impact of peer tutoring, which was structured around set tutor-tutee roles, on vocabulary acquisition outcomes. Learners were instructed on how to provide feedback to their classmates, assess comprehension, and explain concepts. The control group received teacher-led instruction, while the experimental group participated in vocabulary training that included peer education sessions over the course of six weeks. The experimental group demonstrated a distinct advantage in both the immediate and delayed post-tests, as indicated by the results. In addition, qualitative observations revealed that learners who exhibited high interpersonal engagement (e.g., clarifying queries, assisting others, and expressing gratitude) made the most significant vocabulary gains. Peer tutoring, according to Talbi, fosters a socially welcoming learning environment, enhances learner

motivation, and promotes active participation—all of which are critical components of interpersonal intelligence.

The reviewed literature offers significant evidence for the effectiveness of interpersonal intelligence, vocabulary retention strategies, and peer tutoring across various educational settings. Research indicates that individuals with robust interpersonal skills thrive in collaborative settings, and that peer tutoring can markedly improve engagement and educational results. The retention of vocabulary has been shown to be significantly improved through pedagogical approaches that are centered around the learner and that promote social interaction. However, a considerable deficiency is present in the existing body of literature: while each individual element has been examined independently, the synergistic effects of these components have rarely been explored within a cohesive framework. This thesis aims to fill this gap by proposing an integrated approach that examines the impact of interpersonal intelligence on vocabulary retention, operationalized through structured peer tutoring. This study seeks to provide a new perspective in language education by highlighting the importance of social and emotional competencies as mediators of academic success. The literature review confirms the significance of this enquiry and establishes a robust basis for the theoretical and methodological framework of the current study.

## **Conclusion**

The literature on interpersonal intelligence, peer tutoring, and vocabulary retention in EFL situations is extensive and varied. Fundamental frameworks, including Gardner's Theory of Multiple Intelligences, Vygotsky's sociocultural theory, and collaborative learning principles, have collectively established a solid foundation for comprehending the cognitive and social aspects of language acquisition. Furthermore, the empirical contributions from both international and Algerian contexts — including experimental and quasi-experimental studies

— attest to the value of socially-driven pedagogies in improving language outcomes. After establishing the theoretical and empirical underpinnings of this investigation, the path is clear for the primary phase of the research: quasi-experimental fieldwork and data analysis. The concepts and findings discussed in the literature review will form the foundation of the study's methodological design and outcomes interpretation. Drawing on this body of work, the current study aims to provide novel insights into how interpersonal intelligence, when triggered through structured peer tutoring, can improve vocabulary retention among Algerian middle school EFL students.

**Chapter Two: Research Methodology and Data  
Analysis and Interpretation.**

## **Introduction:**

In the first chapter, theoretical background related to interpersonal intelligence and peer tutoring was discussed alongside vocabulary retention, laying the foundation for the subsequent chapter. In this chapter, the focus is on the empirical part of the work, or the fieldwork. It describes the practical implementation of the study, including all the steps taken to conduct the research: the methodology and procedure. This chapter has three main sections. The first section provides a thorough description of the research methodology and the selected design. It offers a comprehensive account of the research methodology and design implemented, detailing the research methods, context, participant population, and instruments, followed by the techniques utilized for data collection and analysis. The second section addresses the discussion of the results, their analysis and interpretation, alongside a discussion of the findings. There is a third section. The third section is reserved for outlining the limitations of this study, the pedagogical implications derived from the findings, and recommendations for future research endeavors.

## **2.1. Research Design**

### **2..1. Quasi-Experimental Design**

#### **2.1.1.1. Definition**

Quasi-experimental method (QEM) is a technique used to study if one factor causes an outcome when the participants cannot be randomly assigned into a control group and an

experimental group because it is impractical or ethical (Shadish, Cook, & Campbell, 2002). As opposed to a true experiment, quasi-experimental methods use multiple pre-existing or naturally occurring groups or situations for comparison. They also use alternate techniques such as statistical control and a strict selection of comparison groups to mitigate alternative explanations and to strengthen internal validity and causal inferences.

#### **2.1.1.2. Main Features**

According to Shadish, Cook, and Campbell (2002), quasi-experimental designs have the following characteristics:

- The absence of random assignment because experimental and control group selection is based on actual circumstances, not a randomized selection.
- When experiments or research projects are conducted, a comparison group is usually included to evaluate the impact of an intervention, although there may be initial differences between the groups.
- Quasi-experiments utilize pre-tests and post-tests to gauge the modifications caused by the intervention at hand.
- Despite being quasi-experimental, a researcher must resort to other statistical tools that can effectively control the effects of confounding variables.
- These designs are frequently used in natural settings such as schools and companies in situations where it is not feasible to have full experimental control.

#### **2.1.2. Justification for Using a Quasi-Experimental Design**

The researchers opted for the quasi-experimental design for this study because their primary aim is to prove a causal relationship between the variable, i.e., peer tutoring grounded on interpersonal intelligence and middle school learners' vocabulary retention. However, in

educational settings with already existing intact groups, it is often impractical to randomly assign students without disrupting existing learning environments. Hence, a quasi-experimental design was chosen for this study as it is a robust approach to evaluate the effectiveness of the intervention in real-world settings.

### **2.1.3. Main Threats to Internal Validity**

Generally, as described by Shadish, Cook, and Campbell (2002), internal validity is the degree to which a research study accurately establishes a causal relationship between the intervention and the outcome. Nevertheless, there are also numerous threats to internal validity in quasi-experimental designs (QEDs) that can create various alternative explanations for the findings. In quasi-experimental designs, several factors can threaten internal validity, such as history, maturation, testing effects, and instrumentation.

- **History effect:** Events not related to the study and especially the intervention yet could affect participants' results. For instance, when some or all learners are exposed to an external scenario to learn more vocabulary.
- **Maturation Effect:** Over time, the changes in study participants (like increased experience, decreased energy, etc.) might impact the outcomes rather than the actual experiment. For example, middle school students' vocabulary increases naturally as they advance in age.
- **Testing Effect:** Variations in post-test results due to repetitive exposure to the same or similar tests.
- **Instrumentation Effect:** Changes in the measurement tool or data collection process can influence results. For example, if the researcher administering the pre-test differs from the one administering the post-test, variations in instructions or grading may affect the outcomes.

#### 2.1.4. Measures Taken to Minimize Threats

By implementing these techniques offered by Shadish, Cook, and Campbell (2002), the study increases its internal validity. In other words, the amount of vocabulary acquired is attributed to the peer-tutoring sessions rather than some other factors.

- **Minimizing the history effect:** the employment of a control group that experiences the same history effect so as to provide a basis for comparison. Additionally, the treatment is administered over a short period of time to mitigate the effect of external factors on the results.
- **To minimize the maturation effect,** a comparison between the results of the pre-test and the post-test is conducted. The goal is to check whether the tests results are significant enough to attribute the intervention or an individual's natural growth. Additionally, the maturation effect is also minimized by selecting both experimental and control groups who have similar characteristics to ensure that their growth is similar. Finally, the intervention is shortened to ensure that the maturation effect is minimized.
- **Minimizing the Testing Effect:** The experimental and the control group are both exposed to different pre-test and post-test versions, i.e., they have similar format but different content, in order to avoid memorization. Moreover, tests are spaced apart by a period of about a month in order to diminish short-term learning effects.
- **Minimizing the Instrumentation Effect:** To ensure the consistency and reliability of the assessment tools, the researchers considered the following: First, the pre-test and post-test are standardized in what concerns both format and difficulty. Secondly, objective scoring techniques are applied, such as vocabulary-focused short-answer question rubrics, to minimize scorer bias and ensure that multiple test corrections yield

consistent scores for the same responses. Finally, a pilot study is conducted to refine instruments before their deployment.

## **2.2. Population and Sampling**

### **2.2.1. Population of the Study**

The study involves fourth-year middle school learners from Haider Belkacem Middle School in Sidi Aissa, M'sila, as participants. They are between 14 and 16 years old.

### **2.2.2. Sampling of the Study**

A convenience sampling method is initially used to ensure accessibility to the targeted participants. However, the study requires only two groups; thus, a random selection process is employed to choose them out of the four available ones. This was done by writing the group numbers on paper and drawing two at random in order to ensure an unbiased selection of the intact groups

## **2.3. Participants of the Study**

The sample consists of 68 learners, evenly split. First, an experimental group of 34 learners participates in peer tutoring sessions. Secondly, a control group receives traditional teacher-led instruction.

## **2.4. Research Instruments**

To gather the necessary data for this study, the following research instruments were employed: the interpersonal intelligence questionnaire, the teacher Observation Checklists,

the pre-test, the post-test and the Satisfaction Scale. Each instrument is described in detail below.

### **2.4.1. Interpersonal Intelligence Questionnaire**

Prior to the experimental phase, learners' interpersonal intelligence levels were gauged through the Interpersonal Intelligence Questionnaire. This questionnaire is adapted from McKenzie's (2005) Multiple Intelligences Inventory. Moreover, the questionnaire aligns with the definition of interpersonal intelligence provided by Armstrong (2009) as the ability to recognize and interpret the emotions, motivations, and behaviors of others, as well as to respond appropriately in social interactions (Armstrong, 2009, p. 9).

Five questions are represented in a Likert scale format; each item reflects learners' ability to collaborate, demonstrate empathy, take on leadership roles, mediate conflicts, and build positive social relationships. Thus, the researchers ensured that the questionnaire aligns with the theoretical framework of Gardner's theory of multiple intelligences.

The questionnaire enables the research to obtain quantifiable data leading to the formation of well-balanced peer tutoring groups.

### **2.4.2. Teacher Observation Checklists**

To validate the self-reported data obtained from the Interpersonal Intelligence Questionnaire, teachers are provided with a Teacher Observation Checklist. It contains the same five items included in the questionnaire provided to the learners. Teachers rated each student using a five-point Likert scale (Never, Rarely, Sometimes, Often, Always) in order to ensure an objective assessment of their social skills. The accuracy of forming balanced peer tutoring groups is assured by comparing the results from the teacher evaluations and the questionnaire responses.

### **2.4.3. Pre-Test**

The purpose of a pre-test is to evaluate the initial English vocabulary knowledge of students during the experimental phase. The test is comprised of four activities that are designed to assess the various aspects of vocabulary comprehension and application. In Task 1, the students are required to select the most appropriate word that matches the specified definition of a word. Students are required to pair adjectives with their corresponding definitions in Task 2. Students are required to fill in the blanks with the terms provided in Task 3. In Task 4, students are required to respond to two open-ended queries that are intended to encourage the use of the target vocabulary and descriptive language.

### **2.4.4. Post-Test**

Following the implementation of the peer tutoring strategy, a post-test was given to the students in order to evaluate their ability to retain and apply the vocabulary that they had learned during the treatment phase. The content, i.e., the vocabulary targeted in the test, was changed, but the format of the post-test was identical to that of the pre-test, allowing the researchers to ensure that the results could be compared to one another and evaluate the students' progress in terms of vocabulary acquisition, respectively.

### **2.4.5. Satisfaction Scale**

In order to enable researchers to collect quantitative and qualitative data about the effectiveness and reception of the peer tutoring strategy from the learners' perspective, a two-section satisfaction scale is employed during the post-experimental phase.

Firstly, section one is five questions on a Likert scale. Every item focuses on the following significant components: engagement, interpersonal comfort, perceived effectiveness, enjoyment, and technique recommendation. Additionally, students answered on a five-point

Likert scale (Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree) to enable a more nuanced evaluation of their experience.

Secondly, Section Two is three open-ended questions designed to gain deeper insight into learners' experiences with peer tutoring sessions. The first question highlights the importance of Gardner's (1993) interpersonal intelligence in peer tutoring sessions, asking learners what they valued most about working with their tutor. The second question, which draws on Vygotsky's (1978) theory of the Zone of Proximal Development and the role of scaffolding in peer learning, asks how peer tutors helped students retain and comprehend vocabulary. The third item promotes critical thinking by allowing students to suggest improvements for tutoring sessions.

#### **2.4.6. Why Likert Scale?**

The researchers decided to use the 5-point Likert scale, a psychometric tool used to measure attitudes or opinions. It offers five response options ranking from *Strongly Disagree* to *Strongly Agree* (Likert, 1932). Here are some of the most important features that made the researchers rely on this scale:

➤ **Simplicity and Clarity**

The 5-point scale offers a clear and format for participants to express the degree of their agreement or disagreement and ensures their engagement and (Boone & Boone, 2012).

➤ **Validity and Reliability**

After the combination of Likert-scale items, they can give results that can be treated like regular number data, and , eventually, making them suitable for statistical tests like the t-test.(Boone & Boone, 2012).Additionally, Carifio and Perla (2007) confirm that valid results

can be achieved by using 4–5 well-designed items if they align theoretically with the target construct, which the case of our study.

### ➤ **Psychometric Adequacy**

The measurement of complex traits (e.g., interpersonal intelligence, satisfaction) can be achieved by using a five-item scale. This is by combining multiple indicators and dimensions to accurately gauge a single behaviour or attitude (Carifio & Perla, 2007).

## **2.5. Research Procedure**

Once the experimental group had the pretest and the results were confirmed through their comparison with the control group pretest results, the treatment—using the peer tutoring grounded on the interpersonal intelligence of the tutors—was introduced.

### **2.5.1. Peer Tutoring Treatment**

The treatment was conducted over 8 sessions lasting for 12 hours in total. Four of them lasted 1 hour each, and the other four lasted 2 hours each over a period of 4 weeks (from February 2nd to February 28th). The targeted vocabulary set consisted of adjectives, nouns, and verbs used to describe personality traits, aligning with Sequence Two of the official fourth-year syllabus: “Me, My Personality, and Life Experiences.”

The aim of the treatment is to enhance vocabulary retention of the learners through peer tutoring grounded on the interpersonal intelligence of selected learners. Nine learners, identified via the questionnaire as having high and very high interpersonal intelligence, were assigned as the peer tutors within their sub-groups of 3 to 4 learners. These tutors were given answer keys exclusively for the initial exercise, which focused on introducing and explaining the meanings of the targeted vocabulary. Their key role was to clearly explain the new vocabulary to their classmates and assist them in correcting the first task.

Most sessions focused on exercises including matching the targeted vocabulary to their definitions, filling in gaps with the same vocabulary, and writing phrases or short paragraphs to encourage their usage. Tutors took the leadership role and acted as a point of reference and support while the learners completed the remaining activities.

While the learners were working in groups, the teacher was constantly moving between groups to monitor the process, provide occasional guidance, and especially to ensure that tutors remained central to the learning process.

By creating such a collaborative, interactive, and socially engaging learning environment, it would not only foster better understanding of vocabulary but also promote long-term retention.

## **2.6. Pilot Testing**

Ensuring the validity and reliability of the data collected was one of the researchers' primary objectives. Thus, the Interpersonal Intelligence Questionnaire, Teacher Observation Checklists and the Pre- and Post-Tests were administered on a convenience sample out of the same population, prior to the experiment during the second week of January. Additionally, these instruments were piloted with a separate sample of 20 learners from an intact group unrelated to either the experimental or control groups. The following sections elaborate on the design, administration, and purpose of each instrument in detail.

### **2.6.1 Interpersonal Intelligence Questionnaire and Teacher Observation Checklists.**

In this section, the researchers conducted theoretical and statistical validation procedures in order to ensure the validity and reliability of the research instruments used in assessing interpersonal intelligence within the context of peer tutoring and vocabulary retention.

### 2.6.1.1. Theoretical and Content-Based Validation of the Instruments

To make the Interpersonal Intelligence Questionnaire and the Teacher Observation Checklist relevant to the context of peer tutoring and vocabulary retention, each of its items reflected a specific feature of interpersonal intelligence (construct validity). The questions are closely aligned with the essential components of interpersonal intelligence as defined by Howard Gardner (1983), namely collaboration, empathy, leadership, conflict resolution, and relationship building (content validity). Additionally, their statements were clear, concise, and easily comprehensible for the target participants. (face validity).

### 2.6.1.2. Statistical Validation of the Instruments

As proposed by Boone, H. N., Jr., & Boone, D. A. (2012), descriptive statistics (the mean and the standard deviation), item-total correlations, and one-sample t-test were computed for each item to assess how well they contribute to the overall construct. The following table presents a comparison of descriptive statistics between both tools:

**Table2.1. Descriptive statistics for the interpersonal questionnaire and the teacher observation checklist.**

Number of participants N	Items.	Mean		Standard deviation	
		Inter. Int. questionnaire	Teacher observation	Inter. Int. questionnaire	Teacher observation
20	Question 1	3.40	3.65	0.821	0.88
	Question 2	3.10	3.10	0.852	0.97
	Question 3	2.80	2.75	1.056	1.07
	Question 4	3.15	2.95	1.182	1.00
	Question 5	2.90	2.85	1.071	1.04

From the table above, the means for all items ranged from 2.80 to 3.40 (questionnaire) and 2.85 to 3.65 (observation), where 3 is the neutral midpoint, suggesting generally moderate agreement with the items. In addition, the standard deviations indicate a reasonable spread in responses, ranging from 0.82 to 1.18(questionnaire) and 0.88 to1.07 (observation) .In other words, all items show tight clustering around the mean, meaning participants generally agreed

in their ratings in both instruments. The following table illustrates an inferential statistic comparison between both tools:

**Table 2.2. Inferential statistics for the interpersonal questionnaire and the teacher observation checklist.**

Number of participants. N	items	Pearson's r item total correlation		One sample t-test interpersonal intelligence questionnaire		One sample t test The teacher observation checklist.	
		Inter. Int. questionnaire	Teacher observation	t-statistic	p-value	t-statistic	p-value
20	Question 1	0.777	0.59	0.539	0.612	0.45	0.63
	Question 2	0.598	0.72	0.525	0.606	0.46	0.65
	Question 3	0.661	0.64	-0.847	0.408	-1.05	0.31
	Question 4	0.830	0.81	0.567	0.577	-0.22	0.83
	Question 5	0.764	0.77	-0.418	0.681	-0.65	0.53

From the table above, both tools show **moderate-to-strong correlations** (questionnaire:  $r = 0.59-0.83$ ; observation:  $r = 0.60-0.81$ ), indicating good internal consistency and consistent **item performance** in measuring the same construct for both tools. In addition, the t-test comparison shows strong agreement between both tools, with all items showing non-significant results with a  $p > 0.05$  for both tools (Questionnaire:  $-0.85$  to  $+0.57$ ; Observation:  $-1.05$  to  $+0.46$ ). In other words, each tool confirmed that responses are centered and not skewed and demonstrated reliable, neutral measurement of interpersonal traits.

### 2.6.1.3. Reliability of the Instruments

Regarding reliability, pilot testing of both the Interpersonal Intelligence Questionnaire and the Teacher Observation Checklists yielded a Cronbach's alpha coefficient of 0.77 and 0.78, respectively. These values exceed the commonly accepted threshold of 0.70 for acceptable reliability (Nunnally & Bernstein, 1994), confirming the strong internal consistency of the tool.

To sum up, the theoretical foundation and statistical evidence confirm that both the Interpersonal Intelligence Questionnaire and the Teacher Observation Checklist are, to a

significant extent, valid and reliable tools. The findings support that they are suitable to be used in peer tutoring and vocabulary development.

## 2.6.2. Pre-Test and Post-Test

### 2.6.2.1. Theoretical and Content-Based Validation of the Instruments

The validity and reliability aspects of the pre-test and the post-test were carefully considered during the piloting phase. Both tools closely align with the presented lessons during the experimental phase, relevant to "My Personality and Life Experience." They directly assess vocabulary related to personality adjectives, dream careers, and childhood memories, eventually confirming that the tests measure what they are meant to measure (content validity). Furthermore, they both use familiar test formats such as multiple-choice, matching, fill-in-the-blank, and short-answer questions because they are easily understood by learners and practical for scoring (Brown, 2005). (Face validity)

### 2.6.2.2. Statistical Validation of the Instruments

The pre-test and post-test were administered separately to the same sample, with a one-week interval between them. The following table presents descriptive statistics:

**Table2.3. Descriptive statistics of the pre-test and the post test.**

Number of participants	mean			Standard deviation		
	Pre-test	Post test	Gain scores	Pre-test	Post test	Gain scores
20	4.44	4.18	-0.26	2.42	2.40	1.43

As indicated in the table above, the mean score of the pretest, 4.44, is almost identical to the mean of the posttest, 4.18. Furthermore, the mean of the gain score is -0.26, which is very close to zero. Additionally, the nearly identical standard deviations (Pre = 2.42, Post = 2.40) show the consistency in participant responses across both tests. Hence, the findings suggest

that both assessments measure vocabulary knowledge at a similar level of difficulty and reliability.

After performing Levene's Test for Homogeneity of Variance, which showed a p-value of 0.797 (greater than 0.05), and Kolmogorov–Smirnov tests that resulted in  $p = 0.138$  for the pretest and  $p = 0.683$  for the posttest, confirming normality in both, a t-test was conducted as shown in the table below.

**Table 2.4. Inferential statistics on the pretest and the post test**

Number of participants	Gain score t-test	
	t-statistic	p-value
20	-0.94	0.36

According to the table above, the t-test for gain scores (-0.94) yields a non-significant p-value of 0.36 ( $p > 0.05$ ). This value means that no statistically significant difference exists between the pretest and posttest scores.

In conclusion, these findings confirm that the pretest and posttest are balanced and consistent in measuring the same level of vocabulary knowledge. The lack of significant score difference shows that the tools are valid and ready for use in the experimental phase.

**2.6.2.3. Reliability of the Instruments**

Both tests assess vocabulary from different angles, such as recognition, recall, and contextual use. This hypothesis is supported by Brown (2005), who claimed that different item formats enhance internal consistency, or reliability, by capturing various construct (the tests) aspects. Additionally, the use of clear answer keys and standardized scoring rubrics for the written production task (task 4) ensures consistent evaluation, regardless of who the scorers are, and strengthens the tests' overall reliability.

## **2.6.4. Satisfaction Scale**

Due to the nature of the satisfaction scale, a sample of 10 learners was selected from the experimental group using systematic random sampling. The learners had experienced the peer tutoring treatment, and they were the only ones capable of providing informed feedback on the experience.

### **2.6.4.1. Theoretical and Content-Based Validation of the Instrument**

The Satisfaction Scale, section one, items were carefully designed to assess learners' enjoyment, perceived effectiveness, engagement, emotional comfort, and willingness to recommend. These key dimensions of learners' satisfaction are relevant to the peer tutoring experience. Prior research supports the inclusion of such dimensions. For instance, peer tutoring contributes to students' enjoyment and involvement, according to Duran and Monereo (2008). They also highlight that when students received assistance from their peers, they felt more satisfied and confident. The findings support the inclusion of these dimensions in the satisfaction scale's design. Additionally, the sentences were appropriate to the learners age, clearly stated, and clear enough for participants to comprehend.

Section two is three open-ended questions. The first question aligns with Gardner's (1993) definition of interpersonal intelligence by shedding light on the social connections between students and tutors. Furthermore, the second question incorporates Vygotsky's (1978) concept of the Zone of Proximal Development and its role in facilitating vocabulary learning. The third question invites learners to suggest improvements and provide feedback in peer learning.

### **2.6.4.2. Statistical Validation of the Instruments**

Similarly to the Interpersonal Intelligence Questionnaire and the Teacher Observation Checklist, descriptive statistics (the mean and the standard deviation), item-total correlations,

and one-sample t-tests were computed for each item to assess how well they contribute to the overall construct. The following table presents a descriptive statistic of the tool:

**Table 2.5. Descriptive statistics for the satisfaction scale.**

Number of participants	items	mean	Standard deviation
10	Question 1	3.70	0.48
	Question 2	3.40	0.52
	Question 3	3.60	0.52
	Question 4	3.70	0.48
	Question 5	3.30	0.48

From the table above, the means for all items ranged from 3.30 to 3.70, where 3 is the neutral midpoint, suggesting generally good agreement with the items. In addition, the standard deviations indicate a reasonable spread in responses, ranging from 0.48 to 0.52. In other words, all items show tight clustering around the mean, meaning participants generally agreed in their ratings in the instrument. The following table illustrates an inferential statistic for the tool.

**Table 2.6. Inferential statistics for the satisfaction scale.**

Number of participants	items	Pearson's r item total correlation	One sample t test	
			t-statistic	p-value
10	<b>Question 1</b>	0.72	4.60	0.0014*
	<b>Question 2</b>	0.65	2.40	0.040*
	<b>Question 3</b>	0.81	3.60	0.0059*
	<b>Question 4</b>	0.78	4.60	0.0014*
	<b>Question 5</b>	0.69	1.90	0.089

From the table above, the tool shows fairly strong correlations ( $r = 0.69-0.81$ ), indicating excellent internal consistency and consistent item performance in measuring the same construct for the tool. In addition, the t-test values indicate that all items show non-significant

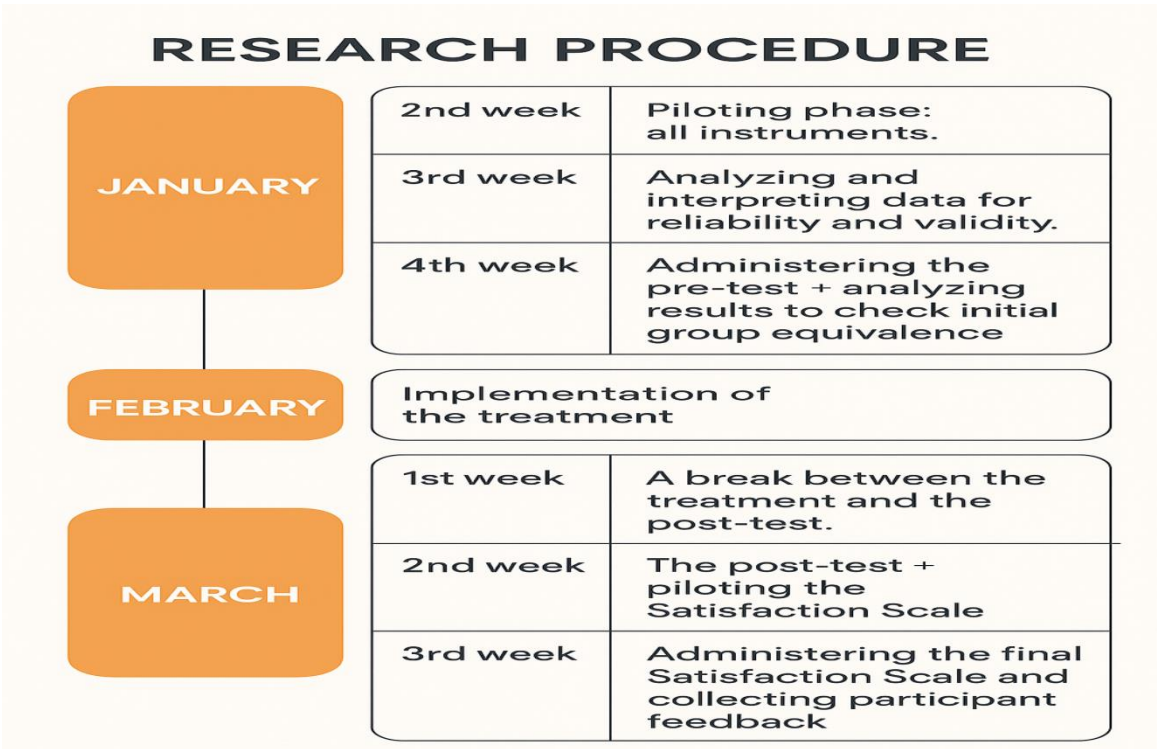
results with a  $p > 0.05$ . In other words, the tool confirmed that responses are centered and not skewed and demonstrated reliable, neutral measurement of satisfaction traits.

**2.6.4.3. Reliability**

The Satisfaction Scale used in this study demonstrated a Cronbach's alpha coefficient of 0.67. Though it is not above 0.7, according to Nunnally and Bernstein (1994), a reliability coefficient of 0.6 or above is suitable for preliminary research, particularly when the limited sample size is limited, which is the case here.

**2.7. Administration of Instruments**

After piloting the designed instruments and verifying their reliability and validity, the researchers started the experiment. The following section is a detailed report on how each tool was deployed during the experiment.



**Figure 2.1. Research Procedure.**

### **2.7.1. Phase One: Pre-Experimental Instruments**

Before starting the treatment, the researchers administered the Interpersonal Intelligence Questionnaire and the Teacher Observation Checklists in order to identify the peer tutors according to the research design.

#### **2.7.1.1. Interpersonal Intelligence Questionnaire**

During the last week of January, the Interpersonal Intelligence Questionnaire was administered to the experimental group. It consists of self-report items, based on traits outlined in Gardner's Multiple Intelligences theory, rated on a Likert scale, wherein, for each question, the learner rates his or her evaluation to the specific question from 1 to 5.

Most learners were calm and showed enthusiasm, sought clarification on certain items, and demonstrated their determination to report accurate facts about their level of interpersonal intelligence. The tool was administered by the teacher, who provided the necessary support to ensure learners understood the questions before responding.

#### **2.7.1.2. Teacher Observation Checklist**

The Teacher Observation Checklist is a useful tool to cross-check learners' self-assessments. The teacher who administered this instrument has been teaching the experimental group since the beginning of the school year. As a result, he has a thorough understanding of his students' intelligence profiles, particularly their interpersonal intelligence, because he frequently conducts pair and group workshops during his regular sessions. The tool was provided to the teacher during the second week of January and recollected after three weeks. Thus, he had sufficient time to evaluate his learners accurately.

### **2.7.2. Phase Two: Experimental Instruments**

The second phase included the administration of a pre-test, the implementation of the peer tutoring treatment, and the administration of a post-test.

### **2.7.2.1. Pre-Test**

During the last week of January, the teacher administered a pretest for both groups, the control group and the experimental group. The objective of this crucial phase is to confirm that both groups possess identical levels of proficiency in the vocabulary related to the topic of “describing personality traits”. The test timing was half an hour. The teacher clarified to the students that the purpose of the assessment is to identify their current level, not to provide an official evaluation in order to reduce their anxiety and tension.

### **2.7.2.1. Post-Test**

During the second week of March, the teacher administered a post-test for both groups, the control group and the experimental group. The objective of this crucial phase is to measure the levels of proficiency in the vocabulary related to the topic of “describing personality traits” after being subjected to the treatment and the traditional teaching methods for the experimental group and the control group, respectively. The test timing was half an hour. The teacher, here, also clarified to the learners that the purpose of the assessment is to identify their new level, not to provide an official evaluation, in order to reduce their anxiety and tension.

### **2.7.3. Phase Three: Post-Experimental Instrument (The Satisfaction Scale)**

During the third week of March, the Satisfaction Scale was administered to the experimental group after conducting the post-test. While dealing with section one which consists of five-item Likert scale, the teacher explained to the learners that they are required to select a number that reflects their actual perceptions of the peer tutoring session. Next, the teacher instructed students to respond to the open-ended questions according to their personal

viewpoints. He went through the questions one by one, assisting them throughout the whole process.

Being designed to capture students' levels of satisfaction with the peer tutoring sessions, this instrument provided valuable qualitative and quantitative insights into the learners' experience with the interpersonal intelligence-based intervention.

## **2.8. Data Analysis**

This section describes the procedures and approaches used to analyze the quantitative and qualitative data collected from the research tools employed in this study. The analysis combined using: Firstly, descriptive statistics, for example, the mean, the median and the standard deviation. Secondly, the inferential statistics, for instance, Cronbach's alpha, Pearson's  $r$ , as well as the non-parametric tests such as: the Mann-Whitney U and Wilcoxon Signed Ranks Test. Additionally, a thematic analysis was conducted to address the qualitative data obtained from the satisfaction scale open-ended questions.

### **2.9.1. Interpersonal Intelligence Questionnaire and Teacher Observation**

#### **Checklist.**

For both tools, the statistical analysis went through two different phases: the piloting phase and the experimental phase. Firstly, during the piloting phase, the researchers focused on calculating the mean and the standard deviation of each item. Also, Pearson's  $r$  and a one-sample  $t$ -test were conducted to ensure the reliability and the validity of both tools. Subsequently, during the experimental phase, the researchers concentrated on the interpretation of the composite scores, i.e., their mean, standard deviation, and classification of the learners according to the interpretation of results following a four-tier scale (5–10: Low interpersonal intelligence, 11–15: Moderate interpersonal intelligence, 16–20: High interpersonal intelligence, 21–25: Very high interpersonal intelligence). The classification of

the learners helped the teachers assign them to subgroups in the experimental group. In conclusion, descriptive statistics were employed to identify the distribution of interpersonal intelligence levels.

### **2.9.2. Pre-Test and Post-Test**

To measure the impact of peer tutoring on vocabulary retention, both control and experimental groups were given a vocabulary pre-test and a post-test. Both tools went through the piloting phase and the experimental phase. Each one had different objectives. During the piloting phase, the statistical analyses concentrated on evaluating the reliability and validity of each tool. By calculating the means, the standard deviations, and the Cronbach's alpha of each separately, the researchers ensured that they were ready for the actual deployment.

During the experimental phase, the results were analyzed using: descriptive statistics, for example, the mean, the median and the standard deviation as well as the non-parametric tests such as: the Mann-Whitney U and Wilcoxon Signed Ranks Test. Moreover, the gain score were calculated to measure vocabulary gains after the intervention. Also, two effect sizes were calculated to compare performance between the groups.

### **2.9.3. Satisfaction Scale**

The satisfaction scale is a combination of two sections. Section one is a five-item Likert scale and section two is three open ended questions.

In the first section, the questionnaire went through the piloting phase, where reliability and the validity of the tool were ensured by employing a statistical analysis, including the means and standard deviations of each item. Additionally, Cronbach's alpha and Pearson's r were calculated to confirm its reliability. During the post-experimental phase, the five Likert-scale questions, was scored and interpreted similarly to the other instruments (5–10: Low satisfaction, 11–15: Moderate satisfaction, 16–20: High satisfaction, 21–25: Very high

satisfaction). In the second section, the three open-ended questions were analyzed qualitatively through thematic content analysis to explore students' perceptions of the peer tutoring experience.

## **2.10. Data Analysis and Interpretation**

This section presents the analysis and interpretation of the data collected to investigate the impact of peer tutoring grounded on interpersonal intelligence on middle school pupils' vocabulary retention. Descriptive and inferential statistical methods as well as thematic examination were employed to derive meaningful insights from the data collected using the designed tools. The chapter is divided into three sections: pre-experimental phase data analysis, experimental phase data analysis, and post-experimental phase data analysis.

### **2.10.1. Pre-Experimental Phase Data Analysis**

This section presents the data analysis and interpretation of the Interpersonal Intelligence Questionnaire and Teacher Observation Checklists. The aim is to identify the learners with high interpersonal intelligence to assign them as the heads of each group. Cross-checking with the teacher's observation data allows the teacher to confirm the identification of the tutors.

#### **2.10.1.1. Interpersonal Intelligence Questionnaire**

The following table summarizes the outcomes of conducting the questionnaire in the experimental group:

**Table2.7. The Composite Scores , Frequencies and Percentages of Interpersonal Intelligence Levels.**

<b>Score intervals</b>	<b>iterpretation</b>	<b>frequency</b>	<b>percentage</b>
<b>5-10</b>	Low	4	11.76%
<b>11-15</b>	Moderate	22	64.70%
<b>16-20</b>	High	6	17.64%
<b>21-25</b>	Very high	2	5.88%

According to the table, the interpretation of learners' composite scores is divided into four categories as follows: Participants' scores between 5 and 10 indicate low interpersonal intelligence. Those in the 11-15 range have a moderate level of intelligence and interpersonal skills. The 16-20 interval is categorized as high interpersonal intelligence above average. Finally, the 21-25 range represents very high intelligence or exceptional interpersonal skills.

The table shows that most learners fall in the moderate interpersonal category. Their number is 22 learners, or 64.70% of the total 34 learners. However, the table clearly indicates that only 8 participants are the most suitable candidates for tutor selection. As their scores are within the high (16-20) and very high (21-25) ranges, their interpersonal intelligence levels align with the criteria for effective tutoring.

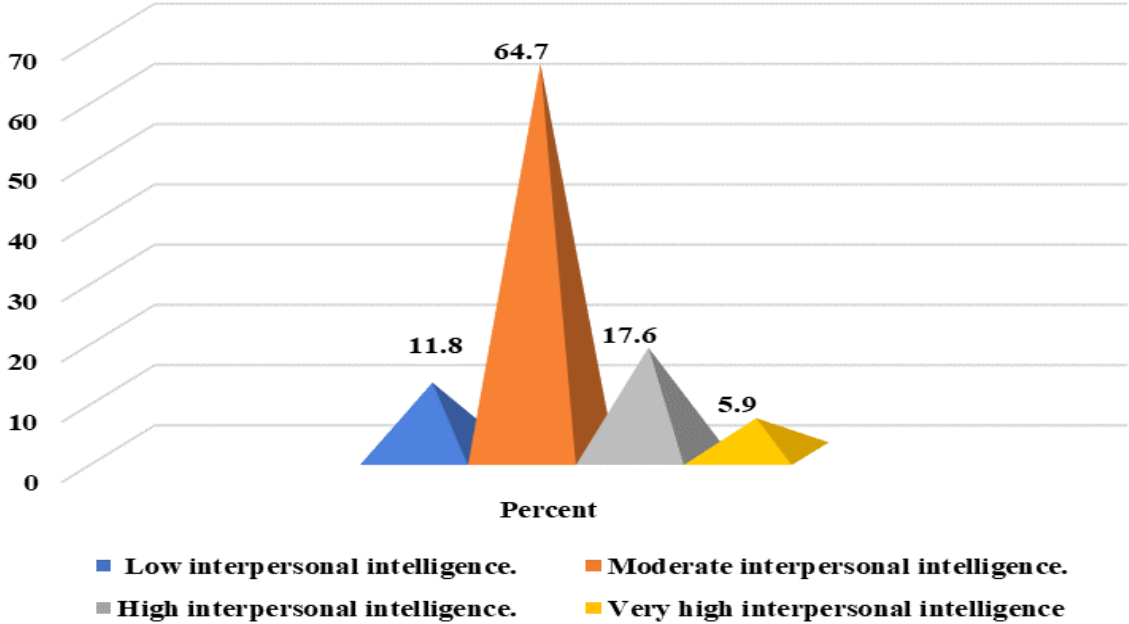
The following table presents descriptive statistics for the questionnaire:

**Table2.8. Interpersonal Intelligence Questionnaire Descriptive Statistics.**

<b>Number of participant</b>	<b>Mean of the composite score</b>	<b>SD of the composite scores</b>	<b>Maximum score</b>	<b>Minimum score</b>
<b>34</b>	14.26	3.45	21	8

As shown in the table above, the **mean score** of 14.26 indicates that the learners' scores are just above the **moderate intelligence** range. This indicates that the majority of learners possess moderate interpersonal skills. Additionally, the **standard deviation** of 3.45 shows that most learners' scores are clustered around the mean, again, affirming that most learners showed a moderate level of interpersonal skill. Furthermore, the **maximum score** is 21 and **the minimum score** is 7, both demonstrating that the range within which the participants' scores fall is average to above-average interpersonal intelligence.

The following bar graph provides a visual interpretation for the questionnaire results:



**Graph 2.1. Bar Graph of Interpersonal Intelligence Questionnaire Results.**

The bar graph illustrates the distribution of learners' interpersonal intelligence scores across four score intervals: Low (5-10), Moderate (11-15), High (16-20), and Very High (21-25). The graph indicates that the majority of participants fall into the moderate intelligence category with 64.7%. The high intelligence range (16-20) also has a noticeable number of participants with 17.64%, but less than the moderate range. The low intelligence range (5-10) has the lowest frequency with 11.76%, indicating that only a few learners demonstrated lower levels of interpersonal intelligence. Finally, few scores fall in the Very High (21-25) range with 5.88%, indicating that only a few learners possess exceptional interpersonal intelligence.

**Conclusion:**

In conclusion, the ideal candidates for selection as tutors are the learners who scored between 16 and 25, as they indicated high and very high intelligence. Based on the frequency and percentage data, only eight learners, the most qualified tutors, demonstrated the highest

scores. Based on the understanding that interpersonal intelligence is a key factor in tutoring effectiveness, this selection process considers learners who excel in this area for the position of tutors.

### 2.10.1.2. Teacher Observation Checklists

The following table describes the results from conducting the observation checklist of the teacher in the experimental group:

**Table2.9. Teacher Observation lists Results Interpretation.**

Score intervals	iterpretation	frequency	percentage
5-10	Low	2	5.88%
11-15	Moderate	25	73.52%
16-20	High	7	20.58%
21-25	Very high	0	0%

As indicated in the table above, similar to the interpersonal intelligence questionnaire, the interpretation of learners' composite scores is divided into four categories as follows: Participants' scores between 5 and 10 indicate low interpersonal intelligence. Those in the 11-15 range have a moderate level of intelligence and interpersonal skills. The 16-20 interval is categorized as high interpersonal intelligence above average. Finally, the 21-25 range represents very high intelligence or exceptional interpersonal skills.

The table shows that most learners fall in the moderate interpersonal category. Their number is 22 learners, or 64.70% of the total 34 learners. However, the table clearly indicates that only 8 participants are the most suitable candidates for tutor selection. As their scores are within the high (16-20) range, their interpersonal intelligence levels align with the criteria for effective tutoring. However, the results show that no single learners scored a very high (21-25) range.

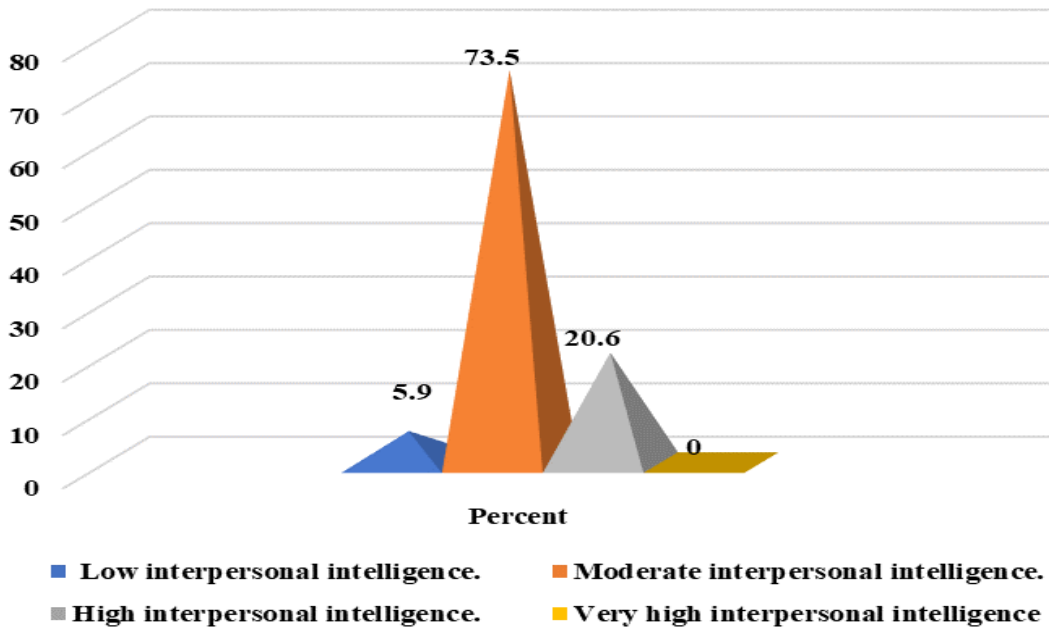
**Table2.10. Teacher Observation lists Descriptive Statistics.**

<b>Number of participant</b>	<b>Mean of the composite score</b>	<b>SD of the composite scores</b>	<b>Maximum score</b>	<b>Minimum score</b>
<b>34</b>	13.65	2.68	19	7

From the table above, the **mean score** of 13.65 indicates that the learners' scores are just above the **moderate intelligence** range. This indicates that the majority of learners possess moderate interpersonal skills. Additionally, the **standard deviation** of 2.68 shows that most learners' scores are tightly clustered around the mean, which affirms that most learners showed a moderate level of interpersonal skill. Furthermore, the **maximum score** is 19 and **the minimum score** is 7, both demonstrating that the range within which the participants' scores fall is average to above-average interpersonal intelligence.

In conclusion, the participants who scored within the **16-25** range, specifically in the **High** and **Very High** categories, are ideal candidates for tutor selection. These participants possess superior interpersonal skills, which are essential for effective tutoring. The selected tutors will come from the **High** and **Very High** groups based on the frequency and percentage breakdown, which highlights the small number of individuals who excel in this area.

The following graphs better illustrate the findings:



**Graph 2.2. Bar Graph of Teacher Observation lists Results.**

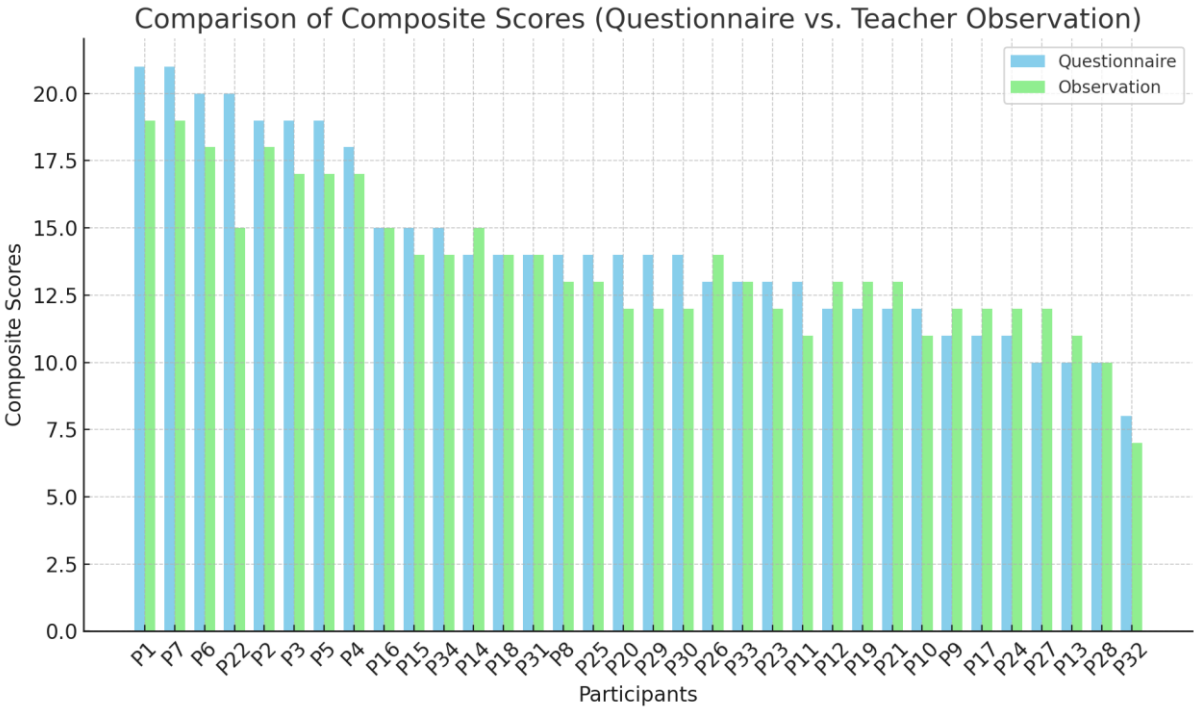
The bar graph illustrates the distribution of learners' interpersonal intelligence scores across four score intervals: Low (5-10), Moderate (11-15), High (16-20), and Very High (21-25). The graph indicates that the majority of participants fall into the moderate intelligence category with 73.5%. The high intelligence range (16-20) also has a noticeable number of participants with 20.6%, but less than the moderate range. The low intelligence range (5-10) has the lowest frequency with 5.9 %, indicating that only a few learners demonstrated lower levels of interpersonal intelligence. Finally, no learner has scored within the Very High Intelligence range (21-25), indicating that no one has exceptionally high interpersonal intelligence skills.

In conclusion, the ideal candidates for selection as tutors are the learners who scored between 16 and 25, as they indicated high and very high intelligence. Based on the frequency and percentage data, only eight learners, the most qualified tutors, demonstrated the highest scores. Based on the understanding that interpersonal intelligence is a key factor in tutoring

effectiveness, this selection process considers learners who excel in this area for the position of tutors.

**2.10.1.3. A Comparison between Interpersonal Intelligence Questionnaire and Teacher Observation Checklist.**

The clustered bar graph compares the composite scores of each participant from the Interpersonal Intelligence Questionnaire and the teacher’s observation.

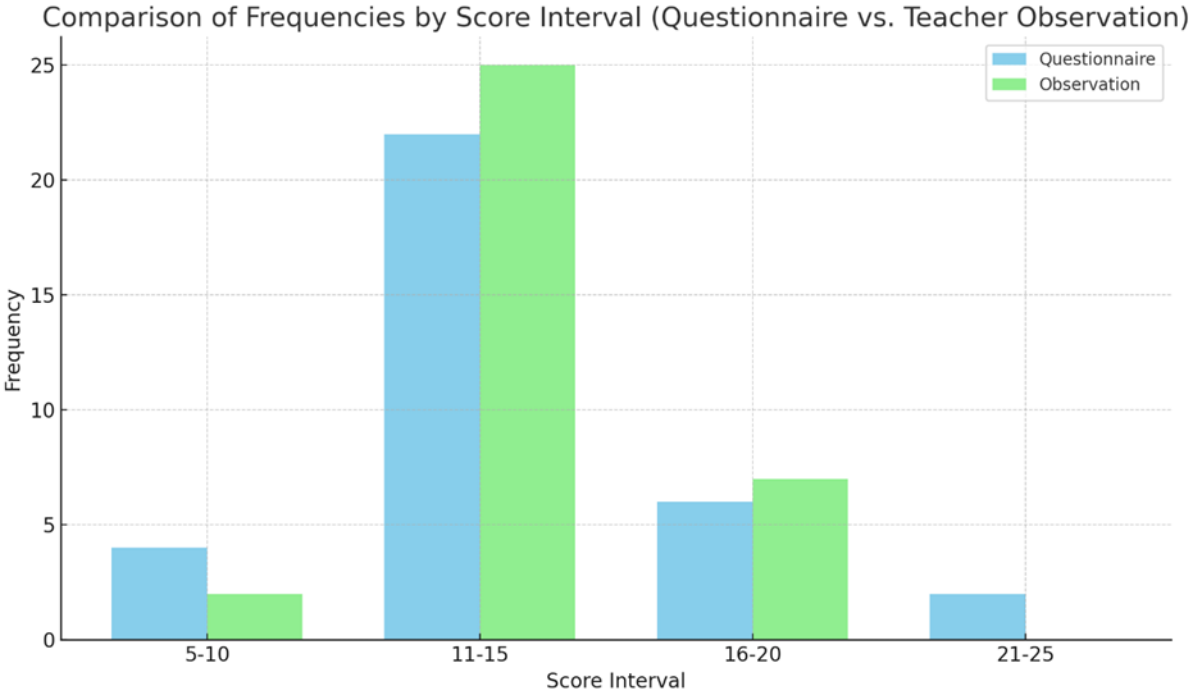


**Graph 2.3. Clustered Bar Graph of Both Tools’ Composite Scores.**

From the graph above, we can see that the composite scores from both tools are fairly consistent across participants, showing that the results from both tools align. Hence, the graph indicates that the two methods of assessing interpersonal intelligence have led to similar conclusions. In addition, the comparison supports the goal of cross-checking results, as both

tools reflect similar ratings, confirming the selection of the top 8 participants with the highest interpersonal intelligence, who are suitable for the tutor role.

This clustered bar graph compares the frequency of participants in different score intervals for both the Interpersonal Intelligence Questionnaire and the Teacher’s Observation.



**Graph 2.4. Clustered Bar Graph of frequencies by Score Intervals of Both Tools’**

**Composite Scores.**

From the graph above, both tools show similar distribution of participants across the intervals. For both tools ,the 5-10 interval has the fewest participants, and similarly, the 21-25 interval also has a small number of participants. However, the 11-15 and 16-20 intervals includes the majority of learners , with a high frequency for the Moderate Intelligence range in both tools.

This similarity between the questionnaire and the observation demonstrates that both methods provided similar findings. Additionally, the findings show that both tools are reliable and accurately assess learners' interpersonal intelligence.

## 2.10.2. Experimental Phase Data Analysis: Pre-Test and Post-Test

In this section, the data gained from the pre-test and the post-test administered to both the experimental and control groups will be analyzed and interpreted to explore the impact of the treatment. To fully identify the treatment effectiveness, there are two sub-sections: between-group comparison and within-group comparison.

### 2.10.2.1. Homogeneity and Normality Tests.

To verify the conditions for selecting the T-test and its suitability for analyzing the current study's data, the study used two main tests:

#### 2.10.2.1.1. Homogeneity Test:

The following table presents the homogeneity results obtained from comparing the pre-tests and post-tests of both the experimental group and the control group:

**Table.2.11. Homogeneity Test Results.**

Groups	Levene Statistic	df1	df2	Sig.
CG_EG_Pre -test	0.09	1	66	0.75
CG_EG_Post -test	0.03	1	66	0.68

Based on the results in the table related to sample homogeneity, both the **pre-test** and **post-test** have the **Sig. values** of 0.75 and 0.68, respectively, **greater than 0.05** . Therefore, the

assumption of **homogeneity of variance is met**, meaning it is appropriate to use the **independent samples T-test** for comparing means between the two groups.

### 2.10.2.1.2 Normality test.

The following table presents the results obtained from the test of normality conducted on both groups pre-tests.

**Table.2.12. Test of Normality Results.**

	Kolmogorov-Smirnov		
	Statistic	df	Sig.
Pre – Test CG	0.235	68	0.000
Pre – Test EG	0.142	68	0.002

The table above shows that the calculated significance level (Sig.) for both groups (control group = 0.000 and experimental group=0.002) is **less than the significance threshold of 0.05**, and thus, the data **do not follow a normal distribution**.

Since a fundamental condition for applying the **T-test** (normality) is not met, the current study must rely on statistical methods that are suitable for the type of data. Therefore, **non-parametric methods** will be used, specifically:

- First, the **Mann-Whitney U Test** to compare the two independent groups: the experimental group and the control group.
- Second, The **Wilcoxon Signed Ranks Test** for comparisons **within the same group** (pre-test vs. post-test).

### 2.10.2.1. Within Group Comparison.

In this section, the pre-test and post-test results of each group are compared separately. The aim is to show the extent of improvement in each group. On the one hand, checking the improvement experimental group after the implementation of the treatment, and, on the other hand, to check the improvement of the control group after receiving the same vocabulary lesson through traditional methods.

#### 2.10.2.1.1. The experimental group.

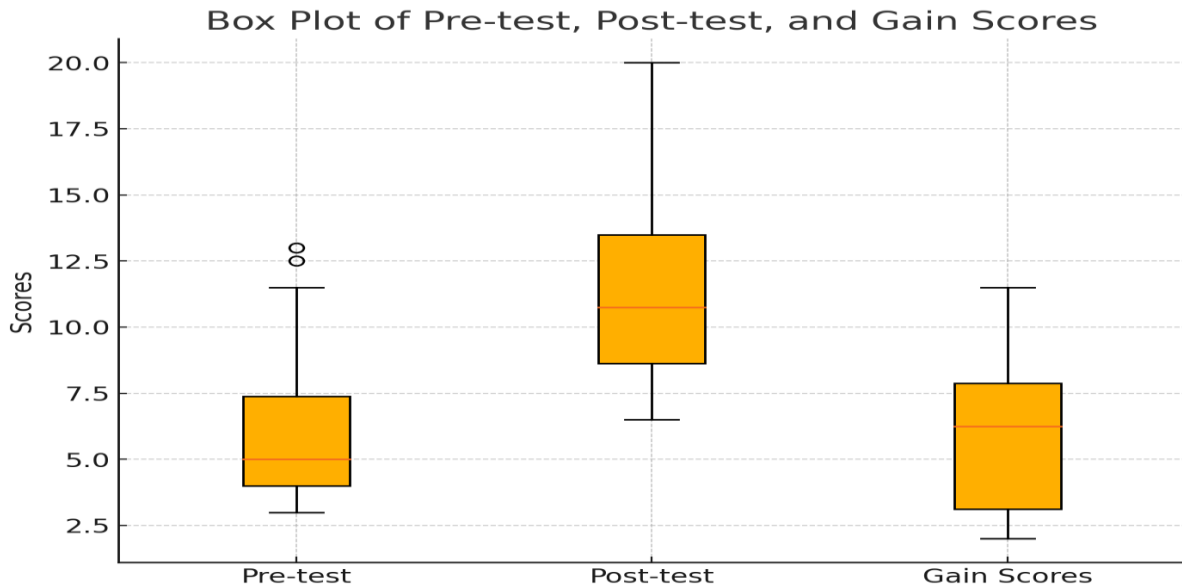
The following table illustrates the descriptive statistics of the experimental group before and after the treatment:

**Table 2.13. Descriptive Statistics of The Pre-Test and The Post-Test results.**

Number of participants N	mean		SD		Mean of gain scores	SD of gain scores
	pre	post	pre	post		
34	5.97	11.88	2.85	4.35	5.91	2.64

From the table above, pre-test scores have a mean of 5.97, with a standard deviation of 2.85. This suggests that the participants had a wide range of initial scores on the pre-test, typically reflected by a high standard deviation. However, post-test scores show a higher mean of 11.88, with a higher standard deviation of 4.35. This finding indicates that learners' scores on the post-test were generally higher, with a greater spread of results compared to the pre-test. Additionally, the gain scores represent the difference between the post-test and pre-test scores, with a mean of 5.91 and a standard deviation of 2.64. The results indicate that, on average, participants improved by 5.91 points, with some variability in the amount of improvement across individuals. To sum up, there was a clear improvement in learners' scores from the pre-test to the post-test. The increase in mean scores from 5.97 (pre-test) to 11.88

(post-test) suggests that the participants showed significant improvement after the intervention. The gain scores also show a significant increase with a mean of 5.91. Furthermore, the box plot below illustrates the distribution of scores for the pre-test, post-test, and gain scores.



**Graph 2.5. Box Plot of The Experimental Group Results.**

The box plot clearly demonstrates the difference between the pre-test and post-test. The pre-test results indicate a more concentrated range of scores, with a median of 5.00 and a relatively limited variance. However, the post-test results indicate a larger improvement in scores, with a higher median around 10.75 and a wider variance. Furthermore, the median of the gain scores is approximately 6.25, signifying that participants gained around 6 points on average. Additionally, the gain score distribution is rather narrow, indicating that the majority of participants improved at similar rates. In **Conclusion**, the treatment had a **moderate to strong educational impact**, which is illustrated by the shift in medians and consistent gain scores across the group.

To examine the differences **within the experimental group (EG)**, the study relied on the **Wilcoxon Signed Ranks Test** in order to identify the significance of the differences between the **pre-test and post-test** measurements. The following table illustrates these results.

**Table 2.14. Wilcoxon Signed Ranks Test Results Of The Pre-test and Post-test.**

EG -Pre – Post-Test	N	Mean Rank	Sum of Rank	Z	Sig
Negative Ranks	0	0	0		
Positive Ranks	34	17.50	595	5.09	0.000
Equal	0				
Total	34				

From the table above, the Wilcoxon Signed Ranks Test yielded a Z value of 5.09 with a significance level (Sig.) of 0.000. Thus, comparing this with the study’s significance threshold of 0.05, we conclude that there are statistically significant differences within the experimental group, in favor of the post-test. In addition, the Mean Rank was 17.50, and the Mean was 11.88, indicating that all 34 participants showed improvement (Positive Ranks = 34). This suggests that the treatment method used in the study effectively contributed to the development of the entire group of learners.

In conclusion, the **Wilcoxon Signed Ranks Test** confirms that there was a significant difference between the pre-test and post-test scores. Hence, the learners did show a significant improvement, and the intervention had a statistically significant effect.

After the analysis and interpretation of the pre-test and post-test scores of the experimental group, a clear improvement in learners' scores is demonstrated by the descriptive statistics and Wilcoxon Signed Ranks Test results. Additionally, the box plot visually shows a shift in median scores and the tight distribution of gain scores and, ultimately, reinforces the

consistent Wilcoxon Signed Ranks Test results that show statistical significance in the improvement due to the implementation of the treatment.

**2.10.2.1.2. The control group.**

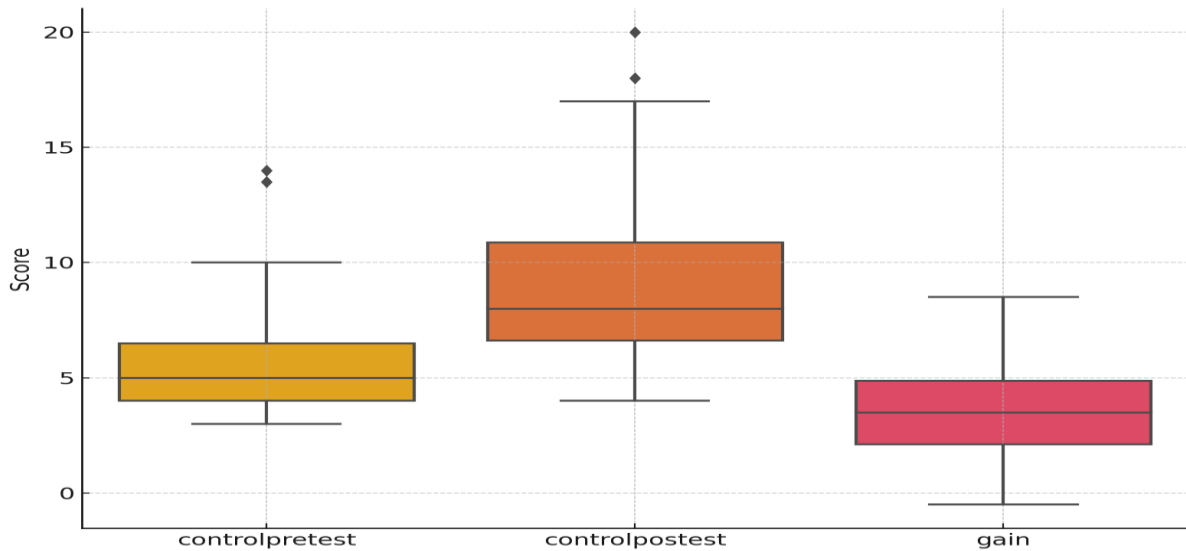
The following table presents the descriptive statistics of the control group learners scores:

**Table 2.15. Descriptive Statistics of The Pre-Test and The Post-Test results.**

Number of participants	mean		SD		Mean of gain scores	SD of gain scores
	pre	post	pre	post		
34	5.85	9.59	2.78	4.31	3.74	2.12

According to the table above, pre-test scores have a mean of 5.85, with a standard deviation of 2.78. This suggests that the participants had a wide range of initial scores on the pretest, typically reflected by a **high standard deviation**. However, post-test scores show a higher mean of 10.12, with a higher standard deviation of 4.78. This finding indicates that learners' scores on the post-test were generally higher, with a greater spread of results compared to the pre-test. Additionally, the gain scores represent the difference between the post-test and pre-test scores, with a mean of 4.26 and a standard deviation of 2.48. The results indicate that, on average, participants improved by 4.26 points, with some variability in the amount of improvement across individuals.

To sum up, there was a clear improvement in learners' scores from the pre-test to the post-test. The increase in mean scores from 5.85 (pre-test) to 10.12 (post-test) suggests that the participants showed significant improvement after being taught with traditional methods. The gain scores also show a significant increase with a mean of 4.26. Additionally, the box plot below illustrates the distribution of scores for the pre-test, post-test, and gain scores.



**Graph 2.6. Control Group: Pretest, Posttest and Gain Scores.**

The box plot clearly demonstrates the difference between the pre-test and post-test. The pre-test results indicate a more concentrated range of scores, with a mean of about **5.00** and a relatively limited variance. However, the post-test results indicate a larger improvement in scores, with a higher median of **8.00** and a wider variance. Furthermore, the median of the gain scores is approximately **3.50**, signifying that participants gained around 4 points on average. Additionally, the gain score distribution is rather narrow, indicating that the majority of participants improved at similar rates.

To examine the differences **within the control group (CG)**, the study relied on the **Wilcoxon Signed Ranks Test** in order to identify the significance of the differences between the **pre-test and post-test** measurements. The following table illustrates these results.

**Table 2.16. Wilcoxon Signed Ranks Test Results Of the Pre-test and the Post-test.**

CG -Pre – Post-Test	N	Mean Rank	Sum of Rank	Z	Sig
<b>Negative Ranks</b>	1	1	1		
<b>Positive Ranks</b>	33	18	594	5.07	0.000
<b>Equal</b>	0				
<b>Total</b>	34				

As shown in the table above, the Wilcoxon Signed Ranks Test yielded a **Z value of 5.07** with a **significance level (Sig.) of 0.000**. Additionally, when compared with the study's significance threshold of **0.05**, this would typically indicate a statistically significant difference. However, a closer look reveals that the **Positive Ranks** included **33 participants**, while only **1 participant** fell under **Negative Ranks** which indicates a slight negative impact from the traditional teaching method.

In conclusion, the **Wilcoxon Signed Ranks Test** confirms that there was a significant difference between the pre-test and post-test scores. Hence, the learners did show an improvement, and the intervention with conventional methods had a statistically significant effect.

After the analysis and interpretation of the pre-test and post-test scores of the control group, a clear improvement in learners' scores is demonstrated by the descriptive statistics and t-tests. Additionally, the box plot visually shows a shift in median scores and the tight distribution of gain scores and, ultimately, reinforces the consistent **Wilcoxon Signed Ranks Test** results that show statistical significance in the improvement of learners.

### 2.10.2.2. Between Group Comparison

The following section compares the pretest results of the experimental and control groups. The primary aim is to demonstrate that their performance was similar before the intervention. Then, another comparison of the posttest results is conducted. However, the aim here is to indicate the effectiveness of the treatment by showing that the experimental group improved more than the control group.

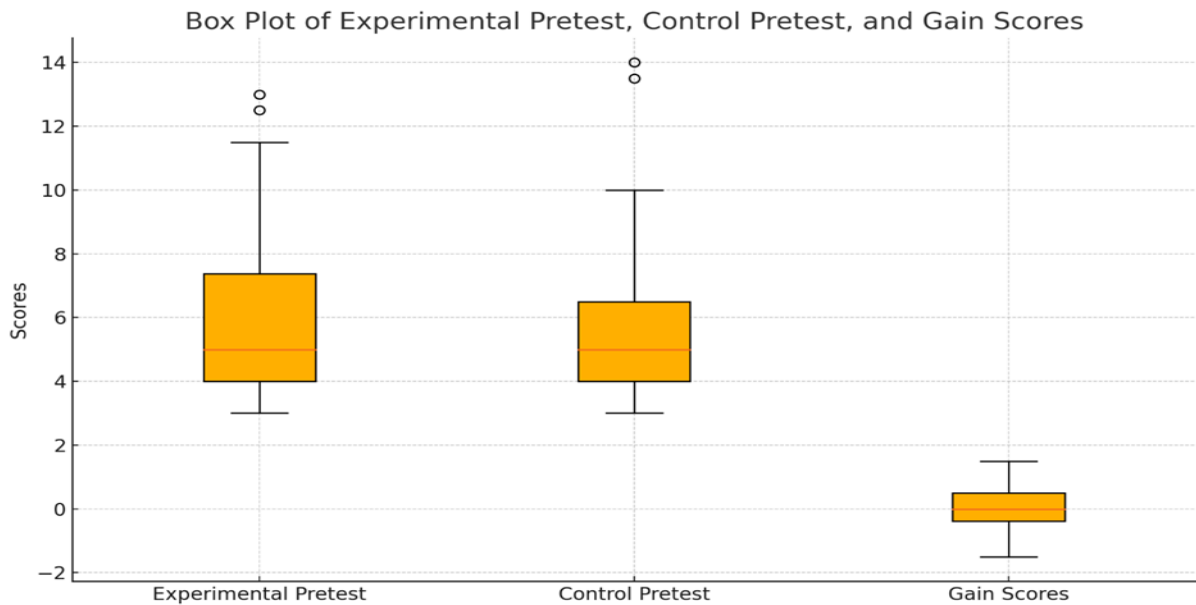
#### 2.10.2.2.1. PRE-TESTS

Establishing the similarity of pretest results provides a baseline for implementing the treatment. Accordingly, the following tables provide a detailed statistical measurement to ensure a fair starting point for the treatment phase.

**Table 2.17. Descriptive Statistics of The Pre-Tests and the Gain Scores results**

Number of participants N	Experimental G. Pretest		Control G. Pretest		Gain Score (difference)	
	Mean	SD	Mean	SD	Mean	SD
<b>68</b>	5.97	2.85	5.85	2.78	0.118	0.76

According to the table above, Descriptive statistics indicate that the experimental group had a mean of 5.97 and a standard deviation of 2.85. Likewise, the mean and standard deviation of the control group were 5,85 and 2.78, respectively. These results indicate that both groups had comparable variability in pretest scores. Additionally, the small mean gain score difference of 0.118, as well as the small standard deviation of 0.76, further indicates minimal difference in improvement between the groups, supporting the conclusion that both groups started from a similar baseline. Moreover, the box plot below illustrates the distribution of scores for the pre-tests of both groups as well as the gain scores:



**Graph 2.7. A comparison Between the Experimental and the Control Groups Pretests.**

According to the box plot above, we can easily notice that the distribution of scores for the experimental pretest and control pretest are highly similar. The medians, interquartile ranges (the range between the 25th and 75th percentiles, or the box itself), and overall spread are mostly comparable. Furthermore, this visual similarity supports the statistical results that indicate that there is no significant difference between the two groups at baseline. Additionally, the score gains show a narrow range of scores and a low value of variation around the median. Consequently, these results further emphasize the limited change across both groups.

The following table presents the results of The Mann-Whitney U Test for the Experimental and Control Groups Pretests.

**Table 2.18. The Mann-Whitney U Test for the Experimental and Control Groups**

**Pretests.**

<b>Group</b>	<b>N</b>	<b>Mean Rank</b>	<b>Sum of Ranks</b>	<b>Mann-Whitney U</b>	<b>Z</b>	<b>Sig</b>
<b>Control Group</b>	34	34.47	1172			
<b>Experimental Group</b>	34	34.53	1174	577	0.01	0.99

As indicated in the table above, the **Mann–Whitney U** value is **577**, with a **Z value of 0.01** and a **significance level (Sig.) of 0.99**. Additionally, when compared to the study’s predefined significance threshold of **0.05**, the **Sig. value (0.99)** is clearly higher. Hence, this value indicates that there are **no significant differences between the two groups**, which means that the groups are **equivalent and well-matched** at the pre-test stage. In conclusion, the Mann-Whitney U test results confirm that the participants were comparable at baseline.

In conclusion, the descriptive statistics and **Mann–Whitney U** Test results confirm that both the experimental and the control groups have a similar baseline. In other words, the treatment effects observed later can be attributed to the intervention itself rather than to any pre-existing differences between the groups.

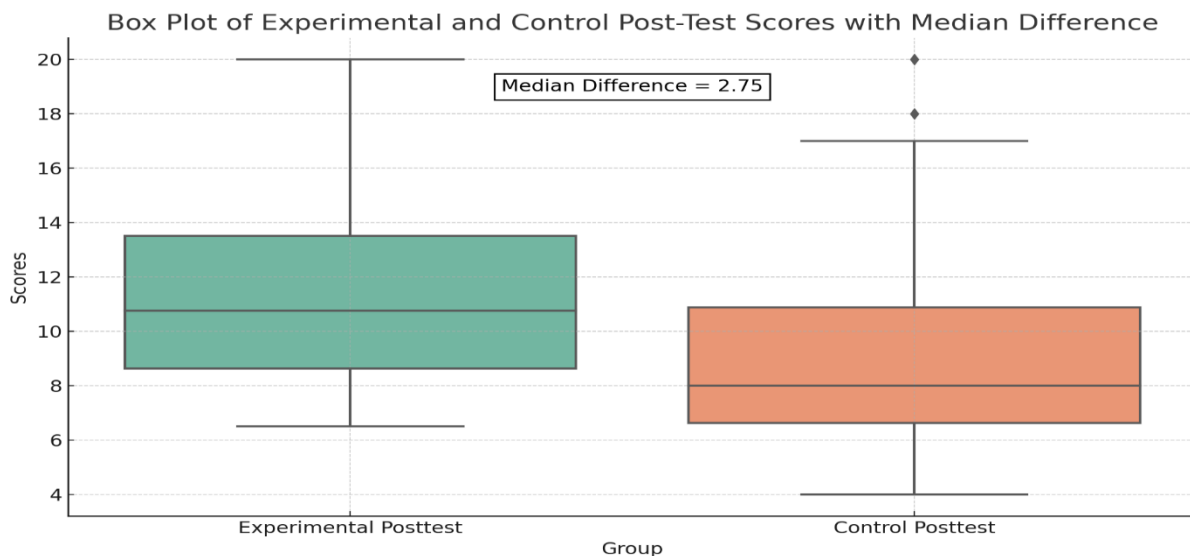
#### **2.10.2.2.2. Post-tests**

In this section, a comparison is conducted between the post tests of both the experimental group and the control group. Therefore, the aim here is to indicate the effectiveness of the treatment by showing that the experimental group improved more than the control group. The table below presents the descriptive statistics related to this comparison.

**Table2.19. Descriptive Statistics of The Posttests of both Groups.**

Number of participants N	Experimental Group Posttest		Control Group Posttest	
	Mean	SD	Mean	SD
<b>68</b>	11.88	4.35	9.59	4.31

According to the tale above, the experimental group outperformed the control group in what concerns the scores of the posttest. The mean of the experimental group posttest is 11.88, and the standard deviation is 4.35; however, the mean of the control group is 9.59, and the standard deviation is 4.31. This information indicates that, on average, participants who received the treatment outperformed those who did not. The standard deviations suggest comparable variability in performance within both groups. Furthermore, the box plot below visually compares the post-test score distributions between both groups.



**Graph.2.8. A Box Plot with Median Difference of Experimental vs Control Post-Test.**

The box plot visually shows that the median post-test score for the experimental group is 11.75, compared to 8.0 for the control group. The median difference between the two groups is 2.75 points, clearly favoring the experimental group. Additionally, the experimental group's scores are more consistently higher, with the interquartile range and upper whisker both

shifted upward. In Conclusion, the experimental group demonstrated superior performance after the treatment, with a meaningful median score increase of 2.75 points over the control group.

Additionally, the following table compares the gain scores of both groups:

**Table 2.20. Descriptive Statistics of The Gain scores Of Both Groups.**

Number of participants N	Experimental Group Gain scores		Control Group Gain scores	
	Mean	SD	Mean	SD
<b>68</b>	5.91	2.64	3.74	2.12

The experimental group also outperformed the control group in what concerns the gain scores. Both the means (5.91, 3.47) and the standard deviations (2.64, 2.12) show that the experimental group had a better performance than the control group. This noticeable difference of over 2 points indicates that the experimental group experienced significantly greater improvements, while the standard deviations suggest consistent performance within each group. In conclusion, all these results support the reliability of the treatment's impact.

To test the validity of the hypothesis, the **Mann–Whitney U test** was used to determine the significance of the differences in the **mean ranks** between the **experimental** and **control** groups on the **post-test**. The following table presents the results.

**Table 2.21. The Mann–Whitney U Test Results for the experimental and Control post-tests .**

Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	Sig
<b>Control Group</b>	34	28.44	967	372	2.53	0.01
<b>Experimental Group</b>	34	40.56	1397			

As shown in the table above, the Mann–Whitney U value is 372, with a Z value of 2.53 and a significance level (Sig.) of 0.01. Furthermore, the Sig. value (0.01) is clearly lower than the study's predefined significance threshold of 0.05. As a result, it indicates that there are statistically significant differences between the two groups, in favor of the experimental group, unlikely due to chance. Additionally, the mean rank for the experimental group (40.56) is substantially higher than that of the control group (28.44), indicating better performance for the experimental group.

In conclusion, the Mann–Whitney U Test results clearly show that the experimental group outperformed the control group in the post-test and the instructional method used with the experimental group was more effective.

Moreover, several studies highlight that the parametric or the non-parametric should not be used in isolation to determine statistical significance. However, it must be considered alongside other measures such as effect sizes. Additionally, these measures, such as Cohen's  $d$ , Effect Size ( $r$ ), and Eta Squared, are recommended for providing a more comprehensive understanding of the data, beyond what p-values can offer. For example, Sullivan and Feinn (2012, p. 279) confirm that when researchers report and interpret their studies, it is imperative to state both the substantive significance, which is the effect size, and the statistical significance represented in the p-value. Moreover, they illustrate on p. 281 that in studies with small sample sizes that do not have approximately 60 in each group, large effect sizes may indicate meaningful effects even when p-values are not statistically significant. Additionally, Bhandari (2020, p. 49) states that effect size is fundamental to hypothesis testing because the p-value is limited when assessing a study's practical significance. The infamous statistician Cohen (1990, p. 1310) also emphasized that the principal outcome of a study investigation is one or more metrics of effect size, rather than p-values.

Given the above, as suggested by Bhandari (2020), **Effect Size (r)** and Eta Squared were calculated as shown in the following tables:

One -Way ANOVA	Eta Squared
CG - EG_Posttests	0.06

**Table 2.22. Effect Size Eta Squared for Post-Test Comparison.**

As shown in the table above, the **Eta Squared** value was 0.06 between both groups post-tests. This means that approximately 6% of the explained variance in the post-test results can be attributed to the treatment. According to Cohen's (1988) guidelines, this represents a **medium effect size**, which suggests that the treatment had a **moderate and educationally meaningful impact** on learners' performance.

**Table 2.23. Non-Parametric Effect Size (r) for Post-Test Comparison.**

Test	Compared Groups	Z Value	N	Effect Size (r)
<b>Mann–Whitney U Test</b>	EG vs CG	2.53	68	0.31

The table above shows that the ( r ) value reached **0.31** which is considered a **medium effect size Cohen (1988)** . This indicates that the **treatment method** had a **moderate impact** on learners' performance. Therefore, it can be concluded that the difference observed between the two groups is statistically significant and **educationally meaningful**. It reflects the **practical effectiveness** of the treatment applied to the experimental group.

In conclusion, these findings imply that the intervention applied to the experimental group was more effective in enhancing learning outcomes than the conditions experienced by the control group. Firstly, descriptive statistics, such as the mean and the standard deviation, of both the scores and the gain scores, indicate a clear improvement in the experimental group's results. Secondly, the Mann–Whitney U Test Results for the experimental and Control post-tests values show statistical significance lower than the conventional alpha level of 0.05. Finally, the effect sizes, including Effect Size (  $r$  ) and Eta Squared, provide strong evidence of the practical significance of the research findings. Hence, the treatment implemented for the experimental group confirms significant effects and effectiveness.

### **2.10.3. Post-Experimental Phase Data Analysis: Satisfaction Scale**

As a final stage, this section will be restricted to the analysis and interpretation of the satisfaction scale data. The latter includes two sections; the first will be analyzed and interpreted according to the composite score to gauge the learners' satisfaction. However, the second section will be analyzed and interpreted thematically.

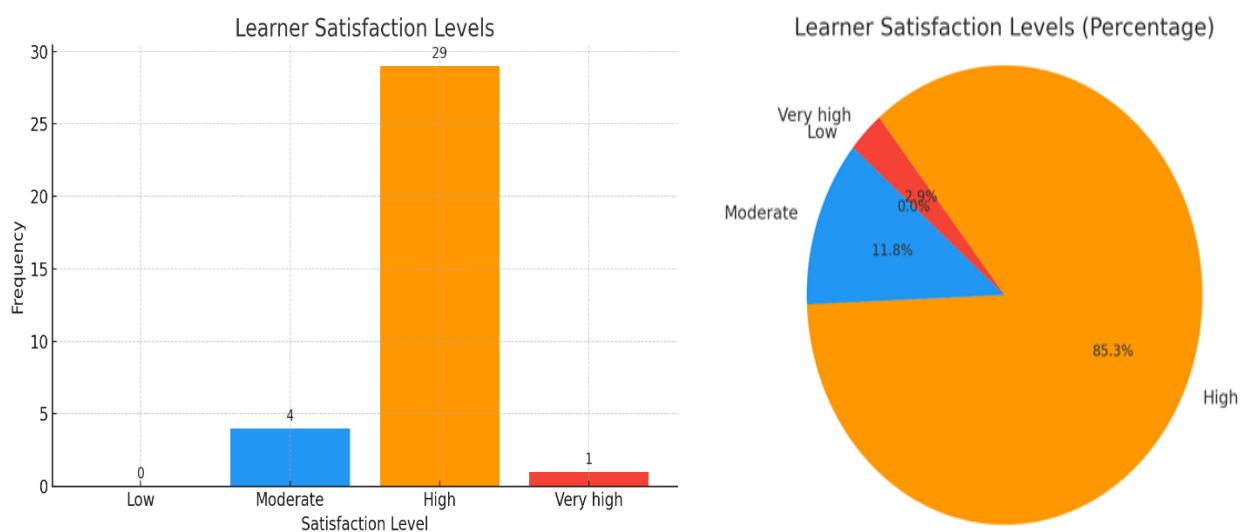
#### **2.10.3.1. Section one: Likert scale**

The analysis and interpretation of the satisfaction scale results will offer insights into respondents' experiences. Hence, the researchers will be able to highlight key strengths and areas for improvement. The section is about the Likert scale questionnaire results. The following table summarizes the findings:

**Table 2.24. Satisfaction Scale Questionnaire.**

<b>Score intervals</b>	<b>iterpretation</b>	<b>frequency</b>	<b>percentage</b>
<b>5-10</b>	Low	0	0%
<b>11-15</b>	Moderate	4	11.76%
<b>16-20</b>	High	29	85%
<b>21-25</b>	Very high	1	2.94%

As shown in the table above, the results indicate that the vast majority of learners, 88.2%, reported high to very high satisfaction with the treatment. 29 were highly satisfied with the treatment, and 1 learner was highly satisfied. Consequently, these outcomes indicate a strong positive response. However, the outcomes show that only a small proportion of 11.8%, representing 8 learners, expressed moderate satisfaction, and none reported low satisfaction. Hence, these findings suggest that the treatment was positively received by the majority of individuals. Furthermore, this favorable feedback indicates that the treatment met the expectations of many participants and reflected a general sense of satisfaction, as illustrated the graphs below:



**Graph 2.9. A Bar graph and A Pie Graph illustrating Learners' levels of Satisfaction.**

### 2.10.3.2. Section two: Open-ended Questions

To have a broader overview beyond the quantitative satisfaction scale, students were asked three open-ended questions about their concerns and perceptions of peer tutoring sessions. After that, the researchers opted for a thematic analysis using the Braun and Clarke's (2006) six-phase model. This model is suitable for the study because it helps organize and interpret

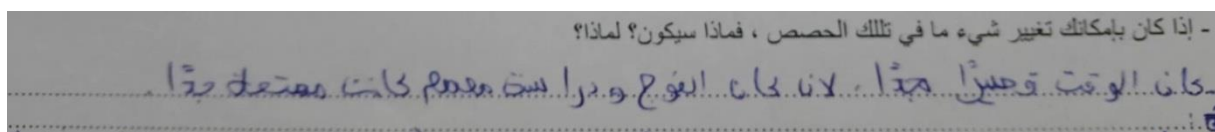
open-ended responses clearly and effectively. Consequently, the researchers tried to follow the six steps to systematically identify, analyze, and report themes derived from the learners' answers. The following figure summarizes the six phases with a brief explanation of each.



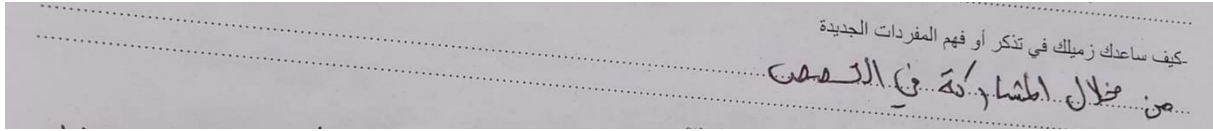
**Figure 2.2 Braun and Clarke's (2006) six-phase model.**

After reviewing the responses of the learners, they were coded and categorized into five main themes: engagement and enjoyment, interpersonal support, vocabulary improvement, requesting a time extension, and reducing the tutees' number.

Firstly, concerning the theme of "engagement and enjoyment," several students described the sessions as *"fun"* and *"more interesting than regular sessions."* These responses reflect the motivational benefits of collaborative learning, as noted in various research studies about peer-assisted learning, such as Topping's (2005) study. The following figures illustrate some of the learners' responses about this theme:

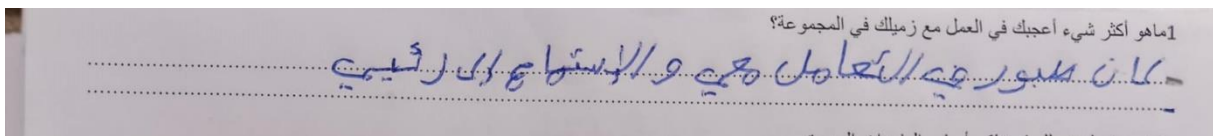


**Figure 2.3 An Example Learners' Responses Expressing Their Enjoyment.**



**Figure 2.4 An Example Learners' Responses Expressing Their Engagement.**

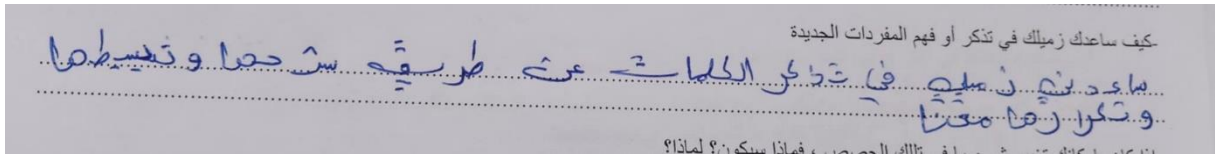
Secondly, regarding the “interpersonal support” theme, many learners stated that their peer tutors treated them in a supportive and friendly way. Such tutors' behavior aligns with Gardner's (1993) concept of interpersonal intelligence. For instance, one student wrote, "My tutor was patient and helped me when I didn't know the word." The learners' responses confirm that peer tutors created an environment that played a pivotal role in the learners' emotional engagement.



**Figure 2.5 An Example Learners' Responses Expressing The tutors' Support.**

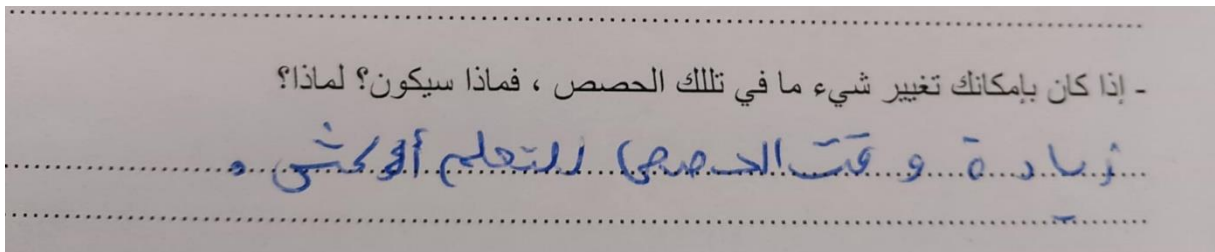
Thirdly, vocabulary improvement theme was mentioned frequently. Many learners stated that peer tutoring helped them better understand and remember new words. For example, one response stated, "*He explained the meaning in simple words, and now I can remember them easily.*"

This concept aligns with Vygotsky's (1978) notion of More Knowledgeable Others (MKO) and the Zone of Proximal Development (ZPD). In other words, the peer tutors act as the MKO, and the sub-group led by these interpersonally intelligent tutors is where vocabulary retention occurs.

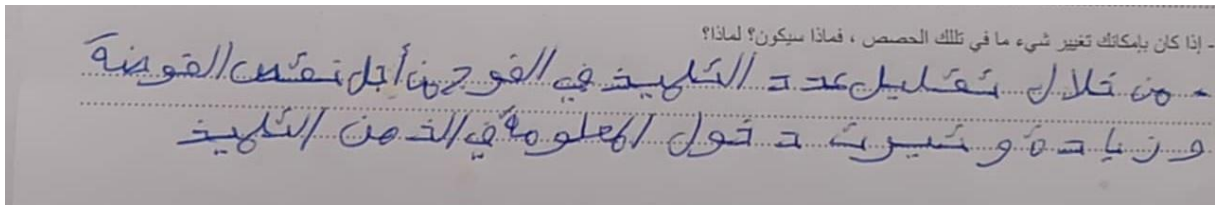


**Figure 2.6 An Example Learners' Responses Expressing Tutees' Vocabulary Retention.**

Finally, the learners constructive feedback was summarized in two main themes: *requesting more time* and *less group members*. However, these suggestions do not reflect dissatisfaction, they offer valuable insights into how the peer tutoring model could be optimized in future implementations.



**Figure 2.7 An Example Learners' Responses Requesting More Time.**



**Figure 2.8 An Example Learners' Responses Requesting Less Group Members.**

The following Table presents the frequency and the percentage each theme was mentioned in the learners' responses:

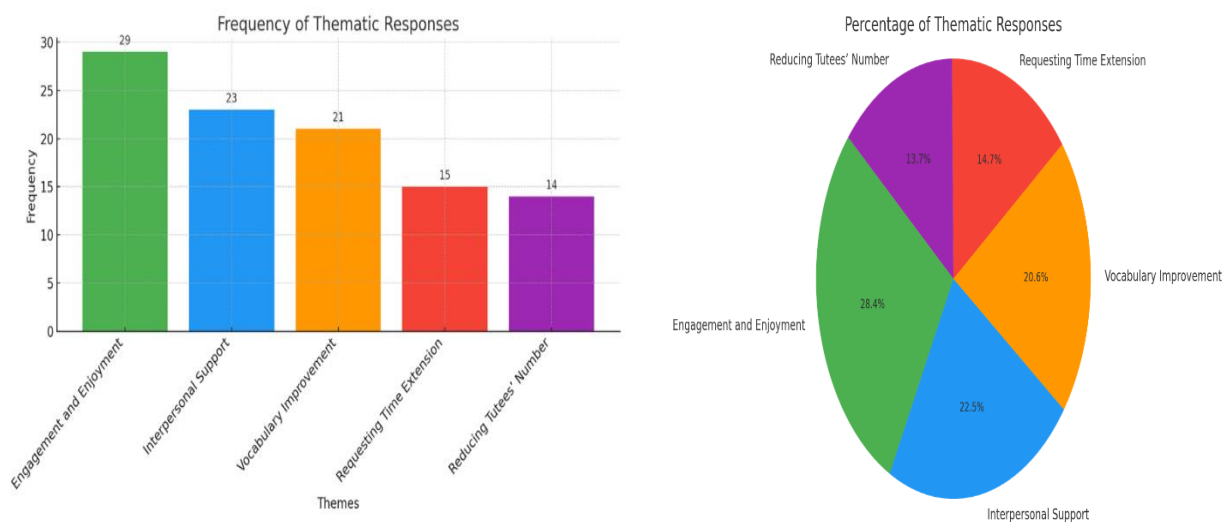
**Table 2.25. A Thematic Analysis of the Open Ended Questions.**

themes	Number of learners	percentage
Engagement and Enjoyment	29	28.4%
Interpersonal Support	23	22.5%
Vocabulary Improvement	21	20.6%
Requesting Time Extension	15	14.7%

<b>Reducing Tutees' Number</b>	14	13.7%
--------------------------------	----	-------

According to the table above, the "Engagement and Enjoyment" theme was the most mentioned, with a frequency of 29 responses. This frequency indicates that learners found the treatment enjoyable and engaging. Additionally, the "Interpersonal Support" theme widely occurred in the learners' responses, exactly in 23 responses. This occurrence shows that the support of their tutors played a pivotal role in enhancing their engagement as well as their vocabulary retention. Moreover, the theme "Vocabulary Improvement" was mentioned in 21 responses. This outcome suggests that the learners noticed a difference in their educational gains. However, a moderate number of learners mentioned inconveniences, such as "Requesting Time Extension" within 15 responses and "Reducing Tutees' Number" within 14 responses.

The following graph illustrates the frequency of occurrence for the five themes as well as their percentages.



**Graph 2.10. A Bar Graph and A pie Cart illustrating the frequency and the percentages of The Thematic Analysis.**

The graphs visually illustrate the findings, providing a clearer understanding of the data and highlighting the themes and their occurrence in the learners' responses. Accordingly, both graphs above indicate the most prevalent themes are engagement and enjoyment, interpersonal support, and vocabulary improvement. However, the themes of requesting a time extension and reducing the number of tutees are less dominant.

### **2.10.3.3. Summary of the Satisfaction Scale Data Analysis**

The satisfaction scale contained two sections. The Likert scale, on the one hand, aimed to assess learners' satisfaction. Its construct was focused on particular dimensions: enjoyment, perceived effectiveness, engagement, emotional comfort, and willingness to recommend. The outcome indicates a high level of satisfaction, as most learners' composite scores were high. On the other hand, the open-ended section revealed five themes: engagement and enjoyment, interpersonal support, vocabulary improvement, requesting a time extension, and reducing the number of tutees. In addition, all five themes align with and reflect the overall construct of the Likert satisfaction scale. Hence, learners' experiences with peer tutoring are both quantitatively positive and qualitatively enriched. This indicates a strong connection between the measured satisfaction and the themes that emerged from their responses.

### **2.10.4. Discussion of the Results.**

This study has two main objectives: firstly, to assess the impact of peer tutoring grounded on the interpersonal intelligence of the tutors on learners' vocabulary retention. Secondly, to evaluate their engagement and overall satisfaction. Accordingly, the researchers opted for a quasi-experimental design, as it was deemed the most appropriate in the given educational context.

To systematically examine the study objectives, the data analysis was conducted in two main phases: pre-experimental and post-experimental. First, the experimental group learners

exhibited a varying range of interpersonal intelligence levels. In other words, most learners displayed moderate levels of interpersonal intelligence. However, a smaller proportion exhibited high and very high levels. These results relate to one of the main ideas in Howard Gardner's (1983) theory of multiple intelligences. Gardner explains that everyone has all types of intelligence, but at varying levels, including interpersonal intelligence. Moreover, Thomas Armstrong (2000) builds on Gardner's theory of Multiple Intelligences. He, further, offers practical applications of this theory in educational contexts. He connects the concept of having different levels of intelligences to classroom differentiation. He suggests that these intelligences rely on both innate traits and life experiences.

In the post-experimental phase, the results analysis focused on two main aspects: the pre-test and post-test outcomes as well as the satisfaction scale findings. The experimental group demonstrated a higher improvement in vocabulary retention than the control group in terms of the pre-test and post-test results. Hence, this indicates that the intervention had a positive effect on learners' ability to retain vocabulary. Mainly, the improvement could be attributed to the use of peer tutoring based on interpersonal intelligence.

On one hand, peer tutoring played a major role in the learners' improvement. These findings align with a study conducted by Afsharpour & Gohar (2014), who executed a quasi-experimental study entitled "A Comparison of the Impact of Peer-Tutored Read-Aloud and Teacher-Guided Read-Aloud on Immediate and Delayed Vocabulary Retention." The researchers ascribed the outranking results of the experimental group to engagement, reduced anxiety, and collaborative learning, which correspond with Vygotsky's (1978) social constructivist theory. Moreover, a study by Nassima Talbi (2021) conducted a similar investigation within a similar educational context entitled "The Use of Peer Tutoring in Enhancing Vocabulary Retention among EFL Middle School Pupils: A Case Study at M'sila Middle School." Similarly, the experimental group demonstrated a distinct advantage in both

the immediate and delayed post-tests, as indicated by the results. Both studies provide empirical evidence that peer tutoring strategies can yield measurable improvements in retention over time.

On the other hand, incorporating interpersonal intelligence also played an important role alongside peer tutoring. For example, according to Gardner's theory of multiple intelligences, individuals or the tutors may have facilitated better vocabulary retention among their peers. This is because these tutors have strong interpersonal intelligence, so they are more effective at communication and collaboration. These findings are consistent with previous research (e.g., Armstrong, 2009; Campbell et al., 1996) that emphasizes that instructional methods are most beneficial for learners when aligned with their intelligence profiles. Additionally, Among the findings of a study conducted by Sahraoui Benhamadi (2020), entitled "The Effectiveness of Group Work in Enhancing Vocabulary Acquisition: A Case Study of Second-Year Middle School Pupils at Boumerdes," Benhamadi stated that socially engaged learners often took on leadership roles in group activities. The results suggest that interpersonal dynamics facilitate language acquisition, providing indirect evidence that interpersonal intelligence improves vocabulary retention during collaborative activities. Similarly, Al-Harthy's (2017) study in Oman entitled "The Role of Interpersonal Intelligence in Collaborative Learning Among Middle School Students," indicated that pupils with high interpersonal intelligence exhibited enhanced efficacy in collaborative environments. These learners frequently assumed leadership roles, participated in conflict resolution, and fostered inclusive group dynamics. To sum up, these studies illustrate the importance of interpersonal intelligence in fostering a supportive and effective learning environment, particularly in peer tutoring subgroups.

However, the observed improvements may have been influenced by other factors beside the peer tutoring treatment. For example, Dörnyei and Csizér (1998) highlight the novelty effect,

where student engagement rises simply because the environment is new. Similarly, another study by Jones (2009) who points to the Hawthorne effect. It is a phenomenon where individuals modify their behavior when they know they are being observed. To sum up, these factors suggest that the positive outcomes might stem from increased motivation rather than the peer tutoring itself.

The satisfaction scale results indicate that the vast majority of learners, 88.2%, reported high to very high satisfaction with the treatment. Additionally, students were asked three open-ended questions about their concerns and perceptions of peer tutoring sessions. Five main themes: engagement and enjoyment, interpersonal support, vocabulary improvement, requesting a time extension, and reducing the tutees' number. Firstly, "engagement and enjoyment" reflects the motivational benefits of collaborative learning, as noted in various research studies about peer-assisted learning, such as Topping's (2005) study. Secondly, in the "interpersonal support" theme, many learners stated that their peer tutors treated them in a supportive and friendly way. Such tutors' behavior aligns with Gardner's (1993) concept of interpersonal intelligence. Finally, the "vocabulary improvement" theme aligns with Vygotsky's (1978) notion of More Knowledgeable Others (MKO) and the Zone of Proximal Development (ZPD). In other words, the peer tutors act as the MKO, and the subgroup led by these interpersonally intelligent tutors is where vocabulary retention occurs.

In conclusion, peer tutoring grounded in interpersonal intelligence appears to significantly enhance vocabulary retention, engagement, and learner satisfaction. Although external factors may have influenced the outcomes, the findings support leveraging interpersonal strengths to improve collaborative learning.

## 2.11. Ethical Considerations

- **Informed Consent:** Informed consent was taken by the researchers from the students and their parents or guardians. They made sure that the participants were familiar with the purpose and procedures of the study and that they had the right to withdraw at any time without any negative consequences.
- **Confidentiality and Anonymity:** The researchers assured the safety of the privacy of the participant by maintaining confidentiality and anonymity. All data collected from the participant, such as personal information and answers, were kept in a safe place, and only the researchers had the privilege to access them.
- **Protection from Harm:** The researchers ensured that participants were not subjected to any form of physical or emotional distress during the study. The peer tutoring sessions were designed to mitigate and eliminate any potential stress or anxiety that the students could have gained.
- **Avoiding Bias and Ensuring Fairness:** The researchers made sure to treat all participants equally and impartially. They ensured fairness in running the peer tutoring sessions and collecting data from the experimental and control groups without any bias.
- **Transparency in Reporting:** The researchers were transparent in reporting all findings. They provided any unexpected results and did not have selective reporting. They gave all the data as it was without including any selective reporting.
- **Cultural Sensitivity:** The researchers made sure that the study materials and methods were appropriate to the culture and the background of the learners, ensuring that nothing in the study materials or methods would be offensive to the learners.

- **Ethical Use of Data and Instruments:** The researchers were confident that the data gathered would only be utilized for the study and not exploited in any other way. They followed the ethical protocols for the use of both instruments and data.
- **Teacher and Researcher Bias:** The researchers knew the potential biases that could affect their interaction with the participants. They took steps to ensure that they remained neutral and objective throughout the study to avoid their personal opinions and expectations from influencing the results.

## 2.12. Limitations of the Study

- Convenience sampling is limiting the selection to only one school and grade level, which restricts the generalizability of the results.
- The study restricts its focus to a specific educational institution and academic level, which could potentially limit the generalizability of its outcomes to other academic settings.
- Self-reported data from the questionnaires (e.g., the interpersonal intelligence questionnaire or satisfaction scale) could be biased by personal motivations or inaccurate self-assessment.
- Random assignment: The study does not control for other intervening variables (i.e., student's motivation, teacher's experience, or classroom environment), which may have an influence on vocabulary retention.
- The research project has a restricted timeframe for the treatment, which might affect the accuracy of the treatment and ultimately the research findings.
- The 68 learners in the sample may not be a perfect reflection of the entire population, primarily regarding differences in learning styles and intrapersonal intelligence.

- The quasi-experimental design does not have random assignment, which can introduce selection bias between the experimental and control groups.

### **2.13. Pedagogical Implications**

- Educators may apply peer tutoring within the frame of interpersonal intelligence for better enhancement in vocabulary learning.
- This pedagogical strategy corresponds to learner centered approaches as well as the communicative approach as it promotes teamwork and increases learners' participation in class activities in lessons.
- The study underlines the importance of differentiated instruction designed around learners' interpersonal intelligence as one of their strengths.
- Teachers are prompted to incorporate strategies of interpersonal intelligence in teaching language with the purpose of increasing the participation and motivation of learners.
- If the teachers incorporate interpersonal intelligence in the group or pair work, they may help develop essential social-emotional skills like empathy, communication, and leadership, as well as language proficiency.
- When teachers integrate structured peer interaction in their sessions, this will create a low-anxiety learning environment, which is particularly beneficial for language acquisition.

### **2.14. Recommendations for Further Research**

- In order to enhance generalizability, future research should consider an expanding sample to include more schools or regions to obtain a better diverse representation.

- Future research should focus on studying the impacts of peer tutoring over an extended time period in order to understand the implications on vocabulary retention over time.
- For future studies, including additional qualitative approaches, such as interviews and observations, concerning the teacher and learner would offer richer understandings of their experiences in the teaching learning process, especially in regards to peer tutoring.
- Such research will assist curriculum developers and other stakeholders to understand the need for interdisciplinary collaboration as well as learner-centered frameworks that exploit the learners' social abilities in vocabulary teaching and learning.

## **Conclusion**

This chapter focuses on the fieldwork for this research study, which aimed to investigate the impact of peer tutoring grounded in interpersonal intelligence on middle school pupils' vocabulary retention. The combination of a carefully selected quasi-experimental design by means of pre-test and post-test as well as a qualitative satisfaction scale, the study aims to provide deep, context-rich insights into students' results and experiences. Ultimately, the researchers could address the gap identified in the literature review. Additionally, the results of the data analysis indicated that the treatment was effective. The themes that emerged from participants' responses revealed high levels of satisfaction with their perceptions and overall experience of the peer tutoring intervention.



## **General conclusion**

Vocabulary acquisition is vital for middle school students' language proficiency, and it is a crucial component of language, allowing pupils to express themselves accurately, comprehend written information, and form meaningful connections with others. Consequently, the researchers had two main objectives: to evaluate the impact of peer tutoring grounded on the interpersonal intelligence of the tutors on learners' vocabulary retention. Also, to explore the students' engagement and overall satisfaction.

Accordingly, the researchers opted for the quasi-experimental design for this study because their primary objective is to prove a causal relationship between the variable, i.e., peer tutoring based on interpersonal intelligence, and middle school learners' vocabulary retention. This design was chosen for this study as it is a sound approach to evaluate the effectiveness of the intervention in the given educational settings.

The study involved fourth-year middle school learners from Haider Belkacem Middle School in Sidi Aissa, M'sila. A convenience sampling method is initially used to ensure accessibility to the targeted participants. The experimental group learners' interpersonal intelligence was assessed by two tools. The interpersonal intelligence questionnaire and the teacher observation checklist. After that, a pretest was introduced to both groups to ensure that they have the same baseline. After the implementation of the treatment, both groups completed a post-test to assess their improvement in vocabulary retention. Finally, the experimental group was given a two-section satisfaction scale containing a five-question Likert scale and three open-ended questions. The aim was to evaluate their satisfaction, engagement, and overall perceptions of the peer tutoring intervention.

After the analysis and interpretation of data collected from different tools, the experimental group learners exhibited a variety of interpersonal levels, ranging from moderate to very high, with different proportions. This concept aligns with Howard Gardner's (1983) theory of multiple intelligences.

Furthermore, the post-experimental findings showed that the experimental group improved significantly more than the control group. All descriptive and inferential statistics and effect size measures demonstrated that the peer tutoring intervention based on interpersonal intelligence was effective. These results align with both Vygotsky's (1978) notion of More Knowledgeable Others (MKO) and the Zone of Proximal Development (ZPD) and Howard Gardner's (1983) theory of multiple intelligence. In this study's case, on one hand, the peer tutors act as the MKO, and the subgroup led by these interpersonally intelligent tutors is where vocabulary retention occurs. On the other hand, according to Gardner's theory of multiple intelligences, individuals or the tutors may have facilitated better vocabulary retention among their peers. As well, these tutors have strong interpersonal intelligence, so they are more effective at communication and collaboration.

Additionally, the satisfaction scale results indicated that the vast majority of learners have high satisfaction with the treatment. The learners were asked three open-ended questions about their concerns and perceptions of peer tutoring sessions. Five main themes: engagement and enjoyment, interpersonal support, vocabulary improvement, requesting a time extension, and reducing the tutees' number. These themes reflect the motivational benefits of collaborative learning grounded on interpersonal intelligence.

According to results' analysis and interpretation, the researchers can confirm the positive impact of the peer tutoring intervention on vocabulary retention. The findings, also, highlight the importance of incorporating interpersonal intelligence into language learning environments. Furthermore, the peer tutoring method encourages differentiated instruction by fostering a more inclusive environment that can enhance learning outcomes. As a result, when teachers use this method in a middle school EFL classroom, they can encourage learners to understand better the teaching input as well as support their metacognitive development. In other words, if learners act as peer tutors, they often need to reflect on how they understand

the material and how to explain it to others. Ultimately, such a method can benefit individual learners, and it may also cultivate a collaborative and inclusive classroom environment.

Given the above, the application of strength-based instructional strategies in various educational contexts is a fertile field for exploration. Particularly, in what concerns studies that investigate the long-term effects of using interpersonal intelligence on academic performance and motivation. Additionally, further studies can examine other intelligence profiles as the intrapersonal or the existential intelligences. Besides, the findings of such studies could enrich our understanding of differentiated instruction. For example, this study demonstrates that using learners' strengths, as the interpersonal intelligence, can help EFL learners in acquiring language. Such strength improves teamwork, interest, and the acquisition of new vocabulary. To sum up, knowing and exploiting students' differences can make teaching better and more inclusive.

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## Appendices

### Appendix I

#### Interpersonal Intelligent Questionnaire.

No.	statement	never	Rarely	sometimes	often	always
1.	I enjoy collaborating with others to solve problems or to complete tasks.	1	2	3	4	5
2.	I am good at understanding and responding to the emotions of others.	1	2	3	4	5
3.	I feel comfortable taking on leadership roles in group settings.	1	2	3	4	5
4.	I am skilled at mediating conflicts and helping others reach an agreement.	1	2	3	4	5
5.	I can easily build positive relationships with people from diverse backgrounds.	1	2	3	4	5

5	4	3	2	1	1-أستمتع بالتعاون مع الآخرين لحل المشكلات أو إكمال المهام
5	4	3	2	1	2- أنا جيد في فهم مشاعر الآخرين والاستجابة لها
5	4	3	2	1	3- أشعر بالراحة عند تولي أدوار قيادية في العمل الجماعي
5	4	3	2	1	4- أنا ماهر في حل النزاعات ومساعدة الآخرين على الوصول إلى اتفاقات
5	4	3	2	1	5- يمكنني بسهولة بناء علاقات إيجابية مع أشخاص من خلفيات متنوعة

## Appendix II

### The teacher Observation Checklist

No.	statement	never	Rarely	sometimes	often	alwa'
1.	This student enjoys collaborating with others to solve problems or complete tasks.	1	2	3	4	5
2.	This student is good at understanding and responding to the emotions of others.	1	2	3	4	5
3.	This student feels comfortable taking on leadership roles in group settings.	1	2	3	4	5
4.	This student is skilled at mediating conflicts and helping others reach an agreement.	1	2	3	4	5
5.	This student can easily build positive relationships with people from diverse backgrounds.	1	2	3	4	5

## Appendix III

### The satisfaction Scale

## Section one :

No.	statement	never	rarely	sometimes	often	always
1.	I enjoyed learning vocabulary through peer tutoring.	1	2	3	4	5
2.	Peer tutoring helped me remember new vocabulary better(effectiveness).	1	2	3	4	5
3.	I felt comfortable and supported while working with my peer tutor(tutee).	1	2	3	4	5
4.	The peer tutoring sessions were engaging.	1	2	3	4	5
5.	I would recommend peer tutoring as a learning method for vocabulary.	1	2	3	4	5

## Section Two :

دائمًا	غالبًا	أحيانًا	نادرًا	أبداً	العبارة
5	4	3	2	1	1- استمتعت بتعلم المفردات من خلال الدراسة في مجموعة مع زملائي
5	4	3	2	1	2- ساعدني تدريس زميلي على تذكر المفردات الجديدة بشكل أفضل .
5	4	3	2	1	3- شعرت بالراحة والدعم أثناء العمل مع زميلي
5	4	3	2	1	4- كانت حصص الدراسة في مجموعات جذابة ومثيرة للاهتمام
5	4	3	2	1	5- أوصي بالتدريس من خلال المجموعات كطريقة لتعلم المفردات.

1.What did you like most about working with your peer tutor?

2.How did your peer tutor help you remember or understand new vocabulary?

3.If you could change something about the peer tutoring sessions, what would it be? Why?.

1 ماهو أكثر شيء أعجبك في العمل مع زميلك في المجموعة؟

.....  
.....

-كيف ساعدك زميلك في تذكر أو فهم المفردات الجديدة

.....  
.....

- إذا كان بإمكانك تغيير شيء ما في تلك الحصص ، فماذا سيكون؟ لماذا؟

.....  
.....

## Appendix IV

**Lesson Plan.** ( the experimental group)

**Timing :**2 hours

**Main Objective :**LWAT describe their ideal teacher.

**Sub-Objective:** LWAT retain and recall a set of personality vocabulary.

### Phase one:

1.The teachers explains the new vocabulary to the tutors and makes sure that they have fully understood their meaning:

*inspiring - encouraging - innovative - respectful - dedicated - humorous - fair*

2.The teacher asks them to take notes , and call for him if needed during the session.

3.Meanwhile, the teacher asks the other learners to organize the groups and prepare themselves for the session.

### Phase two:

1.The teacher provides the first sheets in which the new vocabulary is mentioned and asks he tutor to explain them to their tutees.

2.The teacher moves around the groups and provides assistance if needed. He makes sure that the tutor is the center of discussion.

3.The teacher provides the second working sheets if which two the following tasks are presented:

**Task One: Fill in the gaps with the following adjectives**

*inspiring - encouraging - innovative - respectful - dedicated - humorous - fair*

1."An ideal teacher is .....because they always motivate their students to do their best."

2."A ..... teacher always finds new and exciting ways to teach lessons."

3."My ideal teacher is ..... because they treat everyone with kindness."

4."An ideal teacher is ..... because they work hard to help their students succeed."

5. "I love having a .....teacher because they make learning fun with their jokes ."
6. "A .....teacher treats everyone equally and makes sure no one feels left out."
7. "My ideal teacher is ..... because they encourage me to keep trying, even when I make mistakes."

**Task Two: I Match**

- |               |   |
|---------------|---|
| 1-respectful  | a. "My teacher stayed after class to help me understand a difficult topic." |
| 2-dedicated   | b. "My teacher always encourages me to dream big and work hard."            |
| 3-humorous    | c. "My teacher created a fun game to help us learn math."                   |
| 4-fair        | d. "My teacher always listens to my ideas and values my opinions."          |
| 5-inspiring   | e. "My teacher made the whole class laugh with a funny story."              |
| 6-encouraging | f. "My teacher always makes sure everyone gets a chance to participate."    |
| 7-innovative  | g. "My teacher prepares lessons that gets the best out of them."            |

4. The teacher moves around the group and provides assistance where needed.
5. The teacher starts whole class correction on the board and asks the group to reflect again on their answers.

**Phase three:**

1. The teacher provides the working sheet and asks the learners to fill in the gaps:

**Humorous- respectful -encouraging -fair- innovative -inspiring- dedicated**

**Superhero Name:** Professor Inspire. **Special Power:** The ability to ignite curiosity and passion for learning

Professor Inspire is always....., motivating students to reach their full potential. He is....., always cheering students on and believing in their abilities. He is ....., using creative methods to make lessons engaging. Professor Inspire is ....., treating everyone with kindness and consideration. He is ....., going above and beyond to help their students succeed. He is ....., using laughter to make learning enjoyable. He is ....., ensuring every student is treated equally. Finally, he is supportive, always encouraging students to keep trying, no matter how difficult the task.

2. The teacher corrects the task on the board and asks the learners to reflect on their answers.
3. The teacher writes the instruction on the board which asks the learners to write paragraph about their ideal teacher
4. The teacher moves around the groups, monitors and provides assistance where needed.
5. The teacher listens to their productions, chooses one to be written on board and corrects the mistakes.

**Appendix V**

## Pretest

**Task one:** I choose the word that is suitable for meaning

1. Someone who is always willing to help others is \_\_\_\_\_.
  - a) selfish
  - b) generous
  - c) rude
  - d) dishonest
  
2. My best friend is very \_\_\_\_\_; she always tells the truth.
  - a) dishonest
  - b) lazy
  - c) honest
  - d) moody
  
3. A person who can easily understand how others feel is \_\_\_\_\_.
  - a) aggressive
  - b) empathetic
  - c) careless
  - d) irresponsible
  
4. If you work hard and never give up, you are \_\_\_\_\_.
  - a) ambitious
  - b) pessimistic
  - c) unreliable
  - d) selfish
  
5. My \_\_\_\_\_ is to become a doctor and help sick people.
  - a) ambition

- b) weakness
- c) regret
- d) failure

**Task 2:** Match the adjectives with their correct definitions.

- |                |  |
|----------------|--|
| 1. Optimistic  | a) Someone who enjoys being with others      |
| 2. Introverted | b) Someone who never gives up                |
| 3. Sociable    | c) Someone who expects good things to happen |
| 4. Determined  | d) Someone who prefers being alone           |
| 5. Responsible | e) Someone who always does what they should  |

**Tsk 3: (5 pts):** I Fill in the blanks with the correct word from the box:

**(ambitious, childhood, experience, regret, confident)**

1. My greatest ..... is not studying harder for my exams.
2. He has a lot of work..... because he has had many jobs.
3. She was very..... even as a young child and always wanted to be the best.
4. My.....was full of happy memories with my family and friends.
5. She is very..... and believes in her abilities.

**Task 4: Short Answer :** Answer in 2-3 sentences.

1. How would your best friend describe your personality?

.....

.....

.....

2. Describe your ideal teacher.

.....

.....

.....

## Appendix VI

### Post test

#### Task 1: Choose the word that best fits the meaning.

1. *Someone who stays calm and does not get angry easily is \_\_\_\_\_.*

- a) impatient
- b) patient
- c) aggressive
- d) rude

2. *A person who always follows the rules and treats others with politeness is \_\_\_\_\_.*

- a) respectful
- b) dishonest
- c) careless
- d) selfish

3. *If you never stop working toward your goal, you show \_\_\_\_\_.*

- a) regret
- b) dedication
- c) laziness
- d) dishonesty



5. She is very..... and always comes up with new ideas.

**Task 4: Answer in 2-3 sentences.**

1. How would your best friend describe your personality?

.....

.....

.....

2. Describe your ideal teacher?

.....

.....

.....

**Appendix VII**

**Rubric for Short Answer Questions (Pre-Test/Post-test) Task 4: Short Answer –**

**Vocabulary Focus**

**Scoring: Each question = 2.5 points (Total = 5 points)**

<b>Criteria</b>	<b>2.5 Points (Excellent)</b>	<b>2 Points (Good)</b>	<b>1 Points (Satisfactory)</b>	<b>0.5 Point (Needs Improvement)</b>	<b>0 Points (Incomplete/Incorrect)</b>
<b>Vocabulary Accuracy</b>	Uses appropriate and precise words that fit the question perfectly.	Uses appropriate vocabulary with minor errors.	Uses some relevant vocabulary but with noticeable errors.	Uses few relevant vocabulary words or uses them incorrectly.	Does not use relevant vocabulary.
<b>Range of Vocabulary</b>	Uses three or more appropriate adjectives/words.	Uses two appropriate adjectives/words.	Uses only one appropriate adjective/word.	Uses only one word, and it is not very relevant.	No relevant response.
<b>Relevance</b>	Fully answers	Mostly	Partially	Response is	No response or

e to the Topic	the question directly and clearly.	answers the question but lacks some clarity.	answers but response is vague.	off-topic or unclear.	completely off-topic.
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## ملخص

تذكر المفردات يُعد جانبًا مهمًا في اكتساب اللغة الإنجليزية كلغة أجنبية، وخاصة بالنسبة لتلاميذ المرحلة المتوسطة الذين يقتصر تعرضهم للغة وتفاعلهم معها غالبًا في القسم فقط. تهدف هذه الدراسة إلى استكشاف فعالية التدريس بالأقران كنهج تدريبي لتحسين حفظ المفردات، كما تُقيم أثر المهارات الاجتماعية في تعزيز فعاليته. وقد أُجريت هذه الدراسة في متوسطة حيدر بلقاسم بسبدي عيسى، ولاية المسيلة، باستخدام تصميم شبه تجريبي تضمن مجموعة تجريبية شاركت في حصص التدريس بالأقران، ومجموعة ضابطة تلقت تعليمًا تقليديًا بقيادة المعلم. خلال فترة أربعة أسابيع، شارك أفراد المجموعة التجريبية في أنشطة منظمة للتدريس بالأقران تهدف إلى تعزيز المفردات من خلال مهام تفاعلية، تعلم تعاوني، وتغذية راجعة متبادلة. جُمعت البيانات باستخدام اختبارات قبلية وبعديّة واختبارات مؤجلة للمفردات بهدف قياس التحسن قصير المدى والحفظ طويل الأمد. أظهرت النتائج أن التلاميذ المشاركين في التدريس بالأقران تفوقوا على أقرانهم في كل من الاختبارات الفورية والمؤجلة، مما يشير إلى أن لهذا النهج دورًا بارزًا في ترسيخ المفردات. كما أظهرت البيانات النوعية زيادة في دافعية المتعلمين، وارتفاعًا في مستوى المشاركة، وتحسنًا في السلوك التواصلي. تشير الدراسة إلى أن التدريس بالأقران يعزز بشكل فعال حفظ المفردات في بيئة تعليم اللغة الإنجليزية كلغة أجنبية، وتوصي باعتماده على نطاق أوسع في مناهج اللغة بالمرحلة المتوسطة.

**الكلمات المفتاحية:** الاحتفاظ بالمفردات، التدريس بالأقران، المهارات الاجتماعية.

## Résumé

La mémorisation du vocabulaire est un aspect essentiel de l'apprentissage de l'anglais langue étrangère, en particulier pour les collégiens dont l'exposition et l'interaction linguistiques se limitent souvent à la salle de classe. Cette étude explore l'efficacité de l'enseignement par les pairs comme méthode pédagogique pour améliorer la rétention du lexique, tout en évaluant l'impact des compétences sociales sur son efficacité. Menée au collège **Haider Belkacem à Sidi Aïssa** (M'sila), l'étude adopte un modèle quasi-expérimental, comparant un groupe expérimental (apprentissage par les pairs) et un groupe témoin (enseignement traditionnel). Pendant quatre semaines, le groupe expérimental a participé à des activités structurées favorisant l'acquisition du vocabulaire via des tâches interactives, l'apprentissage collaboratif et des feedbacks mutuels. Les données, recueillies à travers des tests pré-post et différés, ont révélé une nette supériorité du groupe expérimental en termes de rétention immédiate et à long terme. Les résultats qualitatifs ont également mis en lumière une motivation accrue, une participation plus active et de meilleures compétences communicationnelles chez les élèves. L'étude conclut que l'enseignement par les pairs renforce efficacement la mémorisation du vocabulaire en contexte EFL et recommande son intégration élargie dans les programmes de collège.

**Mots-clés** : Rétention du vocabulaire, enseignement par les pairs, compétences sociales.