

The Impact of Didactic Technological Resources on Listening Comprehension in the Classroom

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Abstract

Developing listening comprehension in English as a Foreign Language (EFL) poses a critical challenge in Ecuadorian public primary education due to the prevalence of traditional methods and limited exposure to authentic materials. This essay analyzes the impact of educational technology resources on strengthening this skill, motivation, and active participation among seventh-grade students. Based on a review of recent literature, it is hypothesized that the systematic integration of multimedia tools and instant-feedback software optimizes listening performance by providing meaningful contexts and facilitating personalized monitoring. The study concludes that adopting these digital strategies not only fosters student autonomy but is also essential for updating pedagogical processes in line with contemporary educational trends.

Keywords: didactic resources; technological resources; listening Comprehension; educational technology.

Resumen:

El desarrollo de la comprensión auditiva en el aprendizaje del inglés como lengua extranjera representa un desafío crítico en la educación primaria pública de Ecuador, debido al predominio de métodos tradicionales y al acceso limitado a materiales auténticos. El presente ensayo analiza el impacto de los recursos tecnológicos didácticos en el fortalecimiento de esta destreza, la motivación

y la participación activa de estudiantes de séptimo año de educación básica. Basado en una revisión de la literatura reciente, se sostiene la hipótesis de que la integración sistemática de herramientas multimediales y plataformas de retroalimentación inmediata optimiza el rendimiento auditivo al ofrecer contextos significativos y facilitar un monitoreo personalizado. Se concluye que la adopción de estas estrategias digitales no solo fomenta la autonomía del estudiante, sino que resulta fundamental para actualizar los procesos pedagógicos conforme a las tendencias educativas contemporáneas.

Palabras clave: comprensión auditiva; recursos didácticos; recursos tecnológicos; educación tecnológica.

Introduction

In many Ecuadorian public schools, listening comprehension remains one of the most difficult skills for elementary school English students to develop. Seventh-grade students often struggle to understand spoken English due to limited exposure to authentic audio materials and traditional teaching methods, which focus primarily on reading and grammar.

This lack of interactive and technological strategies reduces their motivation and hinders their development of essential listening comprehension sub-skills, such as identifying key ideas, intonation, and pronunciation patterns.

The current educational context demonstrates a growing need to integrate didactic technological resources, such as: videos, songs, podcasts, and online listening exercises to create dynamic learning environments. Digital resources have become essential for improving listening comprehension because they offer opportunities for self-paced and personalized learning. Interactive applications and multimedia materials create meaningful contexts that enhance students' understanding and participation.

According to Cárdenas et al. (2023), multimedia materials improve comprehension by engaging multiple senses within the educational environment, while Le (2018) highlights that technological tool foster autonomy and reflection.

Furthermore, educators must employ technology-based assessment and feedback to develop auditory competence effectively (Prayudi et al., 2021). Online assessment tools and instant-feedback software facilitate continuous, personalized monitoring of learning, transforming how educators measure and support student progress.

Given this reality, this research aims to analyze the impact of educational technology resources on the development of students' listening comprehension skills in primary school

English classrooms.

This study is based on the hypothesis that the consistent use of technological resources significantly improves the listening performance, motivation, and participation of seventh-grade students. Ultimately, this study will contribute to identifying effective technological strategies that can be seamlessly incorporated into regular English classes to improve listening comprehension and overall student engagement.

LITERATURE REVIEW

Didactic Resource

Didactic resources are an essential component of education. They serve as a bridge to achieve educational goals. Before the professor design a didactic resource in the classroom, they need to know the content of the education for which it is intended (Tunagür et al., 2021).

The main criteria for the selection of didactic means are the goal pursued, the content of the teaching, the nature of the phenomena demonstrated, the age, level, and level of education of the students, the purpose of the teaching, and the level of the teacher and his ability to use the intended didactic means.

According to Caamaño et al. (2021), the use of teaching resources should establish a coherent relationship between the different components of the educational process. These should be consistent with the objectives, content, methodology, and assessment, and the resources themselves can be integrated, thus promoting better learning outcomes.

Szököl et al (2024) mentioned that didactic resources are tools to achieve educational goals. It complements the word of the teacher, which is a very powerful argumentative tool. Didactic Resources refer to material carriers of information, to technical devices and equipment of schools and classes that serve educational purposes. Didactic tools have an irreplaceable place in the educational process.

Ugrai (2020) manifested that the results of employing didactic tools on the education process depend not only on the educator's technical level and ability but especially on the level of didactic context, and the context in which the tools are used, which is why it is the teacher's job to pay careful attention to these aspects.

Didactic resources, also called educational materials or instructional resources, can be defined, according to Carranza and Badilla (2022), as any source of information, physical or digital, used for educational purposes. These resources, the authors point out, can be created by the teacher or acquired as existing educational materials, such as textbooks, websites, and others.

The quality and relevance of the teaching resources used in the English classroom are directly related to motivation, academic performance, and the acquisition of meaningful learning.

Therefore, it is important to emphasize that educators must strengthen their skills in designing, producing, and distributing teaching resources, as these should not only align with the pedagogical objectives of the academic plan but also be deeply connected to the students' cultural, social, and linguistic contexts. (Alvarado, 2025).

Technological Didactic Resource

Technological resources are defined as the systems and devices designed and invented using scientific knowledge to satisfy human needs. Coccia (2019) states that “technology is a complex system created and used by living systems, composed of more than one entity or subsystem” (p. 154). Based on this definition, it can be noted that technology and education are correlated, since they dichotomously enable the creation of resources, activities, tasks, and other elements that help people and students to more effectively carry out the teaching process.

Currently, technological resources such as computers, speakers, projectors, and laptops are used in second language (L2) instruction, as they allow educators to design lessons with interactive activities in which students can actively participate and collaborate. Nawaila et al. (2020) mention that technology offers significant alternatives to make teaching a more manageable process for students. In this sense, it can be stated that technology is a key resource for improving English teaching methods in the classroom.

Teaching resources are an alternative means that can be used during the teaching-learning process (L2) to successfully achieve an academic objective. These technological teaching resources are useful tools for the educational process because they help teachers achieve their planned educational objectives. In general, technological resources serve to put what has been learned into practice and generate meaningful learning that extends beyond the classroom. (Han, 2019).

Selecting the ideal technological resource depends on the pedagogical objectives and academic planning. Educators must consider that each digital platform used as a resource has a different approach to participation and learning. Some platforms are developed using Moodle with structured learning paths, while others are implemented through flexible course selection; still others are developed through personalized learning dashboards. (Cramarenco et al., 2023).

Ordoñez Procel et al. (2024) said that the integration of technological tools in English language instruction promotes interactive environments that enhance comprehension and participation, supporting innovative and meaningful learning experiences.

Vilema Macas (2021) points out that the use of technological resources in language classrooms enhances learners' listening development by creating interactive and engaging experiences. Therefore, choosing this specific group will allow the researcher to observe how such tools impact students' listening comprehension performance in authentic educational contexts.

Tzu-Yu and Hao-Jan (2021) demonstrated that immersive digital environments significantly improve learners' ability to identify sounds and interpret meaning in English listening tasks. They explain that virtual and interactive settings expose students to authentic speech patterns, fostering deeper engagement and comprehension. These innovative tools are crucial because they transform passive listening into an active and contextualized process, helping students experience real-life communication within the classroom.

Saborio-Taylor (2019), technological resources are the most beneficial support in the field of education. They foster the foundations of the teaching processes and the development of the skills required for acquiring a second language. The technological world is advancing rapidly, constantly and endlessly changing, which allows the educational process to remain completely up-to-date. These resources expand the classroom context, provide greater access to current resources from native language-speaking areas, and offer a wide range of tools.

Technological resources have become a fundamental pillar in the development of language learning applications, revolutionizing how students can practice and improve their pronunciation and listening comprehension. These technologies allow for real-time feedback on pronunciation, intonation, and fluency, offering students a personalized and interactive experience that closely mimics a natural conversation with a native speaker. This instant feedback loop is crucial for building confidence and proficiency in a new language, as it gives students the opportunity to correct their mistakes immediately and learn from them (Pragt et al., 2021).

Listening comprehension

Nazarieh et al. (2022) defined listening comprehension as the process of constructing a message from a stream of sounds with what one knows of the phonological, semantic, and syntactic potentialities of the language. Listening comprehension is not a passive but an active process of constructing a message from a stream of sounds with what one knows of the phonological, semantic, and syntactic potentialities of the language.

The value of listening comprehension begins with acquiring vocabulary, pronunciation, intonation, and the ability to understand spoken language. Listening comprehension is a crucial skill in teaching English for effective communication. (Rmelah & Pornwiriyaakit, 2023).

Listening comprehension development also requires reflection and self-assessment, which can be achieved through digital recording tools. Many learners use recordings to evaluate their pronunciation and understanding of messages. Le (2018) explains that voice recording outside the classroom promotes self-monitoring and awareness of individual comprehension difficulties. This process helps students identify weak areas and track their improvement. This practice builds learner autonomy because it gives students control over their progress. Additionally, it promotes

responsibility and self-confidence, as students realize they can monitor their own listening growth without constant teacher intervention.

In summary, the literature demonstrates that didactic technological resources have a positive impact on listening comprehension in the English learning process, providing students with the tools to improve their listening comprehension. Incorporating technological resources into the teaching process helps students be more open to the feedback provided by the educator or a software provide by an online platform.

METHODOLOGY

The study was conducted through the mixed method to collect and analyses both quantitative and qualitative data. To conduct this research, with a descriptive focus; the study focused on conceptualizing the problem and highlighting its most notable characteristics, supplemented by supporting numerical data; this was carried out concurrent with the timeline of the research.

Using a descriptive method to conceptualize the impact of didactic technological resources to enhance listening comprehension in classroom. Through a clear definition of the methodological design, the use of structured protocols for the intervention, and planning in accordance with the schedule established by the master's program, ensured that the study could be conducted efficiently, maintaining quality standards in the results without compromising practical implementation.

To conduct this study, an observation checklist was used, which was implemented as part of a two-week intervention. This research instrument was designed to identify the most relevant elements to observe based on the previously selected variables. The objective was to collect quantitative data. The research instruments designed were applied to thirty-seven students from seventh grade at a public educational institution in the city of Chone. This allowed for work with a limited population under homogeneous conditions, reducing external variability.

As a second research instrument, a semi-structured interview was administered to three professional educators who teach English to obtain premises that will form the basis of the analysis in this study. These instruments were validated by three education experts to confirm the feasibility of their application. The interview included open-ended questions to obtain qualitative information related to students' perceptions of the benefits of using technology-based learning materials to develop their listening comprehension skills.

The data obtained were tabulated and statistically analyzed using a mixed-methods approach that allows for the consideration of both quantitative and qualitative data; this yielded finding that

highlight the importance of the variables to be analyzed. These variables are the use of didactic-technological resources in the context of English language instruction, developing listening skill.

RESULTS

Analysis of the interviews

The interviewees stated that they frequently use teaching resources in the development of the content of the English class, claim that: *'Didactic resources technological as essential component in the learning process'*. Taking as a reference the premise that an English educator who does not use didactic resources in the process of teaching a second language is not developing an academic plan adequate for the current context of the student.

The participating educators state that: *'Using digital resources as teaching strategies is essential for the teaching process to be effective and up-to-date'*. These assertions reaffirm that the use of technological teaching resources is a significant contribution to the process of teaching a second language, especially when the educator seeks to develop a skill such as auditory comprehension, which is sometimes neglected in the teaching process. This is reinforced by the stance of authors such as Dauzón & Izquierdo (2020), The use of technology in an educational context allows educators to create innovative learning environments, making the process more engaging and fostering meaningful learning in students.

Azar (2024) manifested that technological teaching resources to establish a strategy that allows improving academic performance in students. The implementation of these resources strengthens the teaching-learning process; therefore, the selection of this strategy must be congruent with the content, age and academic level of the students. To support this premise participants said: *'The technological resource must be supervised by the educator, as it must be congruent with the age and academic level of the student'*. This reinforces the idea that while technological teaching resources are effective, they must be used in accordance with the students' context.

Interviewers stated that: *'An academic plan that does not include at least one digital teaching resource is currently incomplete'*. In this section authors as Saborío (2019) states that the proposed curriculum is applicable both theoretically and practically in the conceptualization, structuring, design, and implementation of ICT in the English language teaching process. For the reason that the use of ICT incorporates the development of the skills required for English in a comprehensive way into the teaching process, without neglecting any aspect, it strengthens the development of listening skills.

In conclusion, it is worth noting the statement made by one of the interviewees: *‘Develop listening skills through technological resources strengthens the teaching process, contextualizing the content in a technological environment that allows students to remember the lessons of the class more effectively’*. This reaffirms that the use of technological teaching resources facilitates the teaching process for both students and teachers. Specifically, for developing listening skills, it is a positive source of teaching methods that allows for contextualizing content, thus accelerating the learning of new vocabulary and other skills required to express oneself in English.

Analysis of the student observation sheet

Table 1. Observation sheet

Dimensions	Always	Frequently	Sometimes	Never	Total
Phonological perception	23,33%	50%	20%	6.67%	100%
Inference and Selection	16,67%	63,33%	16,67%	3.33%	100%
Sociolinguistic competence	30%	40%	20%	10%	100%

Source: Own Elaboration

The observation sheet was applied to the groups of students during four sessions. In the first session, there was an absence of didactic technological resources; the improvement in academic performance, specifically in the development of listening skills, was observed according to the dimensions relevant to this study.

With a population of 37 students, 23% , equivalent to 8 students observed, plus an additional 18 students who frequently demonstrate improved phonological awareness of the vocabulary presented by the teacher, which is learned more easily. This means that a total of 26 students phonologically assimilate new words better when the teacher uses didactic resources. This demonstrates. This demonstrates the benefit of using these resources to improve phonology in seventh-grade students.

When discussing inference in the development of auditory competence, it is evident that it is the ability of students to anticipate the audio developed in class. When the educator develops inference and selection of correct words through technological resources, it is evident that 29 students in total achieve positive marks in the observation carried out, 16.67% equivalent to 6 students, execute it perfectly; while 63.33% frequently execute inference and selection when performing auditory comprehension activities through technological resources.

30% of the observed population, that is, 11 students, manage to develop sociolinguistic competence thanks to technological resources, which shows that students who use technological resources manage to interact with their peers when developing audio through technological

resources, that is, knowledge becomes interactive and is not limited to just developing school activity.

Discussion

Castillo (2023), previous studies have found numerous benefits in the use of educational resources for the teaching-learning process, especially in the development of listening comprehension. However, other research contradicts these findings. According to these reports, some technologically sourced educational resources are difficult to understand because they are produced with diverse dialects and accents. The diversity of these dialects can frustrate students, as they may not be able to accurately understand or interpret the messages conveyed by the speakers.

Many educators emphasize the importance of developing listening skills. Prior listening experiences allow students to more easily make inferences about what will happen next, improving listening comprehension. Listeners with prior experience learning a second language understand the pronunciation of that language better, whether from native or non-native speakers, compared to those without prior L2 learning experience. Therefore, understanding the meaning conveyed through the pronunciation of a second language depends on the listener's experience and attention. Employing technological resources allows teachers to provide students with prior experiences that enrich their listening skills. (Rmelah & Pornwiriyaakit, 2023).

The findings of this research highlight the relevance of using technological resources when educators seek to improve auditory competence; this is why accents and different dialects do not pose a problem for developing listening skills through technological resources. For this reason, technological didactic resources have an irreplaceable place in the educational process. Results of use depend not only on the technical of the professor level and ability but especially on the level of didactic content (Ugrai, 2020).

The results show a favorable trend towards the use of technological resources for the development of auditory competence; of the 37 students observed, 26 were able to distinguish words more easily after performing an activity that included technological resources. Cárdenas Tzu-Yu and Hao-Jan (2021) demonstrated that immersive digital environments significantly improve learners' ability to identify sounds and interpret meaning in English listening tasks.

Coello and Cedeño Macías (2023) emphasize that multimedia tools such as videos, songs, and online exercises significantly increase motivation and facilitate understanding through visual and listen reinforcement. The educators interviewed stated that technological resources are not only a useful when talked about developing auditory competence, but that their use is integral to the development of all the skills required in learning a second language.

To conclude the discussion, the evidence shows that 30% of the observed students successfully integrated listening skills with substantial help from technological resources. This aligns with the statements made by interviewees, who found this tool useful for both students and educators. Mobile learning environments have shown consistent positive effects on listening comprehension, providing students with accessible and motivating practice opportunities (Ordoñez et al., 2024).

Conclusions

Based on the results, it can be concluded that seventh-grade students positively perceived technological resources such as conversations, songs, documentaries, cartoons, videos, short videos on social media, etc. In general, these resources were well-received by most students because they learned the language in real-life situations, increased their motivation, and actively interacted with their classmates during listening comprehension activities.

Findings demonstrate that students are motivated and receptive when technological didactic resources are used which makes didactics a highly effective resource when teaching the English language.

Integrating the development of listening competence and the use of technological didactic resources is not only innovative but also necessary to achieve a successful teaching process. It is evident that educators must keep pace with modernity by integrating technological elements that energize classroom content.

During the observation, it became evident that technological resources were useful tools for teachers to facilitate the development of a second language (L2), as they enhanced students' listening comprehension skills. This provides a reciprocal benefit for both educators and students.

For greater effectiveness when using technological resources and to increase their impact, it is recommended that teachers implement a wide range of technological resources. This will allow students to develop an interest in learning English in a motivating way. It is also recommended to adapt the technological resources to the students' level and age, as this will make the listening experience more enjoyable and interesting.

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