



TECHNICAL UNIVERSITY OF COTOPAXI
PUJILÍ CAMPUS
UNDERGRADUATE PROGRAM
PEDAGOGY OF NATIONAL AND FOREIGN LANGUAGES
RESEARCH REPORT

THEME:

“A HANDBOOK TO TEACH ENGLISH TO DEAF STUDENTS”

Research report before obtaining the bachelor degree in National and Foreign Language Pedagogy, English Major

Authors:

Chávez Jácome Meiby Pamela
Tapia Paredes Edgar Alejandro

Tutor:

Abata Checa Fanny Mercedes, Mg.

PUJILI-ECUADOR

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AUTHORS' STATEMENT

Chávez Jacome Meiby Pamela, with ID No. 0504036278, Tapia Paredes Edgar Alejandro, with ID No. 0550590988, declare(s) to be the author(s) of the present RESEARCH PROJECT: "A HANDBOOK TO TEACH ENGLISH TO DEAF STUDENTS" with Fanny Mercedes Abata Checa, Mg. as the Tutor of this work; and, expressly exempt the Technical University of Cotopaxi and its legal representatives from any possible claims or legal actions.

Furthermore, I certify that the ideas, concepts, procedures, and results presented in this research work are my sole responsibility.

Pujilí, 26 de febrero del 2025

Signature.
Chávez Jacome Meiby Pamela
ID: 0504036278

Signature.
Tapia Paredes Edgar Alejandro
ID: 0550590988

ENDORSEMENT OF THE RESEARCH PROJECT TUTOR

As the supervisor of the research project on the title:

"A HANDBOOK TO TEACH ENGLISH TO DEAF STUDENTS", by Chávez Jacome Meiby Pamela; Tapia Parodes Edgar Alejandro, from the Pedagogy of National and Foreign Languages, I consider that this Investigative Report deserves the endorsement of approval for meeting the technical standards, translation, and formats provided, as well as incorporating the observations and recommendations proposed in the pre-defense.

Pujili, 26 de febrero del 2025



Signature

Fanny Mercedes Abata Checa, Mg

ID: 0502278740

TUTOR

APPROVAL CERTIFICATE FROM THE GRADUATION COMMITTEE

As the Readers' Tribunal, we approve the present Research Report in accordance with the regulatory provisions issued by the Technical University of Cotopaxi, and by the Pujilli Extension; the applicants: Chávez Jacome Melby Pamela; Tapia Paredes Edgar Alejandro, with the title of the Research Project "A HANDBOOK TO TEACH ENGLISH TO DEAF STUDENTS" has considered the recommendations issued in a timely manner and meets the sufficient merits to be submitted to the defense act of the graduation work.

For the reasons stated above, the recording of the corresponding files on a CD is authorized, in accordance with institutional regulations.

Pujilli, 24 de febrero del 2025

For the record, they sign:


.....
Reader: 1 (President)
Name: Ph.D. Arias Arroyo Paulina Alexandra
CI: 0502212095


.....
Name: MSc. Nelly Patricia Mena Vargas
CI: 0501574297


.....
Reader: 2 (Secretary)
Name: MSc. Rosero Menéndez Jorge Luis
CI: 0500862727

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DEDICATION

This thesis is dedicated to children with hearing disabilities who dream of learning English. May this work serve as another tool on their path to knowledge and inclusion. To my family, my rock and my inspiration. Thank you for your unconditional love, your constant support, and your unwavering faith in me. To my university professors, who guided me with wisdom and patience. To my university classmates, with whom I shared laughter, challenges, and learning. Thank you for your friendship.

TECHNICAL UNIVERSITY OF COTOPAXI PUJILI EXTENSION

UNDERGRADUATE PROGRAM

**DEPARTMENT OF NATIONAL AND FOREIGN LANGUAGE PEDAGOGY ENGLISH
MAJOR**

THEME: A HANDBOOK TO TEACH ENGLISH TO DEAF STUDENTS

Authors:

Chávez Jacome Meiby Pamela

Tapia Paredes Edgar Alejandro

Tutor:

Abata Checa Fanny Mercedes, Mg

ABSTRACT

Learning English is necessary for the development of productive and receptive skills in students with hearing disabilities. To teach English, resources such as books can help teachers with inclusive activities develop their language skills and ensure their active participation in the classroom. This research project aims to design a Handbook for teaching English to students with hearing impairments. The methodology used was qualitative with a non-experimental descriptive level, and thematic analysis was employed to analyze the information. The instrument used was an interview guide, and the technique employed was an interview. An interview was conducted with a student with hearing impairment from the Technical University of Cotopaxi, enrolled in the sixth semester of the Basic Education program. The results of this research highlighted the need to create didactic material for teaching the English language to Deaf students taking into account graphics, visual aids, practical activities and deductive grammar explanations. This can develop vocabulary and writing skills. Therefore, the design of an annual Handbook for teaching English to Deaf students was carried out, being a material with specific activities carefully selected for the development of the teaching and learning process that can be taken into account by teachers when making curricular adaptations. In conclusion, the use of the handbook for teaching English to Deaf students can facilitate the student's educational process.

Keywords: Deaf students, Teaching – learning, linguistic skills, handbook, curricular adaptations

UNIVERSIDAD TÉCNICA DE COTOPAXI
EXTENSIÓN PUJILÍ
PROGRAMA DE PREGRADO
DEPARTAMENTO DE PEDAGOGÍA DE LENGUAS NACIONALES Y
EXTRANJERAS MENCIÓN INGLÉS
TÍTULO: UN MANUAL PARA ENSEÑAR INGLÉS PARA ESTUDIANTES
SORDOS

Authors:

Chávez Jacome Meiby Pamela

Tapia Paredes Edgar Alejandro

Tutor:

Fanny Mercedes Abata Checa, Mg.

RESUMEN

Aprender inglés es necesario para el desarrollo de habilidades productivas y receptivas en estudiantes con discapacidades auditivas. Para enseñar inglés, recursos como libros pueden ayudar a los maestros con actividades inclusivas a desarrollar sus habilidades lingüísticas y asegurar su participación activa en el aula. Este proyecto de investigación tiene como objetivo diseñar un Manual para la enseñanza del inglés a estudiantes con discapacidades auditivas. La metodología utilizada fue cualitativa con un nivel descriptivo no experimental, y se empleó el análisis temático para analizar la información. El instrumento utilizado fue una guía de entrevista, y la técnica empleada fue una entrevista. Se realizó una entrevista con un estudiante con discapacidad auditiva de la Universidad Técnica de Cotopaxi, inscrito en el sexto semestre del programa de Educación Básica. Los resultados de esta investigación destacaron la necesidad de crear material didáctico para la enseñanza del idioma inglés a estudiantes sordos, teniendo en cuenta gráficos, ayudas visuales, actividades prácticas y explicaciones deductivas de gramática. Esto puede desarrollar el vocabulario y las habilidades de escritura. Por lo tanto, se llevó a cabo el diseño de un Manual anual para la enseñanza del inglés a estudiantes sordos, siendo un material con actividades específicas cuidadosamente seleccionadas para el desarrollo del proceso de enseñanza y aprendizaje que pueden ser tenidas en cuenta por los docentes al realizar adaptaciones curriculares. En conclusión, el uso del manual para la enseñanza del inglés a estudiantes sordos puede facilitar el proceso educativo del estudiante.

Palabras clave: Estudiantes sordos, enseñanza–aprendizaje, competencias lingüísticas, manual, adaptaciones curriculares

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UNDERGRADUATE DEGREE WORK STRUCTURE

1. GENERAL INFORMATION

Theme: “A handbook to teach English to deaf student “year 2024-2025

Starting Date: June 2024

Ending Date: February 2025

Place of Research: Pujilí

Sponsoring Faculty: Extension Pujilí

Sponsoring Major: National and Foreign Language Pedagogy.

Macro project of the Major: Does not apply

Work Team:

Abata Checa Fanny Mercedes, Mg.

Chávez Meiby

Tapia Alejandro

Sulca Yanellis

Knowledge Area: Education

University Research Line: Education and communication for human and English development

Extension Subline: Innovation in teaching and learning English as a foreign language

2. Problem Statement

Teaching English to people with hearing disabilities is essential for their right to education and for having a better job profile in the future. Atar et al., (2021) said they are one of the groups that need special education for teach English to Deaf students. In addition, educational institutions must have the necessary materials so that they can learn the language in almost the same way as their classmates.

However, there are several problems in the inclusion of Deaf students such as communication, participating in programs organized by the university, developing group activities, all of these problems cause the student to become frustrated and prefer not to attend the university, causing a low level of learning Spanish and English. They can discover things through their other senses such as touch, sight, smell and taste. Batista and García (2023) mentions that faced with this problem, Deaf students can opt for other options such as: specialized schools for students with this type of disability or also inclusive schools where all students share the same educational space and the curricular grids are adapted for Deaf students. For this reason, the teacher must have adaptive material to make the student feel included in the English language learning process. According to Mumba (2022) that is elementary for a teacher to have teaching materials, since the lack of such materials leads to school failure of the Deaf student.

For most children, linguistic reception or receptivity is possible through the auditory channel. This is not the case for Deaf children, which is why it is very necessary to take into account the necessary materials that are used for teaching the English language. Batanero et al., (2022) shows that none of the faculty teachers, and none of the student teachers about techniques and strategies that they can use when teaching students with hearing difficulties. And having little availability of didactic material by the teachers, this causes that the students cannot develop their knowledge in an adequate way.

Marschark and Knoors (2012) establishes several didactic pedagogical models it is possible to reinforce the weaknesses of the teachers in terms of didactic material, and also in the same way training can be done so that they can prepare themselves in a better way since by having some knowledge of how to conduct a class with Deaf students they can better prepare their class. For this reason, a handbook has been created with different activities for hearing impairment students, so that the teacher can have material. In the same way, the student can learn the language in a simpler way since it can be adapted so that the English teacher can develop step by step with the different activities they find in the handbook. The research questions that the project attempts to answer are:

- a) What are the didactic strategies for teaching English to Deaf students in a handbook?
- b) What are the strengths and weaknesses of Deaf students in learning English to elaborate the handbook?

3. Objectives:

3.1. General Objective

To design a handbook to teach English to students with hearing impairments.

3.2. Specific Objectives

- To determine theories of didactic strategies to teach English to Deaf students.
- To identify strengths and weaknesses of Deaf students in learning English.
- To establish the activities for the handbook to enhance English learning for Deaf students.

4. Activities and Task System in Relation to the Objectives Proposed

Table 1 Activities and task

Specific Objective	Activities	Verification Means	Evidence
To determine didactic strategies to teach English to Deaf students.	Conduct a comprehensive literature review on language impairments and effective teaching methods for hearing-impaired students.	<ul style="list-style-type: none"> • Annotated bibliography • Summary report outlining key findings and theoretical framework 	Theoretical Framework
To identify strengths and weaknesses of Deaf students in learning English.	<ul style="list-style-type: none"> • Identify and organize essential English language topics and subtopics. • Research and compile effective didactic strategies and activities. 	<ul style="list-style-type: none"> • Detailed list of selected topics and subtopics • Compiled list of strategies and activities with rationale 	Guide the interview
To establish the activities for the handbook to enhance English learning for Deaf students	<ul style="list-style-type: none"> • Develop the handbook structure and layout. • Integrate technological tools and Ecuadorian Sign Language (LSEC) elements. • Pilot test sections with target users. 	<ul style="list-style-type: none"> • Draft version of the handbook • Feedback reports from pilot testing • Final designed handbook ready for use 	Handbook

5. Justification

The education of deaf students often remains basic learning due to their disability, hindering their academic progress. This basic teaching is sometimes because teachers are not trained to teach Deaf students and there is no material to use in class. So, it is necessary to elaborate a handbook for teaching English to Deaf students as it addresses an educational need for hearing impairment students present in various institutions. Deaf students face multiple difficulties in learning the English language, mainly due to appropriate methodology and materials to teach them that are necessary to facilitate the learning process for Deaf students.

The design of the handbook can allow teachers and students to understand the strategies and pedagogical activities to teach the English language. The handbook contains visual methods and Ecuadorian Sign Language to improve teaching and strengthen the English language. The handbook can contribute as an essential inclusive tool for the teaching and learning process of the English language. Likewise, the handbook can facilitate the identification, application and appropriate pedagogical activities and evaluation for Deaf students by integrating this didactic resource. In this regard, Nugroho and Lintangari (2022) emphasize the need for specific and adapted material for teaching English, with the aim of closing educational gaps.

So, this research topic focuses on creative a handbook for Deaf students to facilitate easier learning of English. These activities are designed to improve grammar, vocabulary, reading, and writing skills for proper learning development in students with hearing impairment. The handbook contains Ecuadorian Sign Language to optimize English learning. In addition, the implementation of teaching methods in connection with the activities using Ecuadorian Sign Language can enhance vocabulary and grammatical rules in activities that imply memory, repetition as strategies to teach English to Deaf students. It can make English lessons more attractive, interactive, and pleasant for students who often experience limited educational opportunities, which is why. It is often the low-level of education of a Deaf student due to the lack of information or understanding and how information is processed by a student with hearing impairment (Ramadani, 2024).

This handbook aims to work on an inclusive learning environment in which Deaf students and teachers can be aware of the learning and teaching development (Ramadani, 2024). This research seeks to offer memory work through repetition and learning with directly structured words and insights for educators to implement in classrooms, making lessons.

This project is useful for teachers and Deaf students because it provides a fundamental basis for teaching practice and addresses the specific difficulties of students with hearing

disabilities in learning the language. In other words, the proposal provides a resource for Deaf students in the educational field to face the challenge of learning English as a foreign language. Moreover, this handbook can benefit teachers, educational institutions, and families by providing them with a structured book containing practical and adapted activities to learn English. Consequently, the proposal can have a significant impact on the development of inclusive learning, facilitating access to equitable and quality education for Deaf students. It can promote the development of linguistic skills in Deaf students, allowing them to access greater academic opportunities, thus ensuring proper inclusion in society. Furthermore, the handbook can be a pedagogical material that can facilitate the adaptation of English teaching and optimize educational practices in inclusive contexts.

The limitation of the research is the limited Spanish and English knowledge of the sample when collecting data through an interview. This situation is due to the fact that the first language of Deaf students has not yet been fully acquired. Consequently, the interpretation of the results could be affected, making it difficult to obtain comprehensive and accurate information due to the existing communication barriers between the first and second language.

6. Scientific and Technical Foundation

6.1. Background

Banda (2024) mention pedagogical strategies used by teachers to teach reading in English to third grade Deaf pupils in selected special needs schools in Lusaka district. The aim of the research is to examine the appropriate teaching and learning materials used to teach reading to Deaf and hard of hearing children. The approach was qualitative with a case study design. The findings established that teachers teaching reading in English to Deaf and hard of hearing pupils employed a variety of strategies in their reading instruction. They included different teaching pedagogical strategies such as: lip reading, repeated reading in class, picture and word association, fingerspelling, storytelling, language games, demonstration, mime, and Zambian sign language. The results highlighted a number of challenges ranging from lack of teaching materials and lack of teachers specialized in the learner's disability. In conclusion, the study indicates that most of the teachers used the correct strategies and appropriate materials for students with hearing disabilities.

Roberson (2024) said that Supporting KSU English Instructors in Meeting the Access Needs of Deaf and Hard of Hearing Students Faculty needs more training so that students with hearing disabilities feel supported in a more effective way with better dynamic activities in addition to the basic curricular accommodations that faculty are required to have. This research project was qualitative in nature as it presents different phenomenological data from six interviews conducted with participants from the University of the Southwest (Kennesaw

State University) and with an instructional design from Gallaudet University. The participants interviewed were students with hearing disabilities, teachers in different areas of education. These results were agreed with both students and teachers who need more training and teaching resources to meet the needs of students with hearing disabilities.

Banda and Mwanza (2024) argued that Analysis of strategies used by teachers in teaching reading in English to Deaf and hard of hearing pupils in third grade in selected special needs schools in Lusaka district, Zambia. The aim of the study was to analyze the pedagogical strategies used by teachers in teaching reading to hearing impaired children who were selected from different special needs schools in Lusaka district, Zambia. This research was based on two learning theories: constructivism theory and multimodality theory. The methodology was a qualitative one. Data were collected through semi-structured interviews and classroom observations. The instrument used was a survey. In conclusion, although carefully selected strategies were used, teachers needed more training to teach English to hearing impaired students. Therefore, the study recommended that more training should be provided for the different teachers to become aware of dynamic pedagogical activities.

Gorder (2024) said that Teaching Deaf and Hard-of-Hearing Musicians The inclusion of students with hearing impairments in Secondary Choral Music Education. The methodology was qualitative. The study was conducted through a meta-analysis of existing literature. The results showed more than one methodology that can be applied in the learning of hearing-impaired students in order to favor their learning and success in their student life. In the same way music teachers are not able to teach hearing impaired students, this is due to university curricular updates. The results revealed more than a dozen diverse methodologies that can be applied to the learning of hearing impaired students to facilitate their success, as well as indicated that music educators are generally not prepared to teach hearing impaired students due to pedagogical deficiencies in the university curriculum, the results implied that the inclusion of this population in the choral music classroom is achievable and that hearing impaired students share a desire to pursue musical experiences.

Wang et al., (2021) mention that Teaching with Picture Books on Deaf and Hard-of-Hearing Students Creativity Different researches have shown that teaching English Language with Picture Books is very satisfactory for the child to learn English Language in an easier way. The methodology applied in this study was quasi-experimental. The instrument used was an interview with children from 3 to 6 years old. The results showed that the performance of Deaf students was satisfactory. In the same way the creativity that the students developed was very particular since they can communicate with their creative gestures such as drawings, photographs, and letters, among many others.

6.2 Theoretical Framework

6.2.1. English teaching to Deaf students

Special education provides tailored instruction to meet the unique learning needs of Deaf students. However, teachers encounter challenges due to limited foundational training and insufficient specialized preparation. Deaf students often face difficulties with abstract reasoning, effective communication, and information comprehension, which hinders their academic progress. Additionally, many teachers lack the expertise, creativity, and innovation required and often hold the misconception that Deaf students are incapable of mastering advanced-level content (Villarente, 2024).

English educators in schools face significant challenges in teaching and learning due to an average class size of 40 students (Toro, 2019). This number limits the possibility of offering the personalized attention that Deaf students require, as all students are important in the classroom and need the same level of attention. Moreover, the lack of support from a professional specialized in specific needs can hinder the process, as even if the teacher implements strategies, the learning might be slower or not effectively reaching the student. Therefore, this situation complicates both the teaching of classes and the process of learning the English language. If, in addition, the classroom includes students with hearing disabilities, the teacher must be aware that, as Nugroho and Lintangari (2022) mention Deaf students face various difficulties in learning English, such as comprehension problems, word processing, sentence construction, lexical rigidity, grammar usage, and reading performance. These students tend to produce simpler sentences and have a more limited vocabulary. Deaf students encounter obstacles in literacy skills acquisition stemming from the absence of a written form in their primary language. These challenges arise from various factors, including the prevalence of spoken language as the primary mode of communication. Conventional instructional methodologies primarily focus on phonological aspects and linguistic norms, while many youths exhibit limited inclination towards writing (Villarroel, 2020).

6.2.2 Challenges in teaching English to Deaf student

English teachers encounter various challenges when instructing Deaf students, such as limited language abilities, communication barriers, and restricted access to literacy activities and instructional materials. Deaf students frequently exhibit lower language proficiency and struggle with reading, particularly in foreign language contexts. Addressing these challenges requires a multidimensional approach that considers individual factors like age, degree of hearing loss, preferred communication methods, and cognitive styles. In Hungary, additional obstacles include the lack of suitable resources, established teaching approaches, communication challenges, insufficient technological training, and limited community forums for supporting the education of Deaf students (Dinanti, 2023).

6.2.3 Deaf Students' Language and Literacy Problems

In English language teaching, Deaf students face language literacy issues, which are:

a) Language Acquisition: For individuals with severe or profound deafness, the path to language acquisition differs significantly from that of hearing individuals. Language typically emerges in early childhood through frequent, meaningful interactions. However, severe hearing loss severely restricts the quantity and quality of linguistic input accessible to a Deaf person. Consequently, for a Deaf student, learning English is rarely an instinctive or straightforward process; rather, it often involves a challenging journey with numerous obstacles. This challenge is further intensified by inadequacies in the education system, which can lead to missed critical information, making it harder for these students to grasp English grammar, expand their vocabulary, and develop literacy skills to the same level as their hearing peers (Werfel, 2022).

b) English as a second language: Teaching English as a second language to Deaf students is not easy for teachers as they face many problems in the grammatical acquisition of the language to be learned, as well as difficulties in developing the best possible curriculum and providing feedback and guidance (Khasawneh, 2021).

c) Linguistic Difficulties: Problems are evident in written work, where errors can appear in sentence structure, verb tenses, and word omissions. Given a life without exposure to articles, determiners, word endings, and prepositions, such errors are more understandable. The problem is further exacerbated by "carrier language" words like "it," "them," "and," and "with," which are often subtle in fluent speech and, therefore, impossible to lip-read. The absence of hearing and memory interrupts the ability to mentally draft what is written (Subin & Liang-Itsara, 2022).

d) Reading Difficulties: The reading of Deaf students is low upon finishing school, while in higher education their level is intermediate advanced; however, reading remains a time-consuming task due to their limited vocabulary from the restricted access to the language used in classrooms, and the unknown words. As a result, they often need to look up specific terminology from everyday language that their hearing peers use (Akmal, 2020).

e) Lack of background information: Deaf students face difficulties in acquiring information due to their limited access to external auditory sources, which affects language

learning and comprehension. Hearing people obtain information by reading newspapers, listening to television or the radio, communicating with their peers, listening to conversations on public transport, and discussing topics with others in various places. These actions develop linguistic skills; for this reason, Deaf students are excluded from all these activities and have other sources of knowledge and experiences (Hidayat & Rahmat, 2020).

6.2.4 Teaching Strategies to use with Deaf Students

When discussing languages and hearing impairment, different suggestions are put forward, incorporating visuals such as images, videos, films, posters, and mind maps, among others, to tailor materials for classroom activities. Despite the potential difficulty in grasping the precise meaning of new words in a foreign language, visual aids can streamline the learning process (Pineda, 2022).

a) Memory Strategies

Memory strategies (MSs) are powerful tools in vocabulary learning, enhancing remembering and retrieving new knowledge like keywords, acronyms, and images. They help learners combine second language L2 items with new information, transforming it from short-term memory to long-term memory. MSs are simple rules that help learners store specific information and retrieve it when needed. They are often used to organize and encode information, making it easier to remember. Mnemonics, or memory strategies, support remembering by connecting new information with existing words and images. They function by processing vocabulary items in working memory, allowing them to be stored and retrieved from long-term memory. Mnemonics enhance retrieval by assisting learners in faster learning and better recall. They can be adapted to learners' learning differences and are enjoyed by most users (Al-Faris & Jasim, 2021).

b) Group Size

The ideal group size for a Deaf student is between 6 and 10. In large groups, discussions become difficult and communication becomes complicated. It is ideal that group work is structured with the minimum number of students to accommodate their communication needs. Providing instructions on work in sign language and written form, as well as visual resources, improves understanding and participation by assigning specific roles within the group to encourage involvement and ensure that all students contribute (Garoui & Nait, 2020).

c) Seating Arrangement

Arrange seating in a circle or horseshoe shape so the student has a clear view of everyone. Ensure that no one is backlit. The student might prefer to sit near the chairperson, as this is where comments are directed, or next to a note-taker who can help them stay up-to-date with the discussion and topic shifts (Colombo, 2024).

d) Visual Aids

Visual aids are instructional tools created to enhance learning by visually representing concepts, ideas, or information. These aids can include images, diagrams, charts, graphs, videos, and other multimedia resources (Peralta-Izquierdo & Guamán-Luna, 2023). Visual aids can be highly beneficial for Deaf individuals, but they should be prepared and used thoughtfully. Here are key situations to use additional visual aids:

d.1) New Vocabulary: Provide new vocabulary in advance, or display it on the board or overhead projector, as unfamiliar words are impossible to lip-read (Peralta-Izquierdo & Guamán-Luna, 2023). Three main characteristics stand out: first, it focuses on teaching strategies, specifically on how Deaf and hard-of-hearing students acquire new vocabulary. Next, it addresses the students' progress and the challenges they face in the reading classroom. And finally, explore the additional support that teachers need to improve classroom instruction (Alqraini, 2018).

Vocabulary development in Deaf and hard-of-hearing learners differs markedly from that of their hearing peers. On average, Deaf learners have about twice the vocabulary size of hearing learners, yet they face challenges with incidental word learning. Research indicates that most Deaf children have reduced exposure to the frequency distributions of English vocabulary, making it harder for them to acquire and use new words as effectively as hearing peers. Proficiency in American Sign Language can offer an important pathway for learning and applying English vocabulary. Parents and teachers play essential roles in supporting vocabulary growth, with factors like parents' word use frequency, visual accessibility, and responsiveness significantly influencing development. Additionally, parents' knowledge of national Ecuadorian Sign Language can greatly enhance their child's first language acquisition (Birinci & Sariçoban, 2023).

d.2) Videos: Video guided educational interventions offer a promising strategy to enhance school engagement among Deaf adolescents. This innovative approach utilizes group-based activities centered on reflection and assessment of captioned video clips. Inclusive education aims to address both the academic and psychosocial challenges faced by individuals with disabilities (Ishrat et. al., 2024). Video technologies play a key role in improving communication for Deaf individuals, particularly those using sign language. The careful selection of technically advanced videos within e-learning platforms is critical to their success. Video based instruction bridges the limitations of traditional teaching methods, providing a more accessible and engaging learning experience for students with disabilities. The rapid advancement of information technology further complements these efforts, significantly improving the quality of education for these learners.

Video-based learning has been shown to be effective in supporting language acquisition in hearing impaired learners. Studies, they include, highlight the advantages of using videos as a visual tool to enhance vocabulary learning and comprehension. By providing a visual context, along with facial expressions and gestures, video-based learning helps hearing impaired learners better understand and retain English vocabulary (Rivera, 2022).

Visual techniques such as drawings, wall charts, pictures, and other visual aids are fundamental to language learning and vocabulary development for Deaf and hard-of-hearing students. Technological advances have made it easier to incorporate visual materials with audio elements, creating audiovisual resources that benefit both learners and teachers. These students rely on visual aids to see and understand the language forms they need to learn, making such tools essential. For teaching abstract words, drama techniques and Ecuadorian Sign Language can be particularly helpful. Language teachers should adapt their methods to meet the specific needs of these learners by using visual aids, highlighting students' abilities, creating positive language experiences, breaking down topics into manageable parts, providing numerous examples, making cultural comparisons, using varied colors, and integrating computer-assisted language learning tools (Birinci & Sariçoban, 2023).

d.3) Flash card: Flashcards are compact cards featuring images, text, or other elements. Teachers often use them to teach vocabulary to Deaf students, as they aid in comprehension and retention of new words. Additionally, flashcards enhance language learning and can be paired with games to maintain student engagement. Techniques such as

identifying words on the flashcards, collaborating in groups, and jotting down key takeaways can significantly improve students' ability to memorize information (Kalora et. al., 2022).

d.4) Picture: The Lexical Input Approach is a viable method for teaching language skills and vocabulary to post-lingual Deaf students. This approach emphasizes building learners' proficiency with individual words and word combinations, often using visual aids or pictures as effective input. Using pictures to teach vocabulary has long been a common classroom practice, including for students with hearing impairments or those who are hard of hearing. Along with real-life objects (realia), pictures are particularly effective at the beginner level for illustrating word meanings or creating relevant situations and concepts. Birinci and Sariçoban (2023) explored the effectiveness of visual materials in teaching English as a Foreign Language (EFL) vocabulary to Deaf students in Turkey, finding that visual aids outperformed Sign Language in fostering vocabulary acquisition. Similarly demonstrated that combining flashcards with pictures and Sign Language resulted in greater vocabulary gains for students with hearing impairment.

e) Writing exercises

Writing models that integrate sociocultural and cognitive theories emphasize the relationship between individual cognition and the larger writing community. Instruction designed for Deaf students, particularly within a strategic and goal-oriented framework, draws on both cognitive and sociocultural principles. The Strategic and Interactive Writing Instruction (SIWI) approach is built on three core principles: strategic, interactive, and linguistic/metalinguistic. Strategic instruction focuses on teaching students the techniques used by proficient writers, such as planning, organizing, and revising, which improve both their writing skills and understanding. Interactive writing, grounded in sociocultural theory, involves a collaborative, dialogic process in which novice writers are actively engaged and supported by writing communities. This interaction empowers students to lead discussions on grammar and text organization. The third principle emphasizes intentionality, fostering increased metalinguistic awareness and linguistic competence, which are essential for acquiring second-language proficiency. By comparing English and American Sign Language (ASL), teachers can enhance students' understanding of language structures and increase motivation for English literacy (Wolbers et. al., 2022).

6.2.5 Reading Comprehension Strategies for Deaf Students

For Reading Comprehension in Deaf students, the following two strategies have been identified:

1. Guided Reading Thinking Activity Strategy

According to Ocran (2021) the application of the Guided Reading Thinking Activity strategy is appropriate for the learning of Deaf students; as this strategy consists of steps that make understanding the text easier. The process is: (a) imagining the stories based on the title, (b) collectively predicting according to the images presented in the story, (c) reading the text, (d) comparing and evaluating the predictions, (e) presenting the imagined stories, in this way improving reading comprehension skills.

2. Comprehension Teaching for hearing impairment

Vocabulary encompasses all the words individuals recognize and use in communication. It can also refer to a collection of words that are familiar and easily recognized when encountered again. Mastering vocabulary is a fundamental aspect of learning English, vocabulary instruction is tailored to the stages of students' development and their capacity to comprehend new material. In English learning, the focus is often on basic words rather than abstract concepts, providing students with a solid foundation. Learners are introduced to various types of vocabulary, which they gradually understand and incorporate into their daily educational activities (Anggraheni et. al., 2020).

6.2.6 Methodology to teaching English to Deaf Student

Three methodologies for teaching English to Deaf students were found, which will be detailed in the following paragraphs:

a) Communicative Language Teaching (CLT)

The Communicative Language Teaching approach is a language instruction method that prioritizes authentic interaction, student-centered learning, task-based activities, real communication, and purposeful goals. In this framework, English instructors leverage their language expertise to support and enhance students' acquisition through communicative tasks. Communicative Language Teaching aims to equip students with effective communication skills. In classrooms employing Communicative Language Teaching, teachers guide communication, act as advisors, and respond to students' questions, while students engage actively, allowing them to discover the contexts in which they learn most effectively (Lesiana et.al., 2024).

Steps of Communicative Language Teaching

According to Richards and Rodgers, Communicative Language Teaching encompasses five interrelated principles: language learning occurs through its use in communication; the objective of classroom activities should be to foster authentic and meaningful communication; fluency is a vital aspect of communicative competence; effective communication involves the integration of multiple language skills; and learning is a creative, constructive process that includes trial and error. Thus, Communicative Language Teaching emphasizes communication skills across diverse contexts, the importance of authenticity and relevance in activities, language fluency, and the acceptance of errors as part of the learning process. Adhering to these principles is essential for designing instructional plans, as their application promotes a communicative environment where students feel encouraged to engage with language dynamically and adaptively (Bai, 2024).

b) Grammar Translation Method (GTM)

According to Eisa (2020), the grammatical translation method proposes the teaching of the English language allowing students to better understand English literature. To achieve the objective, the learning of grammatical rules of different grammatical structures and vocabulary in a different language was emphasized. Also, it is considered that learning a foreign language contributes to the linguistic and cognitive development of students, as it presents a beneficial mental development. With the purpose of analyzing the impact of the Grammar Translation Method on students' performance when learning English as a foreign language, it can be carried out by combining teaching methodologies with the grammar translation method.

Eisa (2020) argues the process begins with the teacher reading a paragraph, identifying difficult words. Then, these words are translated into the students' native language. Subsequently, the teacher reads and translates the paragraph line by line, explaining the grammatical aspects. As Blanco (2020) points out, the grammatical translation method, although highly criticized for its focus on literal translation, can be very useful for Deaf students. By contrasting the grammar of the English language with sign language, the student can develop a more concise understanding of how the two languages work. This approach becomes very beneficial for hearing-impaired students who have a great command of the sign language in order to establish connections between the two languages. Finally, students can be asked to translate a text from their native language into the foreign language to reinforce their knowledge.

c) Encounter Clarify Remember Internalize Fluently use (ECRIF)

For AlSaleem (2018), the ECRIF method as “a framework of a way of looking at how students learn a language”. This framework aims to create environments conducive to enhancing English language acquisition by emphasizing the learning process through meaningful activities tailored to each student, identify three primary objectives of the ECRIF method: Planning lessons and adapting coursebook materials (reflecting for action), assessing students' progress during lessons (reflecting inaction), reflecting on student learning post-lesson (reflecting on the action). According to the aforementioned author the acronym ECRIF stands for: Encounter a problem (E), Clarify (C), Remember (R), Internalize (I), Fluent use (F).

c.1) Encounter /Clarify Stage

In this stage, students are introduced to the target language for the first time, ensuring they grasp its form, meaning, and use sufficiently to move on to the main part of the lesson. This phase is brief, typically lasting only 5-10 minutes of a 60-minute class.

c.2) Remember/ Internalize Stage

In this stage, students practice the target language, commit it to memory, and work toward using it independently. It's the longest part of the lesson, typically taking 25-40 minutes of a 60-minute class, and generally includes 3-4 activities. These activities begin with simpler, controlled practice and gradually become more complex as students gain confidence in using the language independently (freer practice). The ECRIF lesson structure follows this progression from controlled to freer language use.

c.3) Fluent Use Stage

In this stage, students use the target language as freely, naturally, and independently as possible. This phase fulfills the lesson's objective, aiming to closely mimic real-life language use. As the final part of the lesson, it typically lasts 10-20 minutes of a 60-minute class. By this point, students should be using the language on their own, with minimal involvement from the teacher (p.72).

Table 2 ECRIF in the Classroom

At this stage teacher can help students by	Activities at this stage might include
<ul style="list-style-type: none"> • Providing a clear context. • Giving students a chance to talk about a topic. This 	<ul style="list-style-type: none"> • Brainstorming vocabulary. • Answering questions with target language in it. • Labeling or describing a picture.

Encounter	<p>burst of fluency at the beginning of the lesson can help establish context and help students activate experiences, vocabulary, and grammar that may help them in the lesson.</p> <ul style="list-style-type: none"> • Providing a text to read to first focus on the overall meaning of the text to establish context. • Eliciting vocabulary, sentences from students (Ex. What words do know to describe personality? OR how might you combine these sentences?) 	<ul style="list-style-type: none"> • Doing a gap fill activity. • Using key words to make sentences or complete a dialogue. • Choosing the best response or question for a dialogue. • Marking particular words, phrases, or sentences in a text.
Clarify	<ul style="list-style-type: none"> • Finding out what students already know. • Providing students, a chance to peer teach. Ex. show each other the meaning, pronunciation • Eliciting ideas from students rather than just telling them • Being ready to explain the language item in a variety of ways (Ex. simple verbal explanations, visually, with examples, kinesthetically, etc.) • Highlighting the language item on the board with different colors 	<p>Matching meanings or rules to words or sentences Sorting sentences or words into groups (Ex. adjectives vs. adverbs, finished actions vs. unfinished actions) Discussing the meaning, pronunciation, or rules of the language items Using dictionaries</p>

	<ul style="list-style-type: none"> • Slowing down or repeating the language item several times. • Asking concept check questions.
<p>Remember</p> <ul style="list-style-type: none"> • Doing choral repetition • Paying close attention to problems that students may have. • Giving students specific feedback (Ex. Is their answer or pronunciation, correct?) 	<ul style="list-style-type: none"> • Having students quiz each other (Ex. with pictures, meanings and words). • Having students do drills (Ex. making or changing a sentence from keywords). • Playing games like Bingo, concentration. • Doing a lot of recognition activities. • Saying a word or sentence and point to a picture. • Pointing to a picture and say what it is • Matching questions/answers, meanings and words, sentences and situations, etc.
<p>Internalize</p> <ul style="list-style-type: none"> • Providing chances to use the vocabulary or structure to talk about themselves. • Giving students 'think time' to get ideas or recall experiences. • Allowing students to write and ask questions first and then putting away the paper during the subsequent fluency activity. 	<ul style="list-style-type: none"> • Describing. using the target language or skill • Answering questions: words embedded into questions that students ask and answer together • Doing gap fill activities: Choose correct words, place into blanks in text • Doing tailless sentences: given beginning of sentence so students write endings • Doing information gap activities • Information gap: Students A/B have different information, must communicate to get the information the other has • Correcting sentences: Sentences with mistakes (grammar) they correct. • Making a story: given beginning of story, continue with TL.

-
- Creating a survey: use words to make a survey to ask other Students.
 - Making sentences about yourself: make true sentences about people (whatever you are studying).
 - Putting words in order get a list of words, put them in order that makes sense.
 - Ranking: put words in order based on preferences, usefulness, etc. Students choose their best 3 or worst 3.
 - Retelling story: List of TL, teacher tells a story, students teach words they hear as they listen. Retell the story to their partner using the words.
 - Doing a role-play. Ex convincing, requesting, etc.
 - Discussing questions
 - Jigsaw activities in which students teach each other about a topic.
 - Making a decision together. Ex. What should we take on a desert island and why? OR Who should receive the scholarship
-

Fluent use

- Providing a good model of the activity
 - Providing a clear communicative task that is motivating and relevant to students
 - Encouraging students to ask more questions and give longer answers Giving students enough time to get ideas
 - Noting errors that students make (for future lessons) but not correcting in the moment
- Retelling story: List of TL, teacher tells a story, students teach words they hear as they listen. Retell the story to their partner using the words
 - Doing a role-play. Ex convincing, requesting, etc.
 - Discussing questions
 - Jigsaw activities in which students teach each other about a topic
 - Making a decision together. Ex. What should we take on a desert island and why? OR Who should receive the scholarship?
-

as it can interfere with
student communication

Notes: The table is elaborated by Lázaro (1996) entitled ECRIF in the classroom (p. 34 - 35).

6.2.1.6 Activities for teaching the English language to Deaf students

To strengthen learning, the following activities described by Lázaro (1996) can be used:

Table 3 ECRIF the activities

Reading	Writing
<ul style="list-style-type: none"> • True /false questions • Yes/no questions • Multiple choice questions • Information transfer, e.g table completion • Ordering paragraphs • Choosing titles for texts or paragraphs • Choze test Brainstorming 	<ul style="list-style-type: none"> • Copying • Jumbled words • Form filling • Sentence / dialogue completion • Completing the midde/end of a story • Story writing • Picture /diagram description • Writing essays /compostions /emails/letters npostcard/reports
Grammar	Vocabulary
<ul style="list-style-type: none"> • Multiple-choice questions • Sentence /dialogue completion • Transformation exercises • Error correction • Gap-filling 	<ul style="list-style-type: none"> • Labelling • Categorizing • Word-building • Word maps/mind maps (diagrams showing relationships between words in the same lexical set) • Matching • Odd on out

Notes: The table is elaborated by Lázaro (1996). This found module 1, entitled ECRIF in the classroom (p. 106).

6.2.7 Hearing Impairment

Hearing impairment refers to an alteration or loss in the anatomical or physiological functions of the auditory system. As an immediate result, affected individuals experience difficulties hearing, which limits their access to spoken language (WHO, 2024).

Within hearing impairment, there are different types, which will be described in the following paragraphs:

a) Types of Hearing impairment

According to the World Health Organization (WHO, 2024), the types of hearing impairment are; Normal hearing (0-20 dB): The person has no difficulty perceiving words; Mild or slight hearing loss (20-40 dB): Difficulty perceiving faint or distant voices. In children, this is often associated with apparent attention problems, so early detection, especially before and during the school stage, is crucial; Moderate hearing loss (40-70 dB): The loss affects the hearing threshold within the range of a normal conversation. It is common to find delays in language development and articulation problems; Severe hearing loss (70-90 dB): It is necessary to significantly raise the volume of the voice for it to be perceived. Children in this category often have very limited language or even lack it altogether; Profound hearing loss or deafness (more than 90 dB): Without proper rehabilitation, children will not develop oral language and will only be able to perceive very intense sounds, generally more through the vibrotactile pathway than the auditory one; Cofosis or anacusis: Total loss of hearing, considered rare.

b) Types of Otolaryngological Classification

Hearing impairment, beyond the loss or reduction of the ability to hear, generates various consequences in students that depend on factors such as the age at which the deficiency arises, the level of hearing loss, the intellectual development of the student, the presence of residual hearing, the involvement of the family, and the quality of the rehabilitation process, among others. It is a common mistake to assume that all people with hearing disabilities are the same and that their main problem is limited to hearing loss. In reality, the impact is much broader, affecting the individual's personal development in a comprehensive manner. The implications of hearing impairment vary depending on the degree of hearing loss. However, they do not always fully align with this parameter due to the aforementioned factors. In students with hearing loss, the consequences are notable but not insurmountable. On the other hand, in students with deafness, the effects are often so significant that they deeply compromise their personal development. From a perceptual and linguistic perspective, it is possible to analyze these consequences according to the degree of hearing loss the student presents (WHO, 2024).

c) Types of Classification According to the Time of Appearance

Hearing impairment, beyond the loss or reduction of the ability to hear, generates various consequences in students that depend on factors such as the age at which the deficiency arises, the level of hearing loss, the intellectual development of the student, the presence of residual hearing, the involvement of the family, and the quality of the

rehabilitation process, among others. It is a common mistake to assume that all people with hearing disabilities are the same and that their main problem is limited to hearing loss. In reality, the impact is much broader, affecting the individual's personal development in a comprehensive manner. The implications of hearing impairment vary depending on the degree of hearing loss. However, they do not always fully align with this parameter due to the aforementioned factors. In students with hearing loss, the consequences are notable but not insurmountable. On the other hand, in students with deafness, the effects are often so significant that they deeply compromise their personal development. From a perceptual and linguistic perspective, it is possible to analyze these consequences according to the degree of hearing loss the student presents (WHO, 2024).

6.2.8 Ecuadorian Sign Language

Federación Nacional de Personas Sordas del Ecuador (FENASEC, 2015) mentions that Ecuadorian Sign Language is defined as a gestural-spatial expression and visual perception. Through it, communication channels are generated between Deaf people and people who know sign language. Ecuadorian sign language is considered the first language or native language of Deaf people, which guarantees the development of linguistic, communicative and intellectual abilities. Unlike oral communication, which configures a vocal-auditory channel, Ecuadorian Sign Language transmits through observation, facial and body expression.

It is not a universal language, as one or more languages exist in each country. It has developed naturally over time through contact between users. For many years, this language has been forbidden, but it has been kept alive and its community of users has protected and transmitted its linguistic heritage from generation to generation. The proposal made in this work uses Ecuadorian sign language (Fernández-Gavira et. al., 2021).

6.2.9 Benefits of Ecuadorian Sign Language for Deaf Students

Ecuadorian Sign Language serves as a bridge that helps overcome communication barriers, allowing people with hearing or special communication needs to express themselves freely and be understood. This has motivated many parents and specialists to integrate it as an essential tool to enhance communication and inclusion. Some of the main benefits of teaching Ecuadorian Sign Language to children include; a) Reduction of frustration and strengthening of self-esteem: Allows children to express their needs and emotions effectively, avoiding feelings of helplessness; b) Improvement in family communication:

Facilitates the expression of feelings and needs between parents and children through a visual language, simplifying complex concepts into simple gestures; c) Development of social skills: It promotes more effective and positive interactions with their environment; d) Brain stimulation and holistic learning: It helps activate different areas of the brain, promoting both linguistic and intellectual development. Children manage to assimilate concepts, understand them, and retain information more easily (Larrazabal, 2021).

6.2.10 First language of people with Deaf Community

Deaf children face challenges in language acquisition and speech; however, they can learn their first language through total communication, which includes reading, writing, and sign-based methods. Their internal language system consists of words expressed visually, substituting for spoken language sounds. Development of expressive language skills can only follow receptive language development, and interaction with parents is a crucial first step. Special services are essential to support language acquisition and skill development for individuals who are Deaf or hard of hearing (Nugraha et. al., 2021).

7. Methodology

7.1. Research Approach

The research project has a qualitative approach as it gathers information from the Deaf student to analyze the experience and educational strategies applied in the English language, allowing the description of specific didactic activities that the teacher needs to know to adapt the teaching-learning process. Qualitative research is the collection and description of data based on the quality of human behavior such as beliefs, knowledge, symbols, and decision-making, that is, it delves into the why, where, and when of what is to be investigated (Mora, 1991).

7.2. Research Method or level

The research project is a descriptive level and non-experimental design. It allows for the specific narration of the data collected from the subject, situation, or group studied for this reason, this study was qualitative in nature, as it gathered information from the Deaf student in order to analyze the pedagogical strategies and activities that were used by the teacher during the student's English language learning (Calixto et. al., 2023).

7.3. Research Project

The population consisted of a 24-year-old Deaf student. He studies at the Technical University of Cotopaxi, Pujilí extension. He is in the fifth semester of the Basic Education program. He has a 63% hearing disability on his card from the Ministry of Public Health of Ecuador. He studied primary school at the "Unidad Educativa Especializada Cotopaxi," where he learned Ecuadorian Sign Language and Spanish but not English. He attended high school at "Primero de Abril" school, where he learned Basic English vocabulary and grammar.

7.4 Data Collection and Procedures

For data collection, a structured interview guide with 21 open-ended questions was used as a research instrument. The purpose was to gather information on the positive perceptions and challenges that have facilitated English language learning for deaf students.

The structured interview consists of predetermined questions presented in a specific order for their development (Medina et. al.,2023). The questions were previously selected and adapted to English and Spanish. The instrument was valid by the tutor of the project. For the application of the instrument, a professional in language sign helped to facilitate the collection of information. The survey was translated into Spanish and administered through reading and the assistance of an Ecuadorian Sign Language interpreter, who resolved any questions from the student and helped interpret the responses of the deaf participant.

7.5. Data Analysis Method

Thematic analysis is a method for analyzing qualitative data that entails searching across a data set to identify, analyze, and report repeated patterns Braun and Clarke (2006), as cited in (Varpio, 2020). It is a method for describing data, but it also involves interpretation in the processes of selecting codes and constructing themes. A distinguishing feature of thematic analysis is its flexibility to be used within a wide range of theoretical and epistemological frameworks, and to be applied to a wide range of study questions, designs, and sample sizes. The thematic analysis method analyzes the similarities and differences of each of the participants as well as obtaining data on the challenges and positive data that the students possess. The researchers followed the thematic analysis such as familiarizing with the data to understand the answers. The generated initial codes for the participant. After that, it searched for themes to get the categories and subcategories and also reviewed the themes to be sure about the categories and subcategories. Finally, the researchers did the report of the data.

8. Analysis and Discussion of Results

Table 4 Positive and challenges categories

Themes (categories)	Subcategories
Positive perceptions	Pedagogical support
	Didactic resources
	Learning style
	Technological resources
Challenges perceptions	Linguistic content
	Language skills
	Language assessment
	Teacher's knowledge of Ecuadorian Sign Language

8.1 Category: Positive perceptions

8.1.1 Subcategory: Pedagogical support

Si, es más fácil con intérprete, ya que la intérprete percibe todo el aprendizaje en inglés; razona y luego explica el tema tratado [Yes, it is easier with an interpreter, since the interpreter understands all the learning in English; she reasons and then explains the topic being discussed] (HM). The interpreter plays an essential role in the education of the Deaf student, facilitating communication with the teacher and ensuring the accurate transmission of the knowledge imparted in class. To do this, the interpreter understands the topics covered and interprets them, eliminating communication barriers in the teaching-learning process. Proaño (2024) it may be easier to learn the English language with an interpreter in the case of students with hearing disabilities since the interpreter perceives the difficulties that the student has and this makes it easier to explain it again in a simpler way and that the student understands. If the student does not get frustrated for not understanding it.

Es más fácil aprender con un profesor sordo que con un oyente, ya que la enseñanza es diferente. El profesor sordo enseña e interactúa con señas al comunicarse; yo lo razono y lo entiendo. ya que usa actividades diferentes [It is easier to learn with a Deaf teacher than with a hearing teacher, because the teaching is different. The Deaf teacher teaches and interacts with signs when communicating; I analyze and understand it, because he uses different activities] (HM). The Deaf student feels more comfortable learning with a Deaf teacher because, having the same condition, the teacher understands the learning style of the Deaf community, establishing a trusting environment. Therefore, the Deaf student can ask questions and clarify doubts about the topic in class. Banda (2024) learning with a Deaf teacher is very beneficial for the student as it develops skills such as reading and writing, and also helps them interact in Ecuadorian Sign Language, giving them a specific sign for each word in a new vocabulary.

Como el vocabulario es extenso, yo pido ayuda preguntando a la intérprete o profesor sobre los significados, y algunos yo los aprendo. También a través del libro aprendo más vocabulario. [Since the vocabulary is extensive, I ask for help by asking the interpreter or teacher about the meanings, and I more or less learn them myself. Also, through the book you will learn more vocabulary] (HM). The role of the teacher and their Interpreter is essential when teaching the Deaf students. Both teachers can help by using images, pictures, signs, examples to explain meaning to words, phrases and sentences to clear the student's doubts. Plazarte (2023) says English teachers, when teaching new vocabulary or readings, can rely on the interpreter to facilitate the understanding of the Deaf student, the teacher must master various teaching strategies to effectively impart vocabulary with the support of the interpreter.

Tengo algunos amigos intérpretes y sordos que me ayudan con el aprendizaje del idioma inglés [I have some Deaf interpreter friends who help me with learning English] (HM). People with knowledge of Ecuadorian Sign language and English can contribute to improve the use of vocabulary, grammar, phrases and sentences to learn English into the classroom and outside. Li (2024) when students are surrounded by different language environments, it can help them develop English as they better help to adapt the knowledge such as grammar, vocabulary, and writing.

En el futuro quisiera seguir aprendiendo, aunque me falta un año para graduarme. A mí me gustaría trabajar como profesor, enseñar y a mis estudiantes, que aprendan hasta comprender lo que enseño, durante un largo tiempo. [In the future I would like to continue learning, although I am one year away from graduating. I would like to work as a teacher, and my students would learn to understand what I teach over a long period of time] (HM). The student is motivated to be able to teach students with hearing disabilities so that they can have a better education with more inclusive teaching materials and -learning strategies. According to Mahmutović (2020), Deaf students have the support of sign language interpreters, and adaptations of educational materials, adapting educational materials, models of books for the Deaf, and an educational learning environment, this leads to the development of a strong motivation to reach their greatest academic potential.

8.1.2 Subcategory: Didactic resources

La profesora, con la ayuda del libro, me enseña resolviendo las actividades del libro; yo las entiendo y lo resuelvo; leo el vocabulario también. También en clase la profesora se enfoca en la parte oral, y conmigo en la parte escrita. [The teacher, with the help of the book, teaches me by solving the activities in the book; I understand them and solve them; I read the vocabulary too. Also, in class the teacher focuses on the oral part, and with me on the written part] (HM). The English book, as a didactic support resource, is fundamental for the development of writing in Deaf students, as it serves as a channel for accessing language. It

serves as a reference point for learning vocabulary, grammar, and texts in an orderly manner, facilitating the structural comprehension of English and, in turn, reinforcing both visual and writing skills. Hassanzadeh (2019) states a book is a pedagogical-didactic support resource, it is essential to improve the writing of the Deaf student, since it serves to channel access to language, this is essential to learn grammar, vocabulary, and texts, facilitating the understanding of the grammatical structures of the English language.

Me gustaría que se utilizaran Lengua de Señas Ecuatoriana, imágenes y escritura para relacionar el aprendizaje, que se utilizaran colores para diferenciar en la gramática y menos información, y añadir actividades lúdicas [I would like to see Ecuadorian Sign Language, pictures and writing used to relate learning, colours used to differentiate between grammar and less information, and fun activities added] (HM). It is necessary for the teacher to develop their classes with playful strategies, visual materials, pictures, ludic activities to help students understand the meaning and the use of grammar rules to develop writing skills. Additionally, the student requires that the teacher have basic knowledge of Ecuadorian Sign Language, so that the interaction is more effective, allowing for smooth and clear communication. So, the Deaf student can have a more active participation in the activities carried out in classes. Mena (2022) Deaf students identify that the main challenge in the learning process is the communication barrier, as both teachers and their peers lack proficiency in Sign Language. This situation limits their access to information, restricts interaction, and hinders the necessary dialogue for the construction and deepening of knowledge. Likewise, it is evident that they do not have accessible materials and resources that promote the improvement of their learning.

Es importante el libro de inglés, pero yo tengo muchos problemas con la gramática y nuevo vocabulario; es muy difícil, pero sí lo uso en clase [The English book is important, but I have a lot of problems with grammar and new vocabulary; it is very difficult, but I do use it in class] (HM). The English book, although it has a variety of content adapted to the age of each student and provides topics with grammatical explanations, presents a frustrating and demotivating experience for the Deaf student when relying on content that only has text. The absence of graphic elements, diagrams, images, and Ecuadorian sign language interpretations makes it difficult to understand the topic. And it limits the student's conceptual understanding. Kim (2024) states that illustrated books are the best option for Deaf students to learn English in a simple way, since they offer a wide variety of topics, such as grammar, vocabulary and the different verb tenses that are essential for the student to develop their knowledge and this would have a better impact if the book transmitted their ideas using sign language.

Además, ayudaría tener un libro con vocabulario y su significado en español e imágenes para aprender y estudiar [In addition, it would help to have a book with vocabulary and its meaning in Spanish and images to learn and study] (HM). The teacher must have an adapted text that includes a vocabulary section with representative images organized by unit, accompanied by their meanings in Spanish, English, and Ecuadorian Sign Language; this construction can facilitate the understanding of the Deaf student. Rathert (2022) says the teacher needs to adapt the usual classroom activities and materials to make them more accessible and functional, ensuring inclusion with the Deaf students.

8.1.3 Subcategory: Learning style

El profesor escribe en el pizarrón explicando todo el vocabulario y la gramática, y la intérprete lo escribe en el cuaderno, explicando de manera gráfica; yo observo tanto a la profesora como los apuntes en el cuaderno [The teacher writes on the board explaining all the vocabulary and grammar, and the interpreter writes it in her notebook, explaining it graphically; I observe both the teacher and the notes in the notebook] (HM). The teacher uses the voice to explain the class but it makes difficult for the Deaf students to learn the language so the role of the interpreter is to convey the teacher's ideas clearly and concisely about vocabulary and the different grammatical rules that are taught in class to explain in a more didactic way. Therefore, it is essential that the interpreter has basic knowledge of pedagogy because, in addition to acting as a mediator, they need to know how to teach the student what the teacher imparts in classes. Swanwick (2024) says the role of the interpreter is more than just the translation of words into signs, he or she must also have a broad understanding of the dynamics of the classroom, know the linguistic deficiencies and what the student with a disability has, the interpreter must have the ability not only to transmit the message but also their emotions and intentions.

Primero recolecto toda la informacion que voy a estudiar, leo y memorizo, luego lo práctico y aprendo. Tambien escojo un vocabulario, busco su significado para aprender. [First, I gather all the information I am going to study, read and memorize it, and then I practice and learn it. I also choose a vocabulary and look up its meaning to learn it] (HM). The Deaf student has a learning style based on gathering information through notes in their notebook and English books to process and retain knowledge. To prepare for evaluations, he uses memorization strategies and repetition as practice, establishing reinforcement and internalization of learning. As Ramírez et al., (2022) points out, it is essential that students with hearing disabilities have adapted strategies and techniques to achieve success in assessments. The teacher must include access to study material in accessible and visual formats, the teacher must clarify the student's doubts with the interpreter through sign

language, the adaptation of the assessments to clarify each of the concerns of Deaf students and additionally, if necessary, add more time.

Yo traduzco las palabras que conozco en español a Lengua de Señas Ecuatoriana, pero cuando el significado en inglés no lo conozco, yo lo traduzco a español y luego, a Lengua de Señas Ecuatoriana [I translate the words I know in Spanish into Ecuadorian Sign Language, but when I don't know the meaning in English, I translate it into Spanish and then into Ecuadorian Sign Language] (HM). When the Deaf student is unfamiliar with the vocabulary, they resort to the grammar translation method to understand the grammatical structure of English, expanding their vocabulary and phrases by analyzing the meaning of both languages so it improves their reading skills. As Nairobi (2020) points out the grammatical translation method, although highly criticized for its focus on literal translation, can be very useful for Deaf students. By contrasting the grammar of the English language with sign language, the student can develop a more concise understanding of how the two languages work. This approach becomes very beneficial for hearing-impaired students who have a great command of the sign language in order to establish connections between the two languages.

Si, algo yo practico el aprendizaje del inglés, con mucha paciencia [Yes, more or less, I practice learning English, with great patience] (HM). They can notice the interest, commitment, and motivation that the Deaf student has when practicing English, as it promotes the acquisition of linguistic skills. As Cortés (2022) points out, different Deaf students see English as an opportunity to obtain more information and an opportunity in the world while other Deaf students may feel that sensation of challenging themselves to break those barriers and learn a new language and in this way be able to communicate with other people from different English-speaking countries.

8.1.4 Subcategory: Technological resources

La plataforma de Cambridge es fácil de usar, en caso de una equivocación, puedo volver a repetirlo, pero hay algunas partes en donde se tiene que hablar; yo no puedo pronunciarlo [The Cambridge platform is easy to use, if I make a mistake I can repeat it again, but there are some parts where you have to speak; I can't pronounce it] (HM). The use of online platforms is a useful tool for practicing the English language, as it offers various educational activities that allow the student to make mistakes and improve progressively. The teacher can take advantage of the Cambridge platform as a resource to assign tasks, giving the student the opportunity to practice at home as many times as necessary and according to their availability. Oliveira (2021) says it was demonstrated that the incorporation of digital didactic

resources such as the Cambridge platform was very helpful. It promotes student motivation towards learning and strengthens the knowledge of the English language that was acquired.

8.2. Category: Challenges perceptions

8.2.1. Subcategory: Linguistic content

El vocabulario en el texto es difícil; no entiendo el significado de las palabras porque el inglés es superior y el vocabulario es muy extenso, es muy difícil [The vocabulary in the text is difficult; I don't understand the meaning of the words because the English is superior and the vocabulary is very extensive, it is very difficult] (HM). When vocabulary appears within a text, it can be more difficult for the Deaf student to assimilate without using pictures, translation or Ecuadorian Sign Language. This forces the teacher to adjust their teaching style and adapt strategies, activities, and resources to use them in class. To facilitate vocabulary acquisition, highlighting the vocabulary or keywords with a different color will help the student associate them and build their learning by translating them independently. It is essential to present it accompanied by its meaning in Ecuadorian sign language and in English, directed with a graphic, and integrated into a sentence to reinforce knowledge. As Larrazabal (2021) points out it is essential to consider the linguistic abilities of Deaf students when introducing vocabulary. This involves the use of specific signs, images, and establishing the new vocabulary with knowledge already acquired by the student. It is also important not to limit oneself only to words but also to intertwine the vocabulary with idioms and other elements of language.

8.2.2 Subcategory: Language Skills

La lengua de señas es parecida al inglés. Pero el inglés con el español es diferente. La Lengua de Señas Ecuatoriana la entiendo, pero el inglés no mucho [Ecuadorian Sign Language is similar to English. But English and Spanish are different. I understand Ecuadorian sign language, but not English very well] (HM). The Ecuadorian sign language has its own grammatical structure, and the Deaf student relates it to English to understand how the language is formed. Hashi (2024) states sign language extends beyond the English language, as it covers specific domains such as handwriting and handbook posture recognition, that is, English with sign tongue becomes similar since sign language has a specific signal for words as well as English does not have extensive verbal conjugations that makes an easy comprehension for Deaf students.

8.2.3 Subcategory: Language assessment

Para mí, las evaluaciones en inglés son más fáciles cuando tienen selección múltiple porque ahí puedo analizarlas y responder. Pero de igual manera, las evaluaciones si son difíciles porque tienen mucho vocabulario [For me, English tests are easier when they have multiple choice because I can analyze them and answer them. But the tests are also difficult because they have a lot of vocabulary] (HM). The use of multiple-choice items to assess skills is a useful strategy for Deaf students, as it facilitates their response by offering various options to choose the correct one. However, there are different assessment methods that can be applied in the classroom according to the student's needs. According to Lázaro (1996), there are various forms of assessment that can be applied in the classroom such as: true/false questions, yes/no questions, multiple-choice questions, information transfer (such as completing a table), ordering paragraphs, choosing titles for texts or paragraphs, cloze tests, and brainstorming can be employed and also to assess writing, activities such as unscrambling words, completing forms, filling in sentences or dialogues, completing the development or ending of a story, writing short stories, describing images or diagrams, as well as drafting essays, compositions, emails, letters, postcards, and reports can be used for to evaluated writing.

8.2.4 Subcategory: Teacher's knowledge of Ecuadorian Sign Language

No, solo la intérprete [No, just the interpreter] (HM). In this sense, it is understandable that the teacher does not have knowledge of Ecuadorian Sign Language, as their professional training does not include this language. However, with a Deaf student in the classroom, it is essential for the teacher to be trained in their specific needs and to engage with the Deaf community, acquiring at least basic knowledge of Ecuadorian Sign Language. Kurniaman (2021) says that to achieve inclusion and maintain motivation, it is essential that teachers receive constant training in basic sign language knowledge and get involved in the Deaf educational community to provide a better understanding of the subject.

9. Research Impacts

9.1 Educational Impact

The design of a handbook for teaching English to Deaf students promotes inclusive education by ensuring equitable access to English language learning. This resource provides teachers with specialized strategies that enhance communication and more concrete engagement in the classroom. A trilingual handbook containing Spanish, Ecuadorian Sign Language (LSEC), and English would have a significant impact on education as it provides an accessible and functional resource for students with hearing disabilities, and it would also help teachers and families create an inclusive environment with their students and children.

Handbooks are often adapted in different ways, but this educational resource contains specific activities to develop linguistic skills in Deaf students, addressing topics of great importance to the Deaf community, promoting awareness of Deaf culture, and also presenting effective learning strategies for people with this type of disability.

10. Conclusions and Recommendations

10.1 Conclusions

- According to the theoretical framework some strategies for Deaf students included memorization, setting arrangement, the use of visual aids and videos, acquisition of new vocabulary and grammar tenses and help to Deaf students learn English language using dynamic activities.
- The positive aspects identified in the Deaf student reflect an inclusive educational environment: pedagogical support where the teacher and the interpreter work together for an inclusive education with the student, the use of didactic material, such as the English book, allows access to vocabulary and grammatical structures, while the student's learning style, based on taking notes in their notebook with the support of the interpreter, reinforces their comprehension. Additionally, access to the Cambridge platform provides a digital tool to practice and improve their English level in an autonomous way.
- The challenges that the Deaf student presents are found in different aspects: The linguistic content, since the content that the books have is very hard and has a complex vocabulary that makes it difficult for the Deaf student to understand; Language assessment, since the evaluations carried out by the English teacher contain too much vocabulary and long texts, which is very complicated for Deaf students because they fail to develop their receptive skills; Teacher's knowledge of Ecuadorian Sign Language, the biggest challenge that the Deaf student faces being that the English teacher does not know the basics of Ecuadorian Sign Language, which prevents the teacher from being able to transmit his ideas clearly.
- A book was designed to teach English clearly and concisely, incorporating vocabulary, images, and Ecuadorian Sign Language to reinforce the knowledge that deaf students need to learn. The handbook is in a CD so the institution can have accessibility to the document and it can be used for further research. This resource allows teachers to rely on their lesson planning and have the specific activities they need, while also attending to the rest of the class. In this way, the teacher can achieve a more inclusive teaching and learning process and prevent deaf students from getting frustrated when learning a new language.

10.2 Recommendations

- The teacher must receive continuous training to avoid difficulties when working with Deaf students. These training sessions should address aspects related to hearing impairment, including strategies, methods, activities, and resources that can be used in the classroom. This contributes benefits for both the teacher and the student, strengthening the class in a didactic and interactive manner.
- It is essential that educational institutions adopt measures to promote communication, active participation, and the holistic development to Deaf students with an A1 Starters or Beginners level. In addition, it is important to adapt resources and the support of an Ecuadorian Sign Language interpreter with pedagogical training who is familiar with the English language, didactic materials, and assistive technologies. This can allow the creation of an inclusive environment where Deaf students feel valued, supported, and motivated to reach their full potential.
- The resources must be simplified and adapted with visual aids for the students' comprehension, using clear and concise language. The assessments should contain adaptations to focus on accessible aspects and use accessible activities, minimizing the use of long texts and complex vocabulary. English teachers should receive training on the fundamentals of Ecuadorian Sign Language to facilitate communication and create an inclusive learning environment.
- Teachers can apply the handbook created for A1 starters or Beginner's students in order to teach the English language in an easier and simpler way and evaluate the results for further research about elaborating a book for Deaf students

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12. ANNEX

ANNEX 1

Challenges (difficulties)	Positive
<p>6. ¿Qué te resulta difícil al aprender inglés?</p> <p>El vocabulario en el texto es difícil; no entiendo el significado de las palabras porque el inglés es superior y el vocabulario es muy extenso, es muy difícil.</p> <p>8. ¿Alguno de tus profesores de inglés usó lengua de señas ecuatoriana?</p> <p>No, solo la intérprete.</p> <p>9. ¿Cómo se compara el inglés con el español o el lenguaje de señas ecuatoriana?</p> <p>La lengua de señas es parecida al inglés. Pero el inglés con el español es diferente. La lengua de señas la entiendo, pero el inglés no mucho.</p> <p>10. ¿En qué se enfoca más tu profesor de inglés: lectura, escritura, escucha, habla, vocabulario, gramática?</p> <p>La profesora, con la ayuda del libro, me enseña resolviendo las actividades</p>	<p>1. ¿Qué carrera estudias?</p> <p>Educación básica</p> <p>2. ¿Cuántos años tienes?</p> <p>24 años</p> <p>3. ¿Qué trabajo te gustaría tener después de graduarte?</p> <p>En el futuro quisiera seguir aprendiendo, aunque me falta un año para graduarme. A mí me gustaría trabajar como profesor, enseñar y a mis estudiantes, que aprendan hasta comprender lo que enseño, durante un largo tiempo.</p> <p>4. ¿Estás aprendiendo inglés actualmente?</p> <p>Si, algo yo practico el aprendizaje del inglés, con mucha paciencia.</p> <p>5. ¿Dónde empezaste a aprender inglés?</p> <p>Hace 2 años, he aprendido inglés y también en el colegio</p> <p>7. ¿Qué te ayudó a superar estos desafíos?</p> <p>Como el vocabulario es extenso, yo pido ayuda preguntando a la intérprete o profesor sobre los significados, y más o menos yo los aprendo. También a través del libro aprendo más vocabulario. Además, ayudaría tener un libro</p>

<p>del libro; yo las entiendo y lo resuelvo; leo el vocabulario también. También en clase la profesora se enfoca en la parte oral, y conmigo en la parte escrita.</p> <p>14. Cuando estás aprendiendo nuevas palabras, ¿las traduces a Lengua de señas?</p> <p>Yo traduzco las palabras que conozco en español a lengua de señas, pero cuando el significado en inglés no lo conozco, yo lo traduzco a español y luego, a lengua de señas.</p> <p>17. ¿Es difícil la evaluación en inglés? ¿por qué?</p> <p>Para mí, las evaluaciones en inglés son más fáciles cuando tienen selección múltiple porque ahí puedo analizarlas y responder. Pero de igual manera, las evaluaciones si son difíciles porque tienen mucho vocabulario.</p> <p>19. ¿Entiendes el libro que usas en clase?</p> <p>Es importante el libro de inglés, pero yo tengo muchos problemas con la gramática y nuevo vocabulario; es muy difícil, pero sí lo uso en clases.</p>	<p>con vocabulario y su significado en español e imágenes para aprender y estudiar.</p> <p>11. ¿Te resulta más fácil aprender inglés con el profesor y la intérprete?</p> <p>Si, es más fácil con intérprete, ya que la intérprete percibe todo el aprendizaje en inglés; razona y luego explica el tema tratado.</p> <p>12. ¿Te resulta más fácil aprender inglés con un profesor sordo en formación?</p> <p>Es más fácil aprender con un profesor sordo que con un oyente, ya que la enseñanza es diferente. El profesor sordo enseña e interactúa con señas al comunicarse; yo lo razono y lo entiendo. ya que usa actividades diferentes.</p> <p>13. ¿Qué hizo tu profesor de inglés para explicar el vocabulario y la gramática?</p> <p>El profesor escriba en el pizarrón explicando todo el vocabulario y la gramática, y la intérprete lo escribe en el cuaderno, explicando de manera gráfica; yo observo tanto a la profesora como los apuntes en el cuaderno.</p> <p>15. Cuando lees algo en inglés (un mensaje, una entrada de blog, un correo electrónico, alguna información en internet), ¿lo traduces a Lengua de Signos?</p> <p>Lo traduzco al español y luego a lengua de señas.</p> <p>16. ¿Cómo sueles prepararte para un examen de inglés?</p>
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Primero recolecto toda la información que voy a estudiar, leo y memorizo, y luego lo práctico y aprendo. También escojo un vocabulario, busco su significado para aprender.

18. ¿Hay alguien, un amigo o un familiar, que te esté ayudando con el inglés? ¿Quién? ¿Cómo?

Tengo algunos amigos intérpretes y sordos que me ayudan con el aprendizaje del idioma inglés.

20. ¿Puedes manejar la plataforma de Cambridge fácilmente?

La plataforma de Cambridge es fácil de usar, en caso de una equivocación, puedo volver a repetirlo, pero hay algunas partes en donde se tiene que hablar; yo no puedo pronunciarlo.

21. ¿Cómo te gustaría estudiar inglés?

Me gustaría que se utilizaran lengua de señas, imágenes y escritura para relacionar el aprendizaje, que se utilizaran colores para diferenciar en la gramática y menos información, y añadir actividades lúdicas.

ANNEX 2

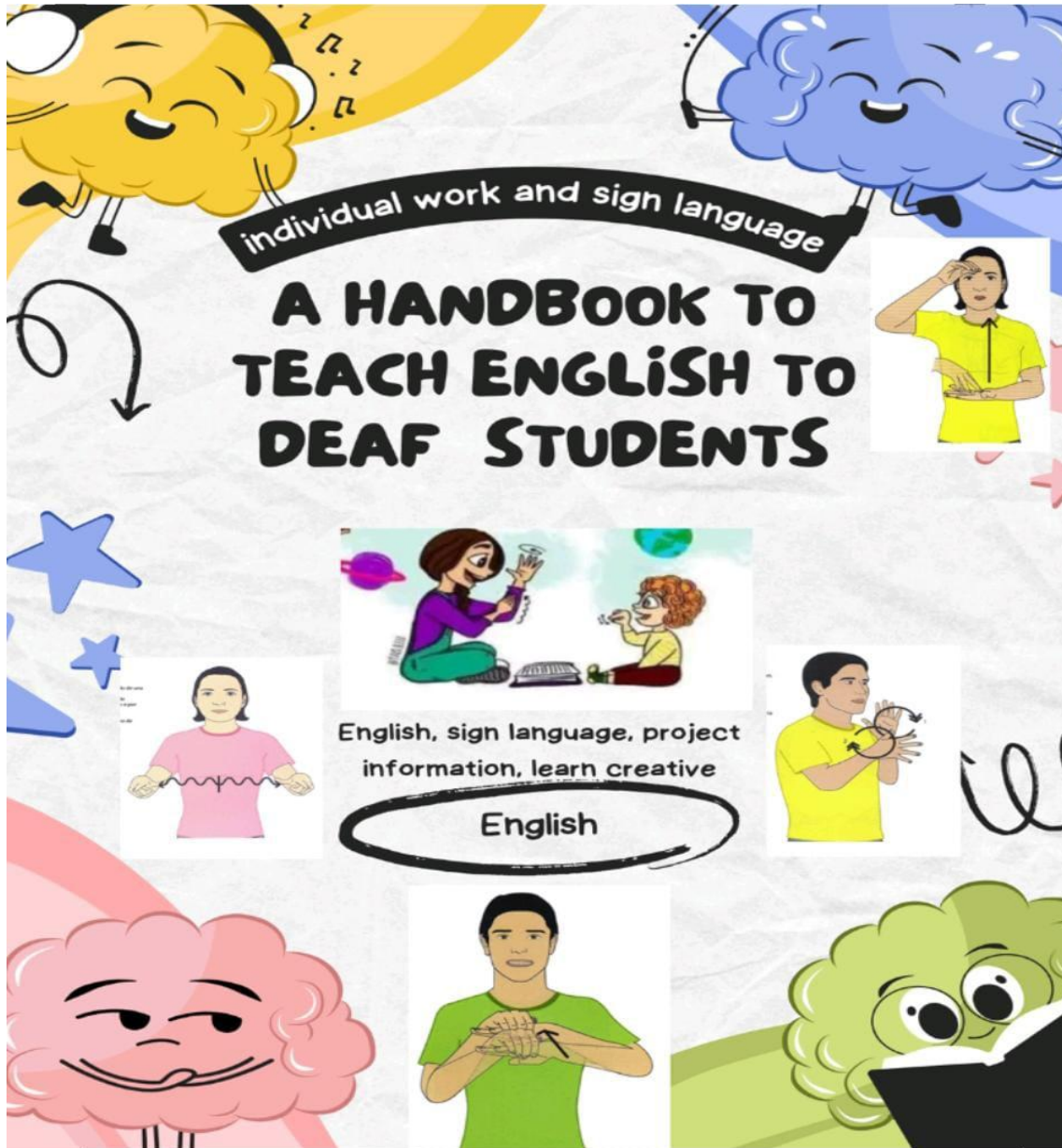
Types of Answers	
Pedagogical Support	<ul style="list-style-type: none"> • Si, es más fácil con intérprete, ya que la intérprete percibe todo el aprendizaje en inglés; razona y luego explica el tema tratado. • Es más fácil aprender con un profesor sordo que con un oyente, ya que la enseñanza es diferente. El profesor sordo enseña e interactúa con señas al comunicarse; yo lo razono y lo entiendo. ya que usa actividades diferentes. • Como el vocabulario es extenso, yo pido ayuda preguntando a la intérprete o profesor sobre los significados, y algunos yo los aprendo. También a través del libro aprendo más vocabulario. • Tengo algunos amigos intérpretes y sordos que me ayudan con el aprendizaje del idioma inglés. • En el futuro quisiera seguir aprendiendo, aunque me falta un año para graduarme. A mí me gustaría trabajar como profesor, enseñar y a mis estudiantes, que aprendan hasta comprender lo que enseño, durante un largo tiempo.
Didactic resources	<ul style="list-style-type: none"> • La profesora, con la ayuda del libro, me enseña resolviendo las actividades del libro; yo las entiendo y lo resuelvo; leo el vocabulario también. También en clase la profesora se enfoca en la parte oral, y conmigo en la parte escrita. • Me gustaría que se utilizaran Lengua de Señas Ecuatoriana, imágenes y escritura para relacionar el aprendizaje, que se utilizaran colores para diferenciar en la gramática y menos información, y añadir actividades lúdicas. • Es importante el libro de inglés, pero yo tengo muchos problemas con la gramática y nuevo vocabulario; es muy difícil, pero sí lo uso en clase. • Además, ayudaría tener un libro con vocabulario y su significado en español e imágenes para aprender y estudiar.

Learning Style	<ul style="list-style-type: none"> • El profesor escribe en el pizarrón explicando todo el vocabulario y la gramática, y la intérprete lo escribe en el cuaderno, explicando de manera gráfica; yo observo tanto a la profesora como los apuntes en el cuaderno • Primero recolecto toda la información que voy a estudiar, leo y memorizo, luego lo práctico y aprendo. También escojo un vocabulario, busco su significado para aprender. • Yo traduzco las palabras que conozco en español a Lengua de Señas Ecuatoriana, pero cuando el significado en inglés no lo conozco, yo lo traduzco a español y luego, a Lengua de Señas Ecuatoriana. • Si, algo yo practico el aprendizaje del inglés, con mucha paciencia.
Tecnological Resources	<ul style="list-style-type: none"> • La plataforma de Cambridge es fácil de usar, en caso de una equivocación, puedo volver a repetirlo, pero hay algunas partes en donde se tiene que hablar; yo no puedo pronunciarlo.
Linguistic Content	<ul style="list-style-type: none"> • El vocabulario en el texto es difícil; no entiendo el significado de las palabras porque el inglés es superior y el vocabulario es muy extenso, es muy difícil.
Language Skill	<ul style="list-style-type: none"> • La lengua de señas es parecida al inglés. Pero el inglés con el español es diferente. La Lengua de Señas Ecuatoriana la entiendo, pero el inglés no mucho.
Language assessment	<ul style="list-style-type: none"> • Para mí, las evaluaciones en inglés son más fáciles cuando tienen selección múltiple porque ahí puedo analizarlas y responder. Pero de igual manera, las evaluaciones si son difíciles porque tienen mucho vocabulario

Teacher's knowledge of Ecuadorian Sign Language	<ul style="list-style-type: none">• No, solo la intérprete
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ANNEX 3

Proposal: Handbook

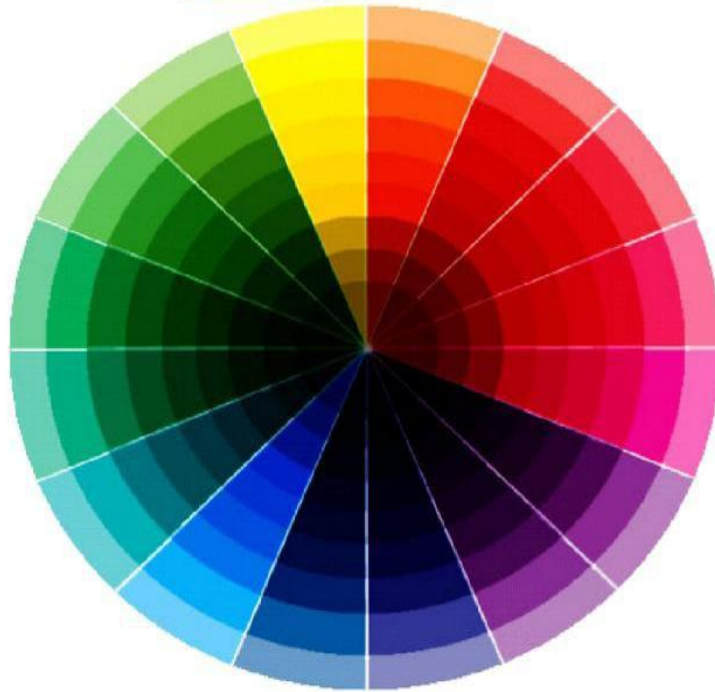


Authors:

Meiby Chávez

Alejandro Tapia

UNIT 1



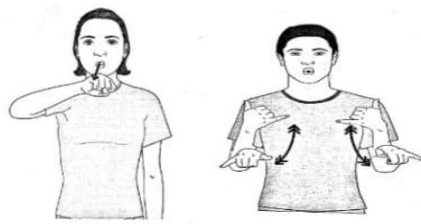
Colors

UNIT 2



Classroom

UNIT 3



Favorite toys

UNIT 4



My family

UNIT 5

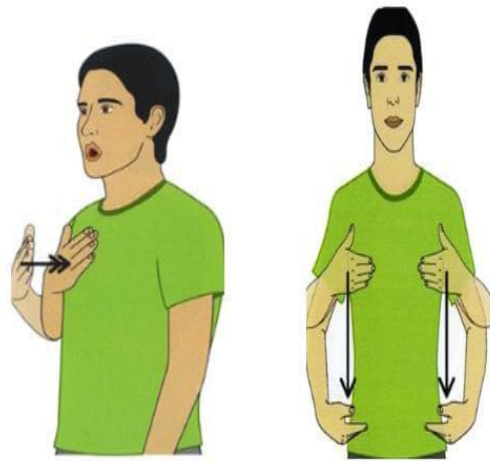


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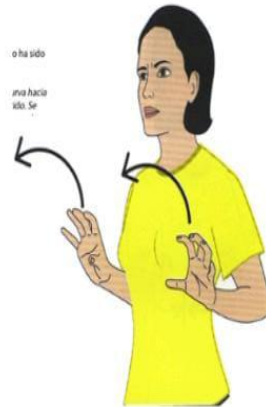
Pets

UNIT 6



My body

UNIT 7



UNIT 8



UNIT 9



UNIT 10



At the funfair

VOCABULARIO

