



**The effect of English audio recording on vocabulary acquisition in rural EFL eighth grade students**

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## **Abstract**

This study examines the use of English audio recordings as a pedagogical strategy to support vocabulary acquisition among rural eighth-grade students. The research adopts a pre-experimental quantitative design supported by qualitative data, involving 25 students from a public rural school in Rocafuerte, Manabí. In contexts where access to authentic linguistic input is limited due to technological and geographical constraints, alternative low-cost strategies become essential for effective language learning. The intervention consisted of the systematic use of English audio recordings across eight sessions over a four-week period. Vocabulary performance was assessed through a pre-test and post-test, complemented by classroom observations and field notes to capture students' engagement and response to auditory input. The results show measurable improvements in students' vocabulary performance following the intervention, evidenced by higher post-test scores and a more homogeneous distribution of results across the group. These findings suggest that exposure to consistent auditory input may support the development of phonological awareness and facilitate the connection between lexical form and meaning. However, due to the descriptive nature of the study and the absence of a control group, the results are interpreted as observed

progress within a specific sample rather than as evidence of a causal relationship. Qualitative observations further indicate increased student engagement and greater familiarity with pronunciation patterns. The study concludes that English audio recordings constitute a practical and cost-effective pedagogical resource for vocabulary development in rural EFL contexts. Additionally, it highlights the importance of context-sensitive instructional strategies and recommends further research with larger samples and controlled designs to validate these findings and explore their long-term impact.

**Keywords:** EFL vocabulary acquisition, audio recordings, rural education, auditory input, phonological processing.

## **1. Introduction**

The acquisition of English as a Foreign Language (EFL) is strongly influenced by both the quality and frequency of linguistic input. Vocabulary development, as highlighted by Nation (2013), constitutes a fundamental component of language proficiency; however, its effectiveness depends on learners' ability to notice, process, and retrieve lexical items through repeated exposure. In many rural contexts, geographical and technological limitations significantly restrict access to authentic phonological input, hindering this process. As Cárdenas and Hernández (2020) point out, these educational settings often face a "pedagogical isolation" where the lack of diverse auditory resources limits the students' opportunities to engage with the target language beyond basic textbook structures.

This study explores auditory mediation—specifically through English audio recordings—as a strategic intervention to bridge the gap between abstract lexical lists and meaningful recognition. By providing consistent and authentic pronunciation models, it is possible to support both the phonological and semantic processing of new words. This approach aligns with the findings of Al-Zoubi (2018), who suggests that systematic exposure to authentic oral models is essential for internalizing the phonemic boundaries of new vocabulary. Therefore, this research examines the potential of low-cost auditory tools to facilitate vocabulary acquisition among eighth-graders in a rural context, focusing on the cognitive transition from passive recognition to active recall.

## **1.2 General and specific objectives:**

### **1.2.1 General objective**

To evaluate the extent to which English audio recordings contribute to vocabulary acquisition among eighth-grade students in a rural context.

### **1.2.2 Specific objectives**

- To identify the main difficulties rural students face when learning and remembering new English words.
- To create and apply listening activities using authentic audio recordings to help students better recognize the sound and meaning of words.
- To compare pre-test and post-test results to measure the improvement in students' vocabulary after using audio recordings.

## **1.3 Problem statement**

In the rural educational setting of the “José Alejandro Bermúdez Fariás” school in Rocafuerte, Manabí, eighth-grade students face a critical “lexical gap.” This challenge is characterized by a functional disconnect: while students may recognize written words in their textbooks, they struggle to identify them in spoken discourse. Currently, the classroom teacher serves as the sole source of spoken English, which restricts exposure to the diverse accents, rhythms, and natural intonations necessary for robust language development.

The digital divide further exacerbates this situation, as limited internet connectivity and a lack of specialized language laboratories often lead to a reliance on traditional, decontextualized translation methods. Consequently, vocabulary instruction has devolved into rote memorization, resulting in inconsistent performance and low retention rates. There is, therefore, an urgent need to determine if providing a systematic, portable auditory stimulus can overcome these local structural constraints and support more effective vocabulary acquisition in this specific resource-limited environment.

## **1.4 Justification**

The relevance of this research lies in its potential to offer a sustainable and effective pedagogical response to the specific needs of rural English education. To ensure a clear delimitation of its impact, the study is justified across three strategic dimensions:

1. **Pedagogical dimension:** The research provides a practical framework for integrating auditory mediation into the curriculum without relying on high-cost infrastructure. By prioritizing the development of the phonological loop, it offers a method to transition from passive vocabulary recognition to active lexical use, enhancing the students' cognitive processing of the language.
2. **Social dimension:** This study addresses educational equity in the Rocafuerte community by demonstrating that significant improvements can be achieved using offline digital resources. It empowers rural teachers and students, ensuring that the quality of English instruction is not dictated solely by the availability of high-speed internet connectivity.
3. **Scientific dimension:** Technically, this research contributes empirical data to the field of applied linguistics in rural Manabí. By providing a replicable model that combines quantitative performance data with qualitative observations, it fills a gap in local literature regarding the effectiveness of low-cost auditory tools for eighth-grade learners.

## 2. Literature Review: A Thematic Synthesis

The theoretical framework of this study is structured around three core pillars: the cognitive processes of vocabulary acquisition, the role of auditory input in language learning, and the specific pedagogical challenges of the rural EFL context. Rather than presenting isolated studies, this section synthesizes how these different dimensions converge to support the use of audio recordings in resource-limited settings. As Al-Zoubi (2018) argues, the quality and frequency of language exposure are determinant factors that synchronize cognitive reception with pedagogical tools to facilitate effective language acquisition. Complementing this view, Thornbury (2002) emphasizes that for vocabulary to be truly acquired, it must be subjected to "spaced retrieval" and phonological processing, a cycle that auditory recordings can facilitate systematically. Furthermore, Cárdenas and Hernández (2020) sustain that in rural

environments, the successful integration of English depends on the teacher's ability to bridge the infrastructure gap with accessible, low-cost mediation that prioritizes oral-aural foundations over traditional rote learning.

### **1. Cognitive dimensions of vocabulary acquisition**

Vocabulary acquisition is widely recognized as a non-linear, incremental process. Central to this process is the phonological loop, a component of Baddeley's working memory model, which is responsible for the temporary storage and manipulation of verbal information; this mechanism is crucial for encoding new vocabulary sounds before they are stored in long-term memory. As Oxford (2017) points out, the efficiency of this cognitive loop is enhanced when the learner utilizes specific auditory strategies to organize phonological data. While early theories focused on rote memorization, contemporary researchers like Nguyen (2022) and Nation (2013) emphasize the importance of "noticing" and "retrieval" as fundamental stages. In this context, Richards and Schmidt (2013) define "noticing" as the conscious cognitive registration of linguistic forms, suggesting that without a clear auditory stimulus, this registration remains incomplete.

2. However, a critical tension exists in the literature regarding how students transition from passive recognition to active recall. While Mukhtorova and Ilxomov (2024) argue that lexical growth depends primarily on frequency of exposure, Pham (2021) suggests that in EFL environments, frequency alone is insufficient if the input lacks phonological clarity. This study aligns with the latter view, suggesting that for rural students, the "noticing" phase must be supported by high-quality auditory models to ensure that the mental representation of a word includes its correct sound and usage.

### **3. The input hypothesis and auditory mediation**

The role of listening as a primary source of language development is grounded in Krashen's (1985) Input Hypothesis, which posits that learners progress when they are exposed to "comprehensible input." Linked to this is the affective filter: a psychological barrier—such as anxiety or lack of motivation—that can prevent input from reaching the language acquisition device. In this study, audio recordings are

expected to lower this filter by providing a controlled, repeatable, and low-pressure auditory environment. This is consistent with recent findings by Al-Jarf (2021), who demonstrates that the use of digital audio tools significantly reduces learner anxiety and increases confidence by allowing students to engage with the language at their own pace, thereby creating a more receptive state for lexical acquisition.

Recent studies have expanded these concepts to the specific use of digital tools. While Shan and Aziz (2022) highlight the benefits of high-tech immersive environments, their findings must be contrasted with the reality of the digital divide. In this regard, the research of Al-Jarf (2021) provides a more applicable bridge for this study, as it demonstrates that even low-tech auditory tools—such as offline recordings—can trigger the same cognitive "input" mechanisms as more sophisticated technologies. This perspective is further supported by Cárdenas and Hernández (2020), who argue that in rural EFL settings, pedagogical success depends on adapting available resources to minimize the lack of language exposure. Furthermore, Mukhtorova and Ilxomov (2024) emphasize that the systematic integration of listening skills is essential for building a foundational vocabulary, as it provides the phonological base necessary for long-term retention. Finally, according to Nguyen (2022), the use of contextualized auditory input helps bridge the gap between abstract recognition and practical lexical use, especially in environments where the teacher is the primary source of English.

#### **4. English education in rural contexts**

Teaching English in rural areas involves structural challenges that go beyond pedagogical methods. As Pham (2021) notes, the lack of authentic exposure to the language often leads to a stagnant learning process. This is compounded by what Shan and Aziz (2022) describe as a resource-limited environment where internet connectivity is not a reliable variable. Therefore, the choice of audio recordings in this study is not a compromise of quality, but a strategic adaptation of established linguistic theories to the rural Manabí context, ensuring that students receive the necessary phonological input to support their lexical development.

### **3. Methods and techniques**

This study adopts a pre-experimental quantitative design with a single-group pre-test/post-test structure to examine changes in students' vocabulary performance following the implementation of English audio recordings. The approach is primarily quantitative, supported by qualitative classroom observation and field notes to document students' engagement and participation during the listening activities.

#### **3.1 Context and participants**

The study was conducted at the “José Alejandro Bermúdez Farías” public rural school in Rocafuerte, Manabí. The sample consisted of 25 eighth-grade students (ages 12–14), selected through non-probabilistic convenience sampling due to accessibility. The group composition included 11 males and 14 females, totaling 25 participants for all testing and observation stages.

#### **3.2 Operational definition of the independent variable**

In this study, the independent variable is strictly defined as the exposure to authentic English audio recordings (digital MP3 files). To ensure operational clarity and differentiate the variable from the pedagogical procedure, it is delimited by the following specific conditions:

- Nature of the stimulus: the auditory input was operationalized through the use of (official recordings from the Ministry of Education modules / curated online auditory resources), delivered in digital MP3 format. This selection ensures that the phonological models are pedagogically structured and appropriate for the learners' level. This approach is consistent with Boutorwick et al. (2019), who emphasize that using curriculum-aligned auditory materials allows for a more controlled "noticing" of target vocabulary. Furthermore, Lichtman (2015) supports the use of pre-recorded models in classroom settings, as they provide a stable and repeatable phonetic anchor that reduces the cognitive load during the initial stages of word recognition.
- Dose and duration: A total of 360 minutes of cumulative auditory exposure (8 sessions of 45 minutes each), where the audio recording is the primary source of

linguistic input. As Oxford (2017) highlights, the consolidation of new lexical items requires a sustained and structured exposure time to allow the working memory to process and transfer auditory data into long-term storage.

- **Technical standard:** High-fidelity digital playback via portable speakers to ensure phonological clarity in a rural classroom setting. In this regard, Thornbury (2002) emphasizes that for auditory mediation to be effective, the learner must be able to perceive the "phonemic shape" of the word clearly, which makes the quality of the sound reproduction a critical variable in the success of the intervention.

**3.3 Pedagogical mediation vs. variable:** It is essential to distinguish the independent variable (the audio input) from the pedagogical strategies (pre-listening visual aids, repetition drills, and gap-filling tasks). While these strategies facilitate the processing of the variable, they are considered constant environmental factors of the intervention, whereas the systematic variation in vocabulary performance is attributed specifically to the auditory stimulus provided by the recordings.

### **3.4 Instruments**

To ensure methodological rigor, the following instruments were utilized:

- **Vocabulary assessment (Pre-test and post-test):** These diagnostic instruments were designed to measure lexical recognition and usage. Each test consisted of 10 items, including multiple-choice questions, matching exercises, and fill-in-the-blanks tasks. Each correct answer was awarded 1 point, for a maximum score of 10 points. To ensure content validity and curricular alignment, the instruments were validated through expert judgment by two experienced English language teachers.
- **Classroom Observation and Field Notes:** These were used to record qualitative data regarding students' participation, motivation, and phonological responses to the auditory input during the intervention.

### **3.5 Procedure**

The pedagogical intervention was carried out over a period of 4 weeks, consisting of 8 sessions (two 45-minute sessions per week). Each session was structured into three distinct phases:

1. **Pre-listening:** introduction of key vocabulary using visual aids to establish context.
2. **While-listening:** active engagement with English audio recordings, where students identified specific terms and practiced phonological repetition.
3. **Post-listening:** reinforcement activities where students applied the new vocabulary in short oral or written contexts. The pre-test was administered prior to the first session, and the post-test was conducted immediately following the final intervention session to compare performance across both moments.

### 3.6. Data analysis

Quantitative data from the pre-test and post-test were analyzed using descriptive statistics, including the mean and standard deviation, processed in Microsoft Excel. To ensure maximum precision, calculations were performed using individual student scores rather than grouped data or class marks. The analysis focuses on observed improvements in group performance and distribution patterns. Qualitative data from field notes provided contextual support to interpret changes in student motivation and engagement.

## 4. Result

This section presents the results from the pre-test and post-test administered to the group of 25 rural eighth-grade students before and after the implementation of English audio recordings as a vocabulary learning strategy. The analysis focuses on descriptive comparisons of students' performance across both testing moments.

### 4.1 Pre-test results

The pre-test results indicate that students initially demonstrated low to medium levels of vocabulary performance. As shown in Table 1, only one student achieved a high score (9.00–10.00), while the majority were distributed between the intermediate range (7.00–8.99) and the lower range (4.01–6.99). This distribution suggests that a significant number of students

faced difficulties in recognizing and using English vocabulary in context. The mean score obtained in the pre-test was 7.16, with a standard deviation reflecting initial variability in vocabulary knowledge.

## 4.2 Post-test results

The post-test results revealed a noticeable improvement in students' vocabulary performance. The increase in the mean score from 7.16 to 8.42 suggests a positive trend associated with the intervention. Additionally, the reduction in standard deviation indicates a more homogeneous distribution of scores, reflecting a decrease in performance variability among participants.

## 4.3 Comparison of pre-test and post-test results

A comparison of the scores reveals an increase of 1.26 points in the mean score. This change reflects an overall improvement of approximately 17.6% in vocabulary performance following the systematic use of audio recordings. Furthermore, the reduction in score variability indicates a more homogeneous distribution, suggesting that the learning gap among students was reduced during the instructional period.

**Table 1.** *Comparison of Vocabulary Performance (N=25)*

| Score range  | Class mark<br>(x) | Frequency Pre-<br>test (f) | f·x Pre-<br>test | Frequency Post-<br>test (f) | f·x Post-<br>test |
|--------------|-------------------|----------------------------|------------------|-----------------------------|-------------------|
| 9.00 – 10.00 | 9.5               | 1                          | 9.5              | 7                           | 66.5              |
| 7.00 – 8.99  | 8.0               | 15                         | 120.0            | 18                          | 144.0             |
| 4.01 – 6.99  | 5.5               | 9                          | 49.5             | 0                           | 0.0               |

|         |   |    |       |    |       |
|---------|---|----|-------|----|-------|
| Total   | — | 25 | 179.0 | 25 | 210.5 |
| Average | — | —  | 7.16  | —  | 8.42  |

**Source:** Pre-test and post-test results collected by the researchers (2025).

## 5. Discussion

These findings can be interpreted in light of cognitive theories of language acquisition, particularly the role of the phonological loop in working memory. The exposure to consistent and high-quality auditory input may have facilitated the encoding and retention of lexical items, supporting the transition from passive recognition to active recall. Furthermore, this aligns with Krashen's Input Hypothesis (1985), as the audio recordings likely provided comprehensible input in a low-anxiety environment, thus promoting more effective language acquisition.

### **Pedagogical and cognitive implications**

The observed transition from the "low" performance range to the "intermediate" and "high" levels indicates that audio recordings may have supported students in moving beyond rote memorization. From a cognitive perspective, this shift is consistent with the strengthening of the phonological loop. By being exposed to authentic models of pronunciation, students were able to develop more stable mental representations of words. This is supported by Webb and Nation (2017), who argue that effective lexical acquisition requires auditory "repetition and retrieval" to transform temporary phonological data into permanent knowledge. Unlike traditional methods centered on translation, the auditory stimulus appears to have facilitated a more direct association between sounds and meanings, potentially optimizing semantic processing.

These observations align with Nguyen (2022), who emphasizes that contextualized input is vital for vocabulary retention. Furthermore, Read (2019) sustains that in environments

where language exposure is limited, pre-recorded auditory tools act as a critical anchor for phonological encoding, ensuring that the student's "noticing" phase is accurate and durable. In rural settings like Rocafuerte, audio recording's function serves as a bridge that compensates for the scarcity of high-tech digital resources.

### **Motivation and student engagement**

Qualitative data from classroom observations indicated an increase in student participation. As noted by Pham (2021), EFL instruction in rural areas often encounters challenges related to low motivation. During this intervention, the use of portable audio equipment was associated with a reduction in the affective filter, as students demonstrated greater confidence when attempting pronunciation. This implies that the improvement was not strictly cognitive but also related to the students' attitude toward the learning environment, which was perceived as more accessible.

## **6. Conclusion**

While the findings cannot be generalized due to the absence of a control group, they provide meaningful evidence that structured auditory exposure may serve as an effective pedagogical strategy in resource-limited rural contexts. The results indicate that audio recordings supported a stronger association between sound and meaning, contributing to improvements in both phonological and semantic processing.

From a cognitive perspective, these findings suggest that consistent exposure to authentic auditory input may facilitate the activation and strengthening of the phonological loop, thereby enhancing vocabulary retention and recall. In addition, the use of audio recordings appears to reduce the reliance on translation-based strategies, promoting a more direct and efficient connection between lexical items and their meanings.

Furthermore, the intervention demonstrated that even low-cost technological resources can generate meaningful learning outcomes when implemented systematically. This highlights the potential of context-sensitive pedagogical adaptations in addressing structural limitations commonly found in rural educational settings.

Therefore, this study contributes to the understanding of how accessible auditory tools can support vocabulary acquisition, offering a practical and scalable approach to reducing lexical gaps in environments with limited technological infrastructure.

## **7. Recommendations**

Based on the findings and the specific context of this study, the following suggestions are proposed to enhance English language instruction in similar rural settings:

- 1. Curricular integration of auditory materials:** It is suggested that English language programs in rural areas consider the gradual integration of contextualized audio recordings. Such materials could serve as a valuable supplement to textbooks, providing students with consistent exposure to authentic pronunciation and intonation patterns without requiring high-speed internet connectivity.
- 2. Teacher professional development:** Educational institutions might explore the implementation of workshops focused on the pedagogical use of low-cost digital resources. Strengthening teachers' skills in selecting and using offline auditory tools could help bridge the gap between traditional methods and modern communicative approaches in resource-limited environments.
- 3. Diversification of listening activities:** Considering the positive response of the students, it is recommended to further explore activities that connect auditory input with local cultural contexts. This could involve the creation of recordings that reflect students' daily lives, which may further enhance their motivation and sense of relevance toward the target language.

**4. Future research lines:** Given the descriptive nature and the specific sample of this study, future researchers are encouraged to conduct longitudinal studies or include control groups. Such approaches would allow for a more comprehensive understanding of the long-term retention of vocabulary and the generalizability of audio recordings as a teaching strategy in diverse rural populations.

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