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**Abstract** This research aimed to investigate the effectiveness of using the whole-brain teaching method in developing the 2nd-grade primary school pupils' EFL listening skills. For this purpose, the quasiexperimental research methodology was utilized. Sixty pupils from Taha Hussien Primary School, EL-Minia Governorate were randomly selected and divided into two groups: the treatment group (n=30) that was taught using the Whole Brain Teaching (WBT) program, and the non-treatment group (n=30) that was taught by the regular teaching methods. For data collection, the listening skills test was administered to the research sample. Using suitable statistical methods, findings indicated the effectiveness of the proposed program using the WBT. There were statistically significant differences between the means of the scores of the treatment and non-treatment groups in the postapplication of the listening skills test in favor of the treatment group due to the utilization of the WBT program. Considering the research findings, the research concluded by presenting recommendations and further future research suggestions.

*Keywords:* Whole Brain Teaching; Listening Skills, 2<sup>nd</sup> Graders.

## استخدام طريقة التدريس الدماغي الكلي لتنمية مهارات الإستماع لدي طلاب الصف الثاني في فصول تدريس اللغة الانجليزية كلغة أجنبية

الملخص هدفت الدراسة الحالية إلي التحقق من فاعلية اثر استخدام طريقة التدريس الدماغي الكلي في تنمية مهارات الإستماع لدي طلاب الصف الثاني في فصول تدريس اللغة الإنجليزية كلغة أجنبية. ولهذا الغرض تم استخدام منهج البحث شبه التجريبي. تم إختيار ستين تلميذا من مدرسة طه حسين الابتدائية بمحافظة المنيا عشوائيا و تم تقسيمهم إلى مجموعتين: مجموعة علاجية (ن = ٣٠) التي تم تدريسها باستخدام برنامج التدريس الدماغي الكلي ومجموعة غير علاجية (ن = ٣٠) التي تم تدريسها من خلال طرق التدريس العادية. ولجمع البيانات تم تطبيق اختبار مهارات الاستماع على عينة الدراسة. وباستخدام الأساليب الإحصائية المناسبة أشارت النتائج إلى فعالية البرنامج المقترح باستخدم طريقة التدريس الدماغي الكلي فوجدت فروق ذات دلالة إحصائية بين متوسطي درجات المجموعتين العلاجية وغير العلاجية في التطبيق البعدي لاختبار مهارات الاستماع لصالح المجموعة العلاجية تعزى إلى استخدام طريقة التدريس الدماغي الكلي وفي ضوء نتائج البحث، العلاجية تعزى إلى استخدام طريقة التدريس الدماغي الكلي وفي ضوء نتائج البحث، العتمت الدراسة بتقديم التوصيات والمقترحات البحثية المستقبلية.

#### Introduction

In the realm of English as a Foreign Language (EFL) teaching, the cultivation of listening skills stands as a cornerstone for language acquisition. Proficient listening not only enables learners to grasp the spoken language but also facilitates nuances communication across cultural and linguistic boundaries. Particularly in the context of second-grade learners, the development of listening skills requires an approach that aligns with their cognitive and linguistic capacities while fostering engagement and comprehension. This research endeavors to explore the efficacy of employing the Whole Brain Teaching method (WBT) to enhance EFL listening skills among second-grade students.

Listening, as elucidated by Dugal (2019) and McClanahan (2022), involves active engagement and receptivity towards audible stimuli, encompassing a spectrum of cognitive and linguistic processes. Rost and Brown (2022) further emphasize the multifaceted nature of listening, highlighting its reliance on neurological, linguistic, pragmatic, and semantic processing. The listening process, delineated by Tyagi (2013), unfolds through sequential stages of hearing, understanding, remembering, evaluating, and responding, each demanding distinct cognitive operations.

To comprehend the complexities of the listening process, it is essential to categorize listening into various types, These types include active, passive, critical, empathetic, appreciative, discriminative, informational, and therapeutic listening, each serving specific purposes and demanding varying levels of engagement and attentiveness from the listener (Lynch & Mendelsohn 2013; Rice, 2015; Renandya & Hu, 2018). Moreover, the bottom-up and top-down processing frameworks, as expounded by May (2020) and Oh and Lee (2014), shed light on the interplay between sensory data and cognitive schemata in deciphering auditory input.

Teaching listening skills entails a structured approach encompassing pre-listening, while-listening, and post-listening activities, as advocated by Latupono and Nikijuluw (2022). These activities aim to activate learners' schemata, facilitate comprehension, and promote critical reflection on the listening material. Pre-listening tasks provide

essential context and vocabulary while while-listening activities engage learners with the listening text, and post-listening tasks encourage deeper analysis and application of the content.

In the context of foreign language acquisition, listening serves as a conduit for exposure to authentic language input, facilitating vocabulary acquisition, grammatical proficiency, and pronunciation refinement (Bulut & Karasakaloglu, 2017; Mirsharapovna, 2022; Zhang & Graham, 2020). However, learners encounter various challenges in developing listening skills, including difficulties in discerning English sounds, controlling speech speed, and maintaining concentration (El-Nahhal, 2016; HAPSARI, 2022; Yilmaz & Yavuz, 2015).

Addressing these challenges necessitates tailored strategies, including phonetic exercises, adjustable playback speeds, and vocabulary-focused pre-listening activities (Ani, 2018; Zokirova, 2022). Moreover, integrating visual support, creating a conducive listening environment, and teaching listening strategies are crucial for managing learners' concentration and enhancing comprehension (Taşdemir, 2018).

In the context of Whole Brain Teaching, effective listening skills play a pivotal role in fostering engagement and information processing among learners. Techniques such as call-and-response, incorporating movement, and establishing clear listening expectations contribute to creating a positive and participatory learning environment (Biffle, 2010; Emyus et al., 2020). Through applying the principles of Whole Brain Teaching, educators aim to optimize learning outcomes by engaging both hemispheres of the brain and promoting active participation and comprehension. This research seeks to investigate the impact of implementing the WBTM on the development of EFL listening skills among second-grade learners, offering insights into effective pedagogical practices for enhancing language acquisition in early education settings.

Research has extensively investigated the impact of Whole Brain Teaching (WBT) on language acquisition, motivation, and academic performance across various educational contexts. Domeño (2016) and Hafrianti et al. (2020) demonstrated the efficacy of WBT in enhancing

language skills and motivation among pupils learning English as a foreign language. Kholifah (2021) and Salem (2017) highlighted the positive outcomes of WBT implementation in specific subject areas, emphasizing improved listening skills, vocabulary retention, and motivation. Addressing the challenges of listening skills in English language learning, Kieu et al. (2023) explored effective engagement techniques, emphasizing active participation during listening lessons. WBT's emphasis on active listening aligns with its instructional approach, aiming to enhance communication and comprehension skills across diverse educational settings.

Originating from observations by Chris Biffle, WBT represents a pedagogical reform movement aimed at enhancing student engagement and classroom management. Grounded in brain research, WBT integrates seven core techniques, emphasizing whole-brain activation and cooperative learning (Battle, 2010). The incorporation of WBT principles into classroom design fosters a dynamic learning environment, engaging students through sensory experiences and collaborative activities (De Boer et al., 2001). Key techniques like Teach-Okay promote memory retention and active participation, contributing to improved academic outcomes (Hosen, 2015).

Studies have reported positive effects of WBT on student engagement, academic self-concept, and overall performance (Clark, 2016). Teachers value WBT for its effectiveness in catering to diverse learning styles and fostering positive attitudes toward learning (Hoss, 2013; Ritchie, 2015). Whole-brain teaching offers a structured approach to classroom management and instruction, promoting positive behavior reinforcement and memory retention (Torio & Cabrillas-Torio, 2016). It encourages student-centered learning and application of knowledge beyond traditional methods, enhancing motivation and skill development (Inci & Erte, 2011).

Research studies have demonstrated the effectiveness of WBT in improving various skills, including writing, reading, speaking, and comprehension, across different grade levels (Sandi, 2015; Rimatika, 2015; Dwintan, 2016). Positive outcomes have been observed in character education integration, fluency development, and motivation enhancement (Haq, 2018; Alrasyid, 2018; Aulina, 2018). Additionally,

comparisons with other teaching methods have shown WBT's superiority in areas such as circuit teaching and language instruction (Bucayong et al., 2020; Kuliahana, 2020). Integration with Brain-Based Learning models further enhances learning outcomes, emphasizing its effectiveness over conventional methods (Handayani & Purwati, 2022).

In conclusion, Whole Brain Teaching emerges as a comprehensive and impactful instructional approach, addressing the diverse needs of students while fostering active engagement, collaboration, and meaningful learning experiences across educational settings. According to the above-mentioned the current research aimed to investigate investigate the effect of using the whole-brain teaching method on developing the 2nd-grade primary school pupils' EFL listening skills. In line with these objectives, the following hypothesis is developed:

## **Context of the problem**

Based on my experience as a teacher, In the context of teaching English as a Foreign Language (EFL), I have observed persistent challenges in effectively developing students' listening skills. Despite employing traditional teaching methods, such as lectures and individual work, I have encountered limitations in fully engaging students and fostering comprehensive language learning experiences.

To document the problem of the research, the researcher utilized the listening test to second graders' primary school pupils, at the selected school for program application, and a pilot questionnaire on using the Whole Brain Teaching method inside the classroom was presented to a random sample of EFL primary school teachers.

After interviews conducted by the researcher with a random sample of EFL primary school teachers with the assistance of supervisors, she concluded that teachers need more teaching methods that can attract and engage them especially because it is the main characteristic of the new curriculum (Connect), teachers stated that most students are bored of the large amount of information in their books. Depending on the results obtained through the interviews and the test, it is noticed that the methods and techniques used by EFL primary school teachers are traditional, and even if teachers use a contemporary one they cannot

completely engage students in EFL tasks. Furthermore, about 95% of teachers do not know any information about whole-brain teaching.

Based on reviewing the related literature and previous studies on the variables of the research, the following became clear: listening skills should be the focus of the EFL classes especially in young classes. Moreover, more attention should be paid to students' engagement to create effective EFL classes and to achieve the current educational vision.

### **Statement of the problem**

The current resaerch aims to investigate the effect of "Using whole brain teaching method in developing primary school pupils' listening skills".

### The Research Significance

- 1. Young EFL learners stand to benefit from this research by experiencing enhanced listening skills and increased engagement in the classroom. By implementing whole-brain teaching methods, students can actively participate in their learning process, leading to a more enriching and effective language learning experience.
- 2. Teachers in EFL classrooms can utilize the findings of this research to enhance their instructional practices. By incorporating whole-brain teaching techniques, teachers can create dynamic and interactive lessons that cater to diverse learning styles, fostering a supportive and engaging learning environment for their students. Additionally, this research provides teachers with valuable insights into effective strategies for developing listening skills among EFL learners.
- 3. Curriculum planners play a crucial role in designing educational programs that meet the needs of EFL learners. This research offers valuable evidence to inform curriculum development efforts, particularly in the areas of listening skills. By integrating whole-brain teaching methods into EFL curricula, planners can create comprehensive and impactful

- learning experiences that promote student success and proficiency in the English language.
- **4.** Stakeholders, including policymakers, administrators, and parents, benefit from research that enhances the quality of EFL education. By advocating for the implementation of wholebrain teaching methods informed by this research, stakeholders can support initiatives aimed at improving teaching and learning practices in EFL contexts.

### **Definition of Terms**

### Whole brain teaching

Biffle (2013) in his book, Whole Brain Teaching for Challenging Kids defined Whole Brain Teaching as "a set of techniques that combines the best attributes of Direct Instruction and Cooperative Learning to create an engaging classroom environment for students and an enjoyable workday for teachers. Whole brain teaching combines both classroom management as well as a sound teaching pedagogy in one system".

The researcher operationally defined whole-brain teaching as a teaching method that is used to get the  $2^{nd}$  graders involved with well-structured instruction and enjoyable techniques.

### Listening skills

Solak (2016) defined listening as an active and interactional process in which a listener receives speech sounds and tries to attach meaning to the spoken words, as the listener tries to understand the intended message of the oral text to respond effectively to oral communication.

Operationally listening skills are an active process involving activities such as getting meaning, the ability to understand the task, and answering questions that the  $2^{nd}$  graders should have.

### **Research Hypotheses**

- There is a statistically significant difference (favoring the treatment group) between the means of scores obtained by the participants of the non-treatment and the treatment group in the post-test of listening sub-skills.
- There is a statistically significant difference (favoring the treatment group) between the means of scores obtained by the

participants of the non-treatment and the treatment group in the post-test of listening sub-skills.

### Materials and Methods Research Design

The current research utilized the quasi-experimental research approach of a pre-post control group design to achieve its objectives. A treatment group and a non-treatment group were exposed to pre-post-treatment material and data collection tools (listening skills test). In addition, the treatment group only was instructed and trained through the Whole-Brain Teaching Program, while the non-treatment group received regular teaching. The researcher instructed both groups to ensure that the research was implemented better.

### **Participants**

The sample for this research comprised sixty 2<sup>nd</sup>-grade pupils attending Taha Hussien Primary School in Minia Governorate during the first semester of the 2022/2023 academic year. The selection was conducted randomly. These pupils were evenly distributed into two groups: a treatment group comprising thirty pupils, and a non-treatment group also consisting of thirty pupils. In the treatment group, instruction was delivered using the Whole-Brain Teaching program, while the non-treatment group received education according to the curriculum outlined by the Egyptian Ministry of Education. The following pupils were excluded from participation as they were grade repeaters or were absent more than twice from the sessions, and those who missed any of the pre-and post-tests.

### Research Instrument

The Listening Skills Test: The Listening Skills Test was prepared by the researcher (See appendix D) to assess the following sub-skills: predicting the content of the listening text, listening to get the general idea in the listening text, listening for details, and listening for specific information.

The researcher constructed the test according to the abovementioned listening sub-skills and the content that was presented in the suggested program. It included thirty items covering the most significant objectives of the program. The test was designed according to the table of specifications. In addition, the key answers were

attached to the test. The test included (30) items: true-false items, listen and circle items, choosing the correct picture items, multiple-choice items, and listen and number in correct order items. A point is given for each correct item. The maximum score is 30 marks.

The pilot experiment for the listening test was conducted on a group consisting of (30) pupils from the second grade at Taha Hussien Primary School, in the academic year 2022/2023. The time for the listening test for the second grade was calculated by counting the time consumed by each pupil taking the test and calculating the average to be (45) minutes (one session) to read and answer the test.

The test's content validity was assessed by a panel of jury members comprising ten TEFL experts. These experts evaluated the test based on specific criteria, including the linguistic clarity of items, alignment with learning objectives, appropriateness for participants, coverage of skills tested, and adequacy of model answers. Following suggested adjustments by the jury, they confirmed the test's suitability and relevance. The finalized version of the test, incorporating jury suggestions, was then administered to participants.

The validity of the listening skills test was calculated using SPSS V.26 software by computing the internal consistency. This was done by finding the correlation coefficient between the score of each listening item and the total score of the dimension to which it belongs, using the survey sample scores, as shown in Table (1).

Table (1) The correlation coefficients between the score of each listening item and the total score of the dimension to which the listening skills test belongs (N=30)

First Skill		Second Skill		Third Skill		Fourth Skill	
Ite	Correlati	Ite	Correlati	Ite	Ite Correlati Ite		Correlati
m	on	m	on	m	on	m	on
	Coefficie		Coefficie		Coefficie		Coefficie
	nt		nt		nt		nt
16	0.852**	1	0.723**	26	0.666**	10	0.473**
17	0.362**	2	0.617**	27	0.761**	11	0.739**
18	0.888**	3	0.654**	28	0.583**	12	0.666**
19	0.856**	4	0.536**	29	0.577**	13	0.587**
20	0.489**	5	0.443**	30	0.42**	14	0.701**

21	0.451**	6	0.64**
22	0.846**	7	0.685**
23	0.783**	8	0.723**
24	0.51**	9	0.723**
25	0.451**		

From the previous table, it is evident that all correlation coefficients between the items of the listening test and the dimension to which each item belongs are statistically significant at the (0.05) and (0.01) levels.

In addition, the researcher calculated the correlation of each dimension from the dimensions of the listening test with the total score of the test, as shown in Table (2).

Table (2) The correlation coefficients of each dimension from the dimensions of the listening test with the total score

Skill	<b>Correlation Coefficients</b>			
Predicting the content of the	0.422*			
listening text				
Listening to get the general idea in	0.548**			
the listening text.				
Listen for details	0.555**			
Listen for specific information	0.552*			

It becomes evident from Table (2) that all correlation coefficients of each dimension from the dimensions of the listening test with the total score are statistically significant at the 0.05 and 0.01 levels.

Hence, from Table (1) and Table (2), it is evident that there are high internal consistency indicators for the listening test, indicating the validity of the test.

The reliability of the listening test was calculated using Cronbach's Alpha equation, and the reliability coefficients for the dimensions and the total score as illustrated in Table (3).

Table (3) Coefficients for Cronbach's Alpha reliability						
Dimension	Item N	Cronbach's Alpha reliability coefficient				
Predicting the content of the listening text	10	0.838				
Listening to get the general idea in the listening text.	9	0.818				
Listen for details	5	0.759				
Listen for specific information	6	0.765				
The listening test as a whole	30	0.826				

From the previous table, it is evident that the values of Cronbach's alpha coefficients are high, indicating a high level of reliability for the listening test.-

- The Whole Brain Teaching Program

The program comprises four main components: a content analysis section to inform the selection of appropriate teaching methods and activities, a framework delineating the structure of the program, a comprehensive teacher's guide, and a corresponding pupil book. Each unit within the program consists of five lessons, beginning with overarching objectives for the unit and specific behavioral objectives for each lesson. Additionally, a model of strategies employed by pupils is provided, with each lesson featuring activities designed to enhance listening sub-skills (Predicting the content of the listening text, Listening to get the general idea in the listening text, Listening for details, Listening for specific information). The conclusion of each lesson includes an evaluation segment featuring various questions aimed at assessing pupil progress. The Whole-Brain teaching program will introduce theme 2, units (four, five, and six) of Connect for the second-grade primary schools. Throughout the program, a focus is placed on implementing the Whole brain teaching method strategies and activities aimed at developing the independent variables.

Training through the presented program is based on the whole brain teaching strategies and techniques in which pupils learn words individually and by peer tutoring and switching roles under the teacher's supervision and guidance. The researcher utilized these techniques in each session:

- 1. Class- Yes (Attention Getter).
- 2. Class Rules (The Organizer).

- 3. Teach-Okay (Whole Brain Activator).
- 4. Scoreboard (The Motivator).
- 5. Mirror (The Class Unifier).
- 6. Hand & Eyes (The Focuser).
- 7. Switch (The Involver).

#### **Results**

To verify the validity of the research hypothesis, an Independent Samples t-test was conducted using SPSS V.26 software to calculate the significance of the difference between the mean scores of the treatment and non-treatment groups in the post-application of the listening test after applying the suggested program using Whole-Brain teaching method as illustrated in Table (4).

Table (4) Mean, Standard Deviation, t-value, and Significance of Differences between Means of Scores Obtained by the Pupils of the Treatment and Non-Treatment groups in the Post-Test of Listening Skills

Group	N	Mean	SD	FD	t-value	Sig.
Non-	30	23.4	3.82	58	13.42	Sig. at
treatment						0.01
Treatment	30	8.56	4.69			

From Table (18), it is evident that there is a statistically significant difference at the 0.01 level between the mean scores of pupils in the treatment and non-treatment research groups in the post-application of the listening test, favoring the treatment group. Thus, the first hypothesis of the research is confirmed, and therefore, accepted. The following figure illustrates this:



Figure (1) A Graphical Representation of The Mean Scores Of Pupils In The Treatment and Nontreatment Groups in the Post-Application of the Listening Test

Since the t-test is used to determine the significance of differences, indicating confidence in the existence of differences between the mean scores of the treatment group in the pre-and post-applications of the listening skills test, regardless of the size of these differences, the effect size equation was employed. This involved converting the t-value to  $\eta 2$  using the effect size equation  $\eta 2$  to calculate the effect of the Whole-Brain teaching program on the development of listening skills among second-grade primary school pupils as follows:

$$\eta 2 = \frac{t2}{t2 + df}$$

 $\eta 2 =$  Eta-squared value, t2 = t-value squared, df = degree of freedom

Table (5) The Proposed Reference Table for Determining Effect Size Levels for Each Measure of Effect Size Scales

Tool	Low effect	Medium effect	High effect
η2	0.01	0.06	0.14
			(Mansour,

1997, 65)

Table (6) Effect Size Values for The Whole Brain Teaching Program on the Listening Skills Test

Variable	t-value	η2	Effect	
Listening Skills	13.42	0.756	Very	high
			effect	

According to Table (20), the effect size value ( $\eta$ 2) was calculated to be 0.756, which is greater than 0.14. This indicates a high-level effect. Therefore, the Whole-Brain Teaching Program demonstrated a high level of impact on the listening skills test among the treatment group pupils. So, the effect size showed that the program was effective and improved pupils' listening skills.

#### **Discussion**

With a focus on encouraging active involvement, engaging multiple senses, and providing quick feedback, Whole Brain Teaching (WBT) presents a hopeful approach to enhancing language skills and promoting cognitive, social, and emotional growth in young children. By utilizing interactive methods that activate both sides of the brain,

WBT establishes an immersive and dynamic setting where children can excel in language development and overall development.

The current research aimed to investigate the effect of using a Whole-Brain Teaching Program on developing 2nd-grade primary school pupils' EFL listening skills. Findings supported the research hypotheses. Pupils of the treatment group (who were taught using the WBT Program) outperformed the pupils of the non-treatment group (who were taught using conventional teaching methods) in the post-application of the listening skills test. The introduction of the WBT program impacted students' abilities regarding the research variables.

Following the implementation of the WBT program in the research, both groups underwent the same assessment procedures. Upon analyzing the results obtained through t-tests, it was confirmed that participants in the treatment group significantly outperformed those in the non-treatment group. These findings supported all three hypotheses of the research.

Creating a non-threatening environment for language learning, especially for young learners like second-grade primary school pupils, is essential for their success and enjoyment in acquiring new language skills. One effective method for achieving this goal is by implementing the Whole-Brain Teaching approach. This method emphasizes engagement, participation, and making learning enjoyable for students. By utilizing strategies that stimulate various parts of the brain, teachers can create an environment where students feel supported and motivated to learn.

Positive reinforcement plays a crucial role in building confidence among language learners. Teachers should use praise, encouragement, and rewards to celebrate students' successes, regardless of their magnitude. This approach fosters a supportive atmosphere in which students feel motivated to continue learning and exploring the language. Interactive activities are integral to language learning in a non-threatening environment. Teachers can incorporate activities such as role-plays, group discussions, language games, and storytelling to engage students actively. These activities not only make learning fun but also provide opportunities for students to practice speaking, listening, reading, and writing in a low-pressure setting.

Visual aids are powerful tools for reinforcing language learning. Teachers can use pictures, flashcards, videos, and other visual materials to support vocabulary acquisition and comprehension. Visuals help students grasp new words and concepts more easily, enhancing their overall learning experience. Movement and gestures are effective in stimulating different parts of the brain and reinforcing language learning. Teachers can encourage students to use physical movements and gestures during language activities, such as acting out words or using hand motions to accompany language patterns. These kinesthetic activities make learning more interactive and memorable for students.

Peer collaboration promotes a supportive learning environment where students can work together and learn from each other. Pair or group activities allow students to practice speaking and listening in a low-pressure setting, enabling them to learn from their peers' strengths and support each other through challenges. Differentiated instruction acknowledges that students have different learning styles and abilities. Teachers should provide a variety of learning activities and allow students to choose tasks that align with their interests and strengths. This approach ensures that all students can engage meaningfully in the language learning process.

Low-stakes assessment minimizes the emphasis on formal evaluation and focuses on informal activities that allow students to demonstrate their understanding without fear of failure. Games, quizzes, and short tasks can be used to assess language proficiency in a relaxed and non-threatening manner. Creating a safe and supportive environment is paramount in language learning. Teachers should cultivate a classroom culture where mistakes are viewed as valuable learning opportunities rather than failures. Encouraging students to take risks and try out new language skills without fear of embarrassment or judgment fosters a positive learning atmosphere.

Incorporating these strategies into language learning activities based on the Whole-Brain Teaching method can create a non-threatening environment where second-grade primary school pupils feel confident, motivated, and eager to develop their language skills.

The results of the first hypothesis indicated that there was a statistically significant difference at the 0.01 level between the mean scores of pupils in the treatment and non-treatment research groups in the post-application of the listening test, favoring the treatment group. In addition, the program achieved a high effect size on developing pupils' listening skills.

Whole Brain Teaching (WBT) offers a comprehensive approach to developing pupils' listening skills in English as a Foreign Language (EFL) contexts by integrating interactive activities, visual aids, movement, peer collaboration, positive reinforcement, differentiated instruction, and technology. Through call-and-response activities, visual cues, gestures, role-plays, group work, praise, and tailored instruction, WBT creates a dynamic learning environment where students actively engage with the language, enhancing their listening comprehension and proficiency. By appealing to multiple sensory modalities and accommodating diverse learning styles, WBT fosters listening, comprehension, and language attentive acquisition, ultimately facilitating meaningful language learning experiences for EFL students. This result is in line with various previous research results indicating the effectiveness of utilizing WBT in developing EFL listening skills (Domeño, 2016; Salem, 2017; Sarikaya & Soylemez, 2018; Hafrianti et al, 2020; Kholifah, 2021; Kieu et al, 2023). Therefore, the current research proved that the WBT program was effective in developing students' listening skills.

### **Recommendations**

Based on the findings of the research evaluating the effect of using a WBT Program on developing 2nd-grade primary school pupils' EFL (English as a Foreign Language) listening skills, the following recommendations can be provided:

1. *Integration of Whole-Brain Teaching into EFL Curriculum:* Educators should consider integrating Whole-Brain Teaching techniques into the EFL curriculum, particularly for younger learners. The program's emphasis on engaging both hemispheres of the brain simultaneously can enhance language learning experiences and outcomes.

- 2. Provide Supportive Learning Environment: Create a warm, safe, and supportive classroom environment to alleviate students' English language learning anxiety. Foster a positive atmosphere where students feel comfortable taking risks and experimenting with new vocabulary.
- 3. *Incorporate Grammatical and Phonemic Awareness:* Introduce grammatical terms and phonemic script in a meaningful context to enhance students' understanding of vocabulary structure and pronunciation. Scaffold learning by providing clear explanations and examples within the Whole-Brain Teaching approach.
- 4. Focus on Vocabulary Strategies: Emphasize incorporating effective vocabulary learning strategies within the Whole-Brain Teaching framework. Activities that engage students in meaningful vocabulary use should be integrated into the instructional plan to enhance language acquisition.
- 5. Active Engagement Strategies: Encourage the use of active engagement strategies such as call-and-response techniques, gestures, and movement-based activities to enhance students' listening skills. These strategies capitalize on multisensory learning, promoting better retention and understanding of language concepts.
- 6. Structured Classroom Management Techniques: Implement structured classroom management techniques advocated by the WBT Program to create a positive and conducive learning environment. These techniques, such as the Class-Yes and Teach-Okay methods, can help maintain student focus, encourage participation, and minimize disruptions during EFL lessons.

### **Suggestions for Further Research**

In light of the research findings, the following topics are proposed:

1. Reconducting this research with the first-grade primary school students.

- 2. Investigating the effect of using WBT on the four language skills.
- 3. Investigating the effect of using WBT on developing young children's motivation to learn EFL.
- 4. Assess the transferability of skills learned through the Whole-Brain Teaching Program to other subject areas beyond English language learning. Explore whether improvements in listening skills also contribute to enhanced performance in subjects such as reading comprehension.
- 5. Explore the effectiveness of the Whole-Brain Teaching Program for students with diverse learning needs, such as English Language Learners (ELLs), students with learning disabilities, or gifted learners. Investigate whether modifications or additional supports are necessary to meet the needs of these populations effectively.

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