RESEARCH-DRIVEN ACTIVITIES AND METACOGNITION ENHANCE LISTENING SKILLS THROUGH PPP METHOD: ECUADORIAN UNIVERSITY CASE STUDY (JULY-SEPTEMBER 2023)

ACTIVIDADES BASADAS EN LA INVESTIGACIÓN Y METACOGNICIÓN PARA MEJORAR LA HABILIDAD AUDITIVA A TRAVÉS DEL MÉTODO PPP: ESTUDIO DE CASO EN UNA UNIVERSIDAD PÚBLICA. (JULIO-SEPTIEMBRE 2023)

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Research-driven activities and metacognition enhance listening skills through PPP method: Ecuadorian university case study (July-September 2023)

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ABSTRACT

The burgeoning global demand for English proficiency, particularly within academic, scientific, technological and future-oriented fields, underscore the critical need for robust listening comprehension for academic achievement and lifelong learning. This quasi-experimental study investigated the efficacy of integrating the PPP method (Presentation, Practice, Production) with metacognitive interventions to enhance the listening proficiency of A2.1 level students at a public university in Quito from July to September 2023. By employing inquiry-based research and fostering critical and reflective thinking through individual, collaborative, and reflective metacognitive assignments, the study aimed to not only improve students' listening comprehension but also cultivate their metacognitive awareness. Initial assessments revealed significant metacognitive challenges among students, manifesting as difficulties in comprehending and successfully completing listening tasks, ultimately impacting their academic performance. However, post-intervention evaluations demonstrated that this integrated approach yielded substantial and statistically significant improvements in both listening proficiency and metacognitive abilities, empowering learners not only to listen and understand more effectively but also to discern the cognitive processes underlying their enhanced performance attaining significant learning.

Keywords: abilities, metacognitive, listen, activities, inquiry

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Actividades basadas en la investigación y metacognición para mejorar la habilidad auditiva a través del método PPP: estudio de caso en una universidad pública. (Julio-Septiembre 2023)

RESUMEN

La creciente demanda global de dominio del inglés, particularmente en los campos académicos, científicos, tecnológicos y orientados al futuro, destaca la necesidad crítica de una sólida comprensión auditiva para el logro académico y el aprendizaje a lo largo de la vida. Este estudio cuasi-experimental investigó la eficacia de integrar el método PPP (Presentación, Práctica, Producción) con intervenciones metacognitivas para mejorar la competencia auditiva de estudiantes de nivel A2.1 en una universidad pública de Quito de julio a septiembre de 2023. Al emplear actividades basadas en la investigación y fomentar el pensamiento crítico y reflexivo a través de tareas metacognitivas individuales, colaborativas y reflexivas, el estudio tuvo como objetivo no solo mejorar la comprensión auditiva de los estudiantes sino también cultivar su conciencia metacognitiva. Las evaluaciones iniciales revelaron desafíos metacognitivos significativos entre los estudiantes, manifestándose como dificultades para comprender y completar con éxito las tareas de escucha, lo que finalmente impactó en su rendimiento académico. Sin embargo, las evaluaciones posteriores a la intervención demostraron que este enfoque integrado produjo mejoras sustanciales y estadísticamente contundentes tanto en la competencia auditiva como en las habilidades metacognitivas, empoderando a los estudiantes no solo para escuchar y comprender de manera más efectiva sino también para discernir los procesos cognitivos que son inherentes a su rendimiento mejorado alcanzando de esta manera un aprendizaje duradero.

Palabras clave: habilidades, metacognitivas, escuchar, actividades, investigación

INTRODUCTION

What would happen if humanity couldn't listen with understanding and communicate with coherence? Despite these patterns evolving from primitive stages to modern times, it's crucial to scrutinize the evolution of language, which profoundly impacts oral communication, governed by the intimate relationship between information reception and production (Escalona & Sarahi, 2021). Our research seeks to enhance listening skills, improving comprehension and retention through metacognitive research-based activities supported strategically by utilizing the PPP method throughout the process. As per Holmes (2019), listening is a receptive skill encompassing sounds, words, sentences, phrases, and paragraphs, typically developed before productive skills. It's considered a natural input behavior, commencing from birth. However, two types of listeners exist: passive and active. Passive listeners merely skim through information, while active listeners delve deeper to achieve satisfactory comprehension for effective speaking (Loveless, 2024). Listening is regarded as a critical skill, initiating cognitive processes during its execution, transitioning from lower to higher-order thinking skills, requiring consistent practice to proficiently grasp and interpret messages (Lakmali, 2022). This research focused on students enrolled in the A2.1 level language course at the Academic Language Institute, within a public university in Quito, Ecuador. Conducted from July to September 2023 According to Pineda (2018), Ecuadorian students encounter listening difficulties due to various factors like reduced forms, rhythm, stress, and intonation, stemming from limited exposure to native language videos, music, or conversations, significantly impacting listening comprehension. Moreover, some students lose focus due to lengthy audio and unfamiliar vocabulary, exacerbated by a lack of teacher motivation, guidance, or feedback. These aspects are pivotal for initiating training to enhance listening comprehension and oral communication, alongside implementing innovative methodologies for communicative activities. This research proposes a listening process integrating diverse and effective individual and collaborative metacognitive research-based activities via the PPP method to elevate listening skills.

Theoretical Framework

English emerged as a global lingua franca from the 16th century, solidifying its dominance by the 20th (Sohaib, 2023). It offers numerous benefits, including improved job prospects, access to global information improving cultural professional and personal growth (Ilyosovna, 2020). Furthermore, learning English enhances cognitive abilities in the cortex, strengthening global connections, and stimulating brain development. (English 100, 2022).

Early second language learning involves significant neural activity in crucial areas for sound processing and auditory function such as the left front and superior temporal gyri. (Martensson et al., 2012) The hippocampus plays a pivotal role in associating new words with existing knowledge and grasping phonological rules, facilitating both short-term and long term memory consolidation. (Schlegel et al., 2012) As learning progresses, the hippocampus continues to integrate new linguistic information, solidifying long-term memory. (Voits, et al., 2022)..

The intermediate phase presents cognitive challenges as learners grapple with complex grammatical structures. This increased cognitive demand leads to enhanced neural activity in the dorsolateral prefrontal cortex, crucial for working memory and executive function facilitating smooth application of grammatical rules in real-time communication (Pliatsikas, 2020). Concurrently, the arcuate fasciculus, a crucial white matter tract connecting language comprehension and production centers, undergoes substantial structural reorganization during second language acquisition. These modifications enhance the brain's capacity to transmit linguistic information, thereby facilitating sound production, contextual understanding, and the attribution of meaning (Adetunji, 2016).

At the advanced stage, learners achieve fluency and automaticity reflecting stabilized gray matter and enhanced cognitive efficiency. The intuitive application of vocabulary and grammar signifies a high level of second-language proficiency, which is a direct result of efficient language processing. (Daller et al., 2023).

In conclusion, acquiring proficiency in another language or multiple languages stimulates essential language and communication brain areas, benefiting memory retention, enhancing concentration, and stimulating oral production efficiently (Herencia, 2023).

Listening Importance and students' perceptions and experiences

Listening is vital receptive skill that transforms auditory input into meaningful communication. According to Akter (2019), this passive skill involves processing linguistic signals to convert sounds from words to more complex communicative structures. Strong listening abilities are crucial for effective interaction, as their absence can hinder successful communication. (Wilshiere, 2024). Notably, in a study by Tattersal (2019) on an Ecuadorian university students found that listening was the least practiced skill, hindered by accent and intonation challenges. The study found a link between secondary school experiences and students´ attitudes toward listening suggesting that past educational experiences may influence listening skill development.

This lack of confidence may be linked to limited exposure to real-life communication activities, as suggested by Pineda (2018). To address these challenges, it is paramount to adopt listening-guided tasks such as issuing orders, posing questions, providing answers, and constructing sentences to prioritize listening, comprehension and speaking over grammatical nuances in a real context. (Newton & I.S.P. Nation, 2021). The following are a few methods and approaches to improve listening.

The Task-based Language Teaching (TBLT) prioritizes authentic communication through meaningful tasks. However its focus on overall understanding may sometimes overlook the development of specific listening skills (Kusnawati & Hilda, 2023). Dictogloss a technique, within TBLT, enhances listening by requiring text reconstruction, fostering critical thinking. Nevertheless, this activity can be cognitively demanding particularly for lower level learners or those with limited prior knowledge. (Iain, 2016). According to Schutz (2019), highlights the importance of the inductive approach in listening, where learners discover language patterns through authentic materials. While this fosters independent learning, it can be challenging for beginners who may struggle with the cognitive demands and require more explicit guidance to maneuver the discovery process.

In contrast, the Shadowing technique focuses on phonological accuracy by having learners repeat chunks of language they hear. This approach targets listening and speaking simultaneously, enhancing sound recognition and speech production by reinforcing lexical and semantic connections through repetition. It emphasizes real-time auditory processing to boost fluency and comprehension (Hamada, 2021).

The PPP (Presentation, Practice, Production) method employs a structured, measured, and progressive approach to the growth of listening skills. In the Presentation stage, engaging resources like visuals, realia, dialogues, and audio recordings introduce listening content, activating learners 'schemata and contextualizing the material. Prior to listening tasks, educators introduce necessary vocabulary, grammatical structures, and pronunciation to facilitate context construction by brainstorming, predicting content, and describing images not only connect students to the listening but also establish a robust foundation for subsequent learning stages (Tefl courses, 2024).

The Practice stage involves applying learned concepts through repetition and controlled listening individual or collaborative exercises, guided by activities focusing on specific skills like gist, detail inference and summarization (Anderson, 2016). Alternatively, the PDP, presentation, pre-during (while) listening and post listening method emphasizes a structured process for critical and spontaneous application of listening skills (Manuel, 2024). Both methods can be employed to teach all language areas, including receptive skills (My English Language, 2024). But it is important to focus on students' needs and the teaching objectives.

Finally, the production stage involves open listening questions or tasks related to communicative activities eliciting both top-down and bottom-up listening skills (Helen, 2023). It demonstrates background knowledge, comprehension, development of the listening skills within a meaningful context (Scrivener, 2011). This method is gradual and scaffolded, enabling learners to progressively develop their listening skills. It guides learners from basic sound and word comprehension to more complex information reception and production of critical and creative language skills. (Nirwani & Zuhud, 2016).

In summary, TBLT, Dictogloss, and the inductive approach prioritize meaningful tasks and engagement to develop listening and cognitive skills. Shadowing emphasizes accurate phonological and speech production through repetition. PPP offers a structured, gradual approach to listening skill development, providing systematic framework for progression from lower to higher-order thinking skills, suitable for learners at various proficiency levels. Depending on the learners' needs and context teachers must select the most appropriate method or approach to develop and promote the full range of listening competencies, as it is imperative for successful language acquisition and later production.

Essential ESL Listening skills

Activating schema: Connecting new information to prior knowledge like context and speaker helps learners anticipate content. (Haiyan, 2018).

Predicting content: Familiar vocabulary and themes, stored in memory, prepare the brain to recognize words related to the topic, aiding understanding (Ahmed, Five essential listening skills for English learners, 2015).

Listening for gist: Grasping the main idea by focusing on content words and intonation provides a general understanding of the spoken information (Campos, EnglishPost.org, 2023).

Detecting signposts: Transition words such as "in conclusion" help listeners follow and connect ideas within the content (Staffordshire University, 2023).

Listening for details: This focuses on specific facts, like dates or names, essential for tasks requiring precise information. (Budnic & Nina, 2020)

Inferring meaning: Students use context clues and prior knowledge to interpret implicit meanings, a skill linked to higher-order thinking (Jing, 2015). Proficient learners excel at inferring, enabling faster and more accurate comprehension than those focusing on syntax. The difficulty of inferring meaning varies based on students' background, skills, and vocabulary levels. (Ueda, 2017).

Summing up: Summarizing content with techniques like note-taking aids in organizing and restating information, showing clear understanding (Ray, 2021). These skills create a comprehensive approach for enhancing listening comprehension in ESL learners.

The Role of Inquiry-Based Activities in ESL Listening Instruction

This approach provides numerous opportunities for learners to acquire knowledge and refine skills through individual, collaborative and reflective activities, emphasizing the development of both soft and hard skills, including creativity, critical thinking and problem solving while fostering metacognitive development. In this dynamic environment, the teacher assumes multiple roles as a planner, mediator, challenger, facilitator, and supervisor (Granjeiro, 2019).

In listening, inquiry-based activities support teachers and students in achieving learning goals through schema activation and breaking down lessons into smaller, manageable chunks. Activities like prediction, reading, listening, identifying main ideas, elaborating on details, fact-checking, discussions,

questioning, summarizing, creating, and evaluating are integrated. This approach allows teachers gain insights into students 'progress, knowledge acquisition, and skill progress. Regular feedback and a comprehensive lesson conclusion enable teachers to gauge student learning and assess the effectiveness of research-based activities (Mindroar, 2021).

Finally, self-evaluation and self-reflection are integral components of metacognitive awareness that should occur at the conclusion of research activities. Students reflect on their learning progress, assess how they are advancing their skills and sub-skills, and identify areas for improvement (Clifford, 2020).

Metacognition

It refers to the process of "thinking about one's own thinking. It involves understanding one´s own cognitive functions, including strengths, weaknesses, and learning styles. This self-awareness enhances learning effectiveness (Luke, 2021).

Metacognition comprises two key components: knowledge of cognition involves being aware of what, how one is learning (procedural knowledge), and why one is learning (conditional knowledge). This awareness facilitates mindful learning and strategy adaptation. (Kirmizi & Saricoban, 2020). The second component, regulation of cognition involves planning, monitoring and evaluating one´s cognitive processes. Students employ reflection, planning, action and evaluation to effectively control and manage their mental processes. This regulation optimizes learning experiences and enables strategy adjustments as needed. (Kirmizi & Saricoban, 2020).

Overall, metacognition and metacognitive awareness empower learners to become more conscious and deliberate in their learning endeavors, allowing them to apply their skills effectively in various contexts.

Metacognition awareness

On a profound level, metacognition entails being conscious of how one thinks and learns. In the English Language Teaching (ELT) classroom, it empowers learners to recognize their metacognitive processes and strategies, thereby enhancing their learning autonomy, decision-making abilities, and problem-solving skills. This heightened awareness not only fosters comfort and confidence during the learning journey but also enables learners to achieve outstanding outcomes (Asy'ari, Ikhsan, & Muhali, 2019). Moreover, contemporary scientific research emphasizes that meta-awareness extends beyond academic excellence to encompass overall well-being in the world (Luke, 2021).

Relationship between metacognitive awareness and listening process questioning.

This phenomenon can be termed as "listener awareness of their cognitive process," wherein learners possess the ability to monitor and regulate their listening process (Fun, Wang, Min, Zhou, & Pan, 2023). Goh et al. (2006) identified five key types of metacognitive awareness that influence students´ listening comprehension strategies. Firstly, problem-solving involves actively addressing comprehension challenges by utilizing known words, grasping the main idea, and drawing on prior knowledge to infer meaning. Secondly, planning and evaluation encompass pre-listening preparation, setting listening goals, monitoring comprehension during the task, and reflecting on the effectiveness of employed strategies. Thirdly, mental translation, the practice of translating every word, should be avoided as it hinders fluency and overall comprehension. Fourthly, person knowledge has to do with self-assessment of one´s listening abilities, considering factors such as confidence, anxiety and self-efficacy beliefs. Finally, directed attention emphasizes maintaining focus and concentration throughout the listening process, particularly when encountering difficulties or experiencing lapses in comprehension (Aesaert et al., 2021).

The following table outlines the prior approach to a listening instruction, emphasizing metacognitive strategies at each stage. It progress from pre-listening prediction and planning to post-listening evaluation and goal setting. Key metacoginitive strategies include monitoring comprehension, problem-solving difficulties, and actively engaging with the listening material through verification, discussion, and reflection. This framework aims to enhance learner autonomy and improve listening comprehension by encouraging conscious and strategic engagement with the listening task.

Table 1. The pedagogical stages of metacognitive strategy teaching adopted in the study.

Stage of Listening Instruction		Related metacognitive strategies
Once listeners know the topic and text type, they predict the types of information and possible words they may hear.	Planning/predicting stage.	Planning and directed attention
Listeners verify initial hypotheses, correct as required, and note additional information understood.		Monitoring

	First verification stage	
Listeners compare what they have written with peers, modify as required, establish what needs resolution, and decide on details that still need special attention.		Monitoring, planning, and selective attention.
Listeners verify points of disagreement, make corrections, and write down additional details understood.	Second verification stage	Monitoring and problem solving.
Class discussion in which all contribute to reconstructions of the text's main points and most pertinent details interspersed with reflection on how listeners arrived at the meaning of certain words or parts of the text.		Monitoring and evaluation
Listeners listen for information that they could not decipher earlier in the class discussion. Teachers should consider sharing the transcript with learners.	Final verification stage	Selective attention and monitoring
Based on discussion or strategies used to		Evaluation
compensate for what was not understood, listeners write goals for the next listening activities.	Reflective stage	

Nota:Fuente (Mashhadi & Saeed, 2016)

Design

This research employs a quasi-experimental design due to the presence of an "exposure" and a "response", and the need to investigate their relationship. The absence of a control group and random assignment is acknowledged, emphasizing the design´s flexibility and ethical considerations. Despite these limitations, the study aims to explore behaviors and uncover patterns through quantitative analysis

Quantitative research allows for the systematic collection and analysis of numerical data, enabling researchers to quantify variables, assess patterns, and draw objective conclusions. This approach is chosen to understand the phenomenon under investigation and establish relationships between the variables.

METHODOLOGY

Throughout this research, two key data collection instruments were utilized: a pre-test conducted at the study's commencement and a post-test administered approximately one week before the study's conclusion. The pre-test, involving 81 students, served as a baseline assessment to gauge initial proficiency levels and capture existing knowledge. Administering the pre-test to all students allowed for comparison and tracking of progress. The post-test, involving 91 students, aimed to measure progress and assess the effectiveness of interventions or instructional strategies. Both tests assessed specific learning objectives and were designed to be reliable, valid, and aligned with instructional content.

The methodology employed in this research utilizes a combination of qualitative and quasi-experimental approaches. The qualitative aspect involves a comprehensive examination of participant behaviors and trends through meticulous observation and systematic recording of data. This qualitative component aims to capture nuanced details and provide a deeper understanding of the educational approaches under scrutiny. Additionally, the research incorporates quasi-experimental methods to assess the effectiveness of these educational approaches. By comparing outcomes between groups under different teaching conditions, researchers can draw conclusions about the impact of specific interventions in a controlled yet real-world setting. This quasi-experimental design allows for the evaluation of causal relationships while considering practical constraints and ethical considerations inherent in educational research.

The involvement of two teachers overseeing groups of students ensures balanced teacher participation, enhancing the validity of the study's findings. Through this methodological combination of qualitative observation and quasi-experimental analysis, the research seeks to provide meaningful insights into the effectiveness of educational approaches and contribute to the advancement of educational practices.

Participants

This research investigated language listening learning among A2.1 level students at the Academic Language Institute of a public university in Quito, Ecuador, from July to September 2023. The study encompassed a diverse student population with varying backgrounds and academic experiences. Students followed a structured curriculum, including classroom instruction and independent study time. A significant number of students participated, ensuring a robust dataset. Instructors played a crucial role in guiding student learning and contributed to the study`s success through their expertise and commitment to quality education.

Table No. 2. Pre-Test

Schedule	Period	No. students	Level	Teachers in charge
15:00 – 17:00	July – September	13	A2.1	A
17:00 – 19:00	July – September	12	A2.1	A
19:00 – 21:00	July – September	15	A2.1	A
7:00 – 12:00	July – September	18	A2.1	A
19:00 – 21:00	July – September	10	A2.1	B
17:00 – 19:00	July – September	13	A2.1	B
Total		**81**		

Table No. 3. Post-Test

Class schedule	Period	No. students	Level	Teachers in charge
15:00 – 17:00	July – September	13	A2.1	A
17:00 – 19:00	July – September	15	A2.1	A
19:00 – 21:00	July – September	15	A2.1	A
7:00 – 12:00	July – September	22	A2.1	A
19:00 – 21:00	July – September	13	A2.1	B
17:00 – 19:00	July – September	13	A2.1	B
Total		**91**		

It is noteworthy that a significant disparity in participant numbers emerged between the pre-test and post-test phases. This discrepancy stemmed from the absence of ten students during the pre-test session, leading to a higher turnout for the subsequent post-test assessment. This absence may have been influenced by various factors such as scheduling conflicts or unforeseen circumstances.

Regarding gender distribution, a closer examination reveals the breakdown of participants into distinct categories based on gender. This breakdown provides valuable insight into the composition of the study's sample population, allowing for a more nuanced understanding of potential gender-related dynamics or trends within the research findings.

Table No. 4. Pre-test

Group	Women	Men	Total
1	9	4	13
2	8	4	12
3	8	7	15
4	14	4	18
5	6	4	10
6	7	6	13
	52	29	81

The pre-test results indicate that the research sample consisted of 52 women and 29 men, making up a total of 81 participants. This distribution indicates that roughly 64% of the participants were women, while around 36% were men. It's important to acknowledge the gender breakdown as it provides insight into the composition of the sample population. However, for the purposes of the analysis, the emphasis might be placed more on the overall participation numbers rather than the gender imbalance specifically.

Table No. 5. Post-test

Group	Women	Men	Total
1	9	4	13
2	9	6	15
3	8	7	15
4	16	6	22
5	8	5	13
6	7	6	13
	57	34	91

In the post-test phase, the number of participants increased to 91, with 57 women and 34 men. This distribution shows that approximately 63% of the participants were women, while around 37% were men. Similar to the pre-test phase, the gender breakdown provides valuable information about the composition of the sample population. However, it's essential to analyze the overall participation numbers and any changes between the pre-test and post-test phases to understand the impact of the intervention or study over time.

Procedure

The sample consisted of 81 students for the pre-test and 91 students for the post-test, all selected from a public university. Prior to commencing the research, obtaining consent from participants was essential to ensure their full understanding and voluntary participation. Furthermore, securing authorization from relevant administrative bodies within the university was critical for the research's successful execution. This involved obtaining approval from the university's management bodies, demonstrating adherence to ethical research standards and institutional guidelines. The collaboration and support of the teaching staff were vital for facilitating the study's implementation. Their involvement not only aided logistical coordination but also reinforced the academic integrity and validity of the research. Overall, these measures emphasized ethical considerations and procedural rigor in conducting the study within the university environment.

Reliability

In this research, the reliability of the instruments was evaluated by involving English students at the A2.1 level of the Academic Institute of Languages, part of a public university in Ecuador. Data collected from these informants helped identify points of convergence, indicating the validity of the data collection instrument. Both the pre-test and post-test played crucial roles in assessing the impact of the PPP methodology on listening skills. Through these assessments, researchers analyzed how the PPP approach influenced the development of listening abilities among English language learners at the A2.1 level. These rigorous methodologies aimed to provide a comprehensive understanding of the PPP method's effectiveness in enhancing language acquisition and proficiency.

The involvement of informants ensured the reliability of the research instruments, ensuring consistent and accurate data collection.

Data analysis.

Pre-test

The pre-test was meticulously structured into five distinct sections, aligning with the methodology employed in this research. These sections were designed to systematically assess various aspects of language learning and comprehension. Firstly, the pre-test included a section dedicated to activating schema, aiming to tap into participants' prior knowledge and experiences related to the subject matter. Following this, sections focusing on listening for general ideas and listening for details were incorporated, allowing researchers to evaluate participants' ability to grasp overarching concepts as well as finer details within audio stimuli. Additionally, the pre-test included sections dedicated to goal setting and reflection. These components encouraged participants to set personal learning objectives and critically reflect on their learning experiences and strategies. By incorporating these elements, the pre-test aimed to provide a comprehensive overview of participants' listening skills, while also fostering metacognitive awareness and goal-oriented learning practices.

As previously mentioned, a total of 81 participants actively engaged in the pre-test, providing valuable data for analysis and evaluation. Their responses offered insights into the effectiveness of the pre-test format and its alignment with the research objectives, thus contributing to the overall validity and reliability of the study's findings.

Table No. 6

ITEM	Total	
1	81	ACTIVATING SCHEMA
2	81	
3	81	
4	81	LISTENING FOR GENERAL IDEAS
5	81	
6	81	
7	81	
8	81	LISTENING FOR DETAILS
9	81	
10	81	
11	81	
12	81	GOAL SETTING
13	81	REFLECTION
14	61	
15	81	

Post-test

Expanding on the framework established in the pre-test, the post-test was structured into five sections to maintain methodological consistency throughout the research. Each section corresponded to essential aspects of the research methodology, allowing for a comprehensive evaluation of participants' listening skills and learning progression.

The initial section of the post-test focused on activating schema, prompting participants to draw upon their existing knowledge and experiences related to the subject matter. This foundational step provided insights into participants' familiarity with relevant concepts. The following sections mirrored the pre-test, addressing listening for general ideas and details. These segments assessed participants' comprehension of audio stimuli at both conceptual and specific levels. Additionally, sections dedicated to goal setting and reflection were included, offering participants a chance to establish learning objectives and reflect on their experiences. By integrating these elements, the post-test not only evaluated listening skills but also promoted metacognitive awareness and goal-driven learning.

Maintaining consistency with the pre-test structure, the post-test ensured a systematic approach to data collection and analysis. This alignment facilitated meaningful comparisons, allowing researchers to evaluate the PPP methodology's impact on participants' listening skills over time.

Table No. 7

ITEM	Total	
1	91	ACTIVATING SCHEMA
2	91	
3	91	
4	91	LISTENING FOR GENERAL IDEAS
5	91	
6	91	
7	91	
8	91	LISTENING FOR DETAILS
9	91	
10	91	
11	91	
12	91	GOAL SETTING
13	91	REFLECTION
14	91	
15	91	

In both the pre- and post-tests, a standardized questionnaire was employed, utilizing the same set of questions and format. This approach ensured consistency in data collection and facilitated a direct comparison between the participants' performance before and after exposure to the PPP (Presentation, Practice, Production) methodology. As the primary focus of the activity was on assessing listening skills, the questionnaire was thoughtfully designed to encompass various aspects of listening comprehension, vocabulary recognition, and potentially other related skills relevant to the proficiency level of the participants, who were English students at the A2.1 level of the Academic Institute of Languages within a public university in Ecuador. Then a questionnaire was elaborated based on the following information:

Table No. 8

1	What is the most suitable title for this listening activity?	ACTIVATING SCHEMA
2	Which possible piece of advice could be heard on the audio according to the listening title?	
3	What other piece of advice could be heard on the audio?	
4	What is the main idea of the listening activity 1?	LISTENING FOR GENERAL IDEA
5	Choose another main idea that best fits to activity 2	
6	Select the general idea for listening activity 3	
7	Check the best main idea for listening activity 4	
8	What are other details related to question 1?	LISTENING FOR DETAILS
9	Choose other details related to question 2	
10	Select the specific information related to question 3	
11	Check the option that shows more details for question 4	
12	Read and choose the appropriate response according to the topic and grammar structure.	GOAL SETTING
13	How did I feel while doing the listening activity?	REFLECTION
14	Which listening activity did you find the most challenging?	
15	Which of these activities would you use to improve your listening skill?	

Both the pre-test and the post-test presented three response options in three sections: correct, partly correct, and incorrect". In one of the sections, the answers were "true, false, and does not say" and in the last section, the options were "comfortable, quite comfortable, and not comfortable".

Pre-test

Following the administration of this pre-test to 81 participants, the subsequent data was collected and analyzed.

Table No. 9

|	Pre-Test				
ITEM	Correct	Partly correct	Wrong	Total	ACTIVATING
1	15	40	26	81	SCHEMA
2	46	21	14	81	
3	52	23	6	81	
ITEM	Correct	Partly correct	Wrong	Total	LISTENING
4	54	22	5	81	FOR GENERAL
5	45	19	17	81	IDEAS
6	52	24	5	81	
7	66	9	6	81	
ITEM	True	False	Doesn't say	Total	LISTENING
8	5	17	59	81	FOR DETAILS
9	41	14	26	81	
10	72	9	0	81	
11	34	16	31	81	
ITEM	Correct	Partly correct	Wrong	Total	GOAL SETTING
12	65	12	4	81	
ITEM	Comfortable	Quite comfortable	Not comfortable	Total	REFLECTION
13	32	25	24	81	
14	46	22	13	81	
15	44	30	7	81	

From the information obtained, the following data is analyzed:

Figure 1
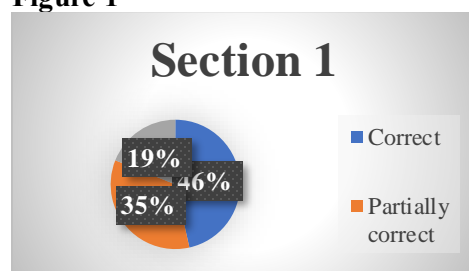
The initial section focuses on "schema activation," where students are prompted to anticipate events based on visual cues, vocabulary, and inquiries. On average, 46% of the total, with 36.7 participants providing correct responses. Additionally, 35% were partly correct, with 29.00 participants, while 19% inaccurately responded, totaling 15.3 participants.

Figure 2
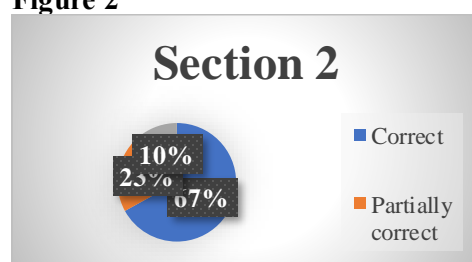
In the second section, emphasis is placed on "listening for general ideas," requiring students to deduce the main concept by selecting appropriate questions. On average, 67% of the total, with 54.3 participants providing correct responses. Additionally, 23% were partly correct, with 18.5 participants, while 10% inaccurately responded, totaling 8.2 participants.

Figure 3
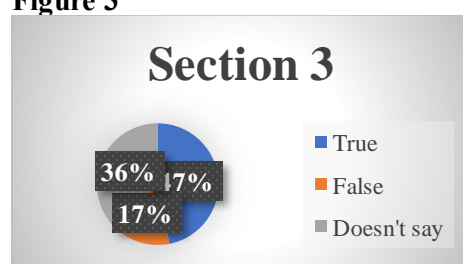
In the third section, the focus shifts to "listening for details," where students are tasked with extracting more nuanced information from texts. On average, 47% of the total, 38 participants responded with "true." Additionally, 17% answered "false," with 14 participants, while 36% responded with "doesn't say," totaling 29 participants.

Figure 4
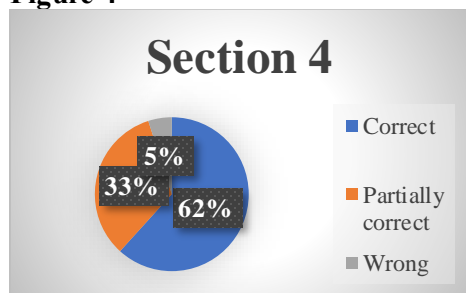
In the fourth section, the focus lies on "goal setting," where students are tasked with identifying the academic goal of the listening activity. On average, 62% of the total, 50 participants provided correct answers. Additionally, 33% answered "partly correct," with 27 participants, while 5% responded incorrectly, totaling 4 participants.

Figure 5
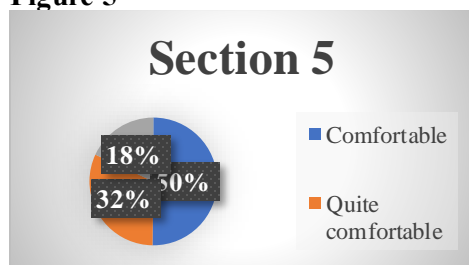
In the fifth section, the focus shifts to "reflection," where students are encouraged to share their feelings, ideas, and reflections on the activity. On average, 50% of the total, 40.5 participants expressed feeling comfortable with the task. Additionally, 32% felt "quite comfortable," with an average of 25.9 participants, while 18% responded that they were "not comfortable," averaging 14.6 participants.

Post-test

Following the administration of the post-test to 91 participants, the test comprised three sections, each offering response options of "correct," "partly correct," and "incorrect." One section required participants to choose from "true," "false," and "does not say," while the last section offered options of "comfortable," "relatively comfortable," and "not comfortable." The resulting data provided insights into the participants' performance across these sections.

Table No. 10

| ITEM	Correct	Partly correct	Wrong	Total	ACTIVATING SCHEMA
		Post-Test			
1	82	7	2	91	
2	80	10	1	91	
3	37	53	1	91	
ITEM	**Correct**	**Partly correct**	**Wrong**	**Total**	LISTENING FOR GENERAL IDEA
4	81	7	3	91	
5	68	11	12	91	
6	70	9	12	91	
7	69	12	10	91	
ITEM	**True**	**False**	**Doesn't say**	**Total**	LISTENING FOR DETAILS
8	81	6	4	91	
9	53	33	5	91	
10	58	19	14	91	
11	51	20	20	91	
ITEM	**Correct**	**Partly correct**	**Wrong**	**Total**	GOAL SETTING
12	65	25	1	91	
ITEM	**Comfortable**	**Quite comfortable**	**Not comfortable**	**Total**	REFLECTION
13	55	25	11	91	
14	77	9	5	91	
15	59	25	7	91	

From the information obtained, the following data is analyzed:

Figure 6
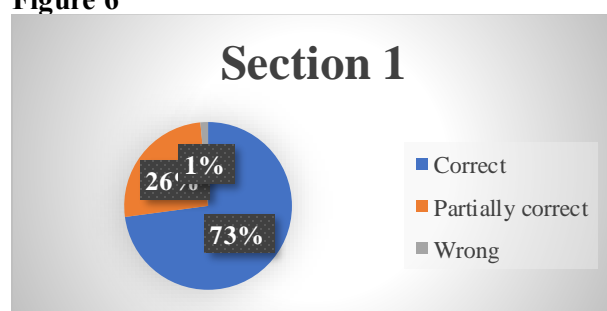
The initial section focuses on "schema activation," where students are tasked with predicting events using images, vocabulary, and questions. On average, 73% of the total, 66.4 participants provided

correct responses. Additionally, 26% answered "partly correct," with an average of 23.7 participants, while 1% responded incorrectly, representing 0.9 participants.

Figure 7

Section 2
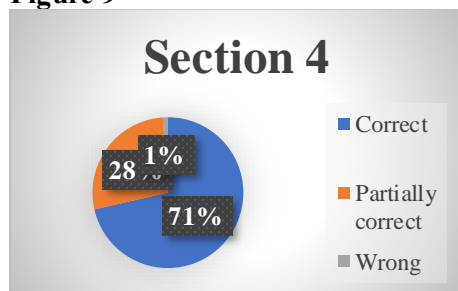
Correct
Partially correct
Wrong

10%
1%
79%
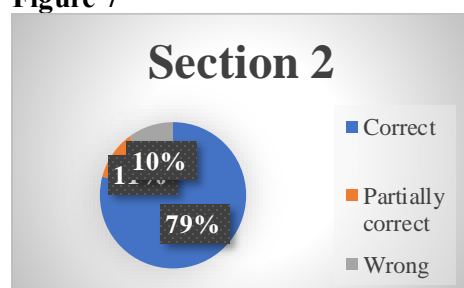
In the second section focusing on "listening for general ideas," participants engaged in discerning the main idea by selecting relevant questions. The results showed that, on average, 79% of the total, which is approximately 71.9 participants, accurately identified the main idea. Furthermore, 11% of participants, about 10.0, provided partially correct responses, while 10% of the total, approximately 9.1 participants, answered incorrectly.

Figure 8

Section 3

True
False
Doesn't say

12%
21%
67%
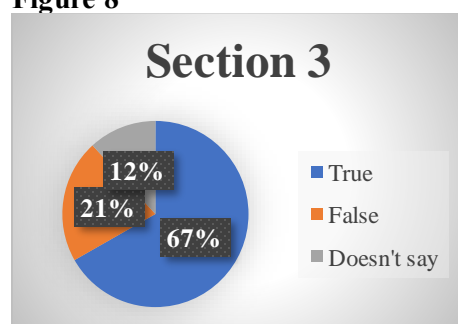
In the third section, focusing on "listening for details," participants were tasked with acquiring more in-depth information related to the texts provided. On average, 67% of the total, which is approximately 61.0 participants, responded with "true." Additionally, about 21% of the total, an average of 19.1 participants, answered "false," while approximately 12% of the total, an average of 10.9 participants, indicated "doesn't say."

Figure 9

In the fourth section, "goal setting," students were tasked with selecting the academic goal of the listening activity. On average, 71% of the total, which is approximately 64.6 participants, provided correct responses. Additionally, about 28% of the total, an average of 25.5 participants, answered "partly correct," while only 1 participant, representing 1%, answered incorrectly.

Figure 10
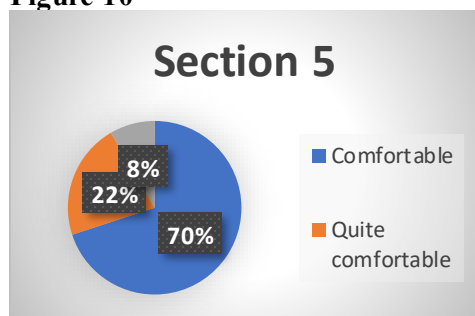
In the fifth section, "reflection," students were prompted to articulate their feelings, ideas, and reflections on the activity. On average, 70% of the total, approximately 63.7 participants, reported feeling comfortable with the task. Additionally, about 22% of the total, an average of 20.0 participants, felt "quite comfortable," while only 8% of the total, an average of 7.3 participants, indicated that they were "not comfortable."

DISCUSSION

The pre-test and post-test design is a commonly used experimental method to measure changes in participants' behavior due to an intervention. The process involves three main steps:

Administer Pre-Test: The initial test is given to participants to establish a baseline measurement of their performance before any intervention.

Administer Post-Test: After the intervention, participants take a second test to measure any changes in their scores or behavior.

Evaluate Disparity: Researchers compare pre-test and post-test results to assess the impact of the intervention on participants' behavior or performance.

This design helps evaluate the effectiveness of interventions and provides insights for future research and applications. The study also highlights the importance of using standardized protocols, randomizing participants, and carefully analyzing data to ensure the validity and reliability of findings. An active listening approach, incorporating tailored vocabulary and metacognitive reflection, was used to engage learners and improve their listening skills. The study found that such research-based activities effectively enhanced listening abilities and supported learners' overall well-being, empowering them to become more autonomous and reflective listeners.

CONCLUSIONS

Methodology-specific setting and standards

This research was conducted within a methodology-specific setting, ensuring consistency and reliability in the procedures. By adhering to well-established standards, including randomization, standardized testing protocols, and rigorous data analysis, the study's results are robust and can be replicated across similar contexts. This methodological approach enhances the credibility and generalizability of the findings, allowing for meaningful comparisons with other studies in the field.

Active listening approach

The findings highlight the active nature of the listening process, wherein listeners engage their linguistic, contextual, and world knowledge along with various listening strategies to comprehend messages effectively. This underscores the importance of providing learners with opportunities to actively engage with listening materials, fostering deeper comprehension and interpretation skills.

Tailoring vocabulary and expressions

Vocabulary and expressions were carefully selected and taught to learners according to their proficiency levels. This practice, particularly emphasized in the "activating schema" stage of the presentation, ensures that learners are adequately equipped with the necessary linguistic tools to comprehend and engage with the listening materials effectively.

Systematic and metacognitive listening activities

The study underscores the importance of systematic, attractive, varied, dynamic, and challenging listening activities based on metacognition. These activities, presented in the practice stages of the intervention, aim to stimulate students' critical thinking, motivation, and interest. By integrating metacognitive strategies into listening tasks, learners are encouraged to reflect on their learning process, identify strengths and weaknesses, and employ effective problem-solving strategies to enhance their listening abilities.

Reflection and well-being

Learners are encouraged to reflect not only on their listening performance but also on their overall well-being during the listening activities. By promoting self-awareness and metacognitive reflection, learners can identify emotional responses, strengths, weaknesses, and areas for improvement. This reflective practice empowers learners to take ownership of their learning journey, seek solutions to challenges, and make informed decisions to enhance their listening skills and overall well-being.

Impact of research-based activities

The study's results demonstrate a significant increase in post-test scores compared to pre-test scores, indicating the positive influence of research-based activities on improving listening skills. This improvement is attributed to the integration of metacognitive strategies and the systematic implementation of activities based on the Presentation-Practice-Production (PPP) method.

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