

**COMPETENCIA LECTORA INGLÉS-ESPAÑOL DE ESTUDIANTES CON
DÉFICIT AUDITIVO: Acceso y apoyo técnico en universidades
ecuatorianas**

*READING COMPETENCE IN ENGLISH-SPANISH OF STUDENTS WITH
HEARING IMPAIRMENT: Access and technical support in Ecuadorian
universities.*

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RESUMEN

Palabras clave	El acceso de estudiantes con déficit sensorial a los apoyos pedagógicos/técnicos sigue siendo un desafío para las universidades a nivel mundial. El objetivo de este trabajo es determinar el nivel de apoyo pedagógico/técnico que las universidades ofrecen a los estudiantes con discapacidad auditiva en Ecuador. Se acude al enfoque mixto de la investigación científica. El instrumento utilizado es el Cuestionario de Acceso a la Educación Inclusiva creado por Real. Las técnicas utilizadas fueron la observación contextual, entrevista en profundidad y encuesta. Los resultados muestran que, persisten las limitaciones para el acceso al apoyo pedagógico en el contexto universitario, reduciendo el desarrollo de habilidades lectoras del alumnado. El estudio concluyó que las universidades de Manabí en Ecuador requieren instalar soportes pedagógicos/técnicos para ayudar a los estudiantes con discapacidad auditiva, fortalecer la capacitación y motivación de los profesores para implementar adaptaciones curriculares y tutorías para mejorar las habilidades lectoras de los estudiantes.
Accesibilidad	
Apoyo pedagógico	
Discapacidad	
Educación Inclusiva	
Enseñanza de una segunda lengua	

ABSTRACT

Keywords

Accessibility

Pedagogical support

Second language instruction

Disability

Inclusive education

Accessing students with sensory deficits to technical support continues to challenge universities worldwide. This work aims to determine the level of technical support universities offer to students with hearing disabilities in Ecuador. It used a mixed approach to scientific research. The instrument used is the Inclusive Education Access Questionnaire created by Real. The techniques used were contextual observation, in-depth interviews, and surveys. The results show that access to technical support in the university context is needed, reducing the development of students reading skills. The study concluded that the universities of Manabí in Ecuador need to install technical support to help students with hearing disabilities. It requires strengthening teachers' training and motivation to implement curricular adaptations and tutorials to improve students' reading skills.

INTRODUCTION

Barriers to quality education persist, obscuring students' desire to learn a foreign language due to their sensory impairment. It ratifies that access to quality education still requires the commitment and effort of teachers, administrators, and agents of Education in developing countries such as Ecuador.

Hearing impairment is difficulty in hearing sounds and negatively influences daily activities. It not only depends on the physical or biological characteristics of the person, but it is a condition that arises due to the interaction of their deficit with an unfavorable environment (López & Valenzuela, 2015). Inclusive Education aims to ensure academic excellence and relevance of the educational programs offered for which compliance with the principles of accessibility, quality, and social relevance (Corral et al., 2015; Pinoargote et al., 2018). In addition, according to Luzardo et al. (2018), educational inclusion promotes eliminating all possible forms of exclusion that persist in any nation's educational system. They consider government policies, teaching practices, and culture for the inclusiveness that arises in all educational institutions worldwide (Villafuerte & Pinoargote, 2019).

While general progress in inclusive Education is linked to the development of cultural values, the promise of greater inclusion in schools goes hand in hand with the availability of adequate resources (Saloviita, 2019). "Zibah Nwako's

submission seeks clarification for what happens when the very concept of education is exclusionary, when it does not always take into cognisance marginal groups, alternative knowledge(s), and other forms of both schooling and education in the context of South-East Nigeria in West Africa” (Abdulrahman et al., 2021, p. 49). In addition, educational inclusion constitutes how the school accepts, recognizes, and includes the existing diversity and seeks all people’s individual and social well-being (Rodríguez et al., 2020; Rueda et al., 2020). These teacher attitudes have been recognized as a critical indicator for adequate student inclusion (Garrad et al., 2022) and are a prerequisite for successful implementation.

The interaction of interdisciplinary teams is required to strengthen the understanding that inclusive Education involves their health and well-being (Ocampo, 2018). However, inclusive Education must consider more than building functional types of educational architecture. In addition, it is also necessary to understand that diversity is not a problem but an opportunity to enrich society (Abdulrahman et al., 2021). Therefore, Matos and Fukuda (2016) demonstrated no excellent relationship practices between students with or without disabilities. In addition, Fernández et al. (2017) argue that teachers express discomfort in the presence of students with disabilities in the classroom. However, the work of Pegalajar and Colmenero (2017) shows that teachers, especially women, have attitudes that favor attention to students with disabilities. They add that the new generations of teachers state that they are better prepared to care for students with special educational needs linked or not to disabilities. Furthermore, Mateus et al. (2017) demonstrated in their work that harmful inclusive practices persist in schools that directly involve teachers and their weak involvement with disability cases. Macías and Villafuerte (2020) conclude that laws favor social and educational inclusion in Ecuador, but the practices have many pending tasks.

Finally, Velázquez and Villafuerte (2020) determine that games allow the muscles of the oral cavity to strengthen, therefore improving intonation, pronunciation, and fluency of oral expression in the use of the mother tongue and foreign language.

Therefore, the challenge of educational research should focus on identifying strategies to improve communication in the educational environment, thus favoring maximum learning and the integral development of children, teenagers, and people with hearing deficits. The following research questions guided this study:

1. What is the situation of access observed in Ecuadorian universities for students with disabilities?
2. What is the population of students with hearing impairment attending three universities in Manabí?
3. What are the technical supports implemented in Ecuadorian universities for the attention of students with hearing disabilities?
4. How to improve reading skills in students with hearing impairment?

This research aims to find strategies to strengthen reading skills in students with hearing impairment in the mother tongue Spanish and English as a foreign language by analyzing technical and technological resources.

LITERATURE REVIEW

1. Hearing disabilities in the university context

To Pérez-Labrada et al. (2019), the mastery of reading and writing by deaf learners is considered an essential tool for social integration, since the written text is one of the most effective means for them to receive information and access to new knowledge. In the meantime, Alegre & Villar (2019) argued that, when students have hearing difficulties, their linguistic capacity may be affected, harming elements that intervene in communication, such as vocabulary, grammar, articulation, fluency, comprehension, or pronunciation.

According to Pulgar (2018) the education of students with hearing problems must be understood from the perspective of diversity. That is why they require an education according to their characteristics and needs.

Furthermore, Mateos & Jiménez (2018) ensures that hearing loss can appear at any age of the child, at birth, or later; It can be abrupt or progressive, temporary or partially. In addition, Sánchez Salazar et al. (2019) affirm that severe hearing loss in the early stages of life will have important effects on the development of a boy or girl and on their acquisition of their oral language and therefore on teaching and learning.

2. Reading skills and students with hearing impairment

According to Connor (2016), reading comprehension (fundamental competence in educational methodology) is a process that involves individual lexical decoding and linguistic comprehension. Consequently, students present problems in basic processes such as phonological awareness, access to the lexicon, vocabulary acquisition and morphosyntactic skills. In order for these students to stay on grade level and graduate with the skills necessary to either be a successful college student or find a decent job after high school, teachers of the deaf need to be made aware of any methods or strategies they can use to successfully support the development of reading comprehension skills in their students. Unfortunately, “One of the major challenging tasks of educators of deaf and hard of hearing students is to enhance the reading comprehension performance of their students” (Nikolarazi, Vekiri, & Easterbrooks, 2013, p. 485).

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However, the hearing limitations of students with hearing impairment have a limitation in the extrapolation of prior knowledge, because they have fewer concepts and linguistic meanings stored in their memory. In addition, Cañizares (2016) remarked that reading includes visual or spelling (character recognition by sight) and auditory or phonemic (correlation between the letter or grapheme and its sounds or phonemes). Therefore, to achieve good reading fluency, students must master phonology, being one of the greatest difficulties for them. Nevertheless, Romo (2019) states that reading includes knowledge, skills, and strategies that human beings develop to understand the different contexts of everyday life, meanwhile reading comprehension is the ability of applying cognitive and metacognitive thinking strategies to understand a text.

3. Inclusive education in university contexts

The practice of reading comprehension in the university context requires attention from teachers to develop the cognitive, reflective and critical abilities of students during the learning process (Ocampo, 2018). In addition, López-Vélez (2018) stated

that inclusive education aims to achieve quality education, which is characterized by two qualities, such as excellence and equity. To Perilla Granados (2018) mentions inclusive education as an opportunity to guarantee the rights of people with special educational needs. However, advances in inclusive education had been concentrated in primary and secondary education. However, Crisol Moya (2019) affirms that Educational Inclusion is related to the access, participation and achievements of all students. Therefore, to Galván (2019) inclusive education is a human right to live, learn and develop with all the people who make up our community, including mainly the school, without forgetting the rest of the itineraries that make up the right to learning throughout the entire life.

Among the works revised in this research framework Miñana Blasco (2020) remarked that inclusive education implies recognizing the learners' different trajectories, needs, expectations, and interests. In addition, the work of Clavijo and Bautista (2020) concluded that the access to an educational system under equal conditions and learning opportunities, is an aspiration that must be assumed by all governments and public and private institutions. Finally, Macías and Villafuerte (2020) ratified those Ecuadorian laws and agreements have been generated to support the inclusive education. However, the current conditions of teachers' practices and inclusive culture still should be developed to warranty efficient levels of inclusion in the Ecuadorian education.

METHODOLOGY

The article extracts results from three case studies. The information was collected in three national universities located in the province of Manabí in Ecuador. The research used the mix research approach.

The informants were 18 people. 6 professors (30% female and 70% male) and 12 students (60% female and 40% male).

The instrument used in this research is the Questionnaire for Inclusive Education of Real (2011). The instrument was adapted by the research team to contextual observation form, in-deep interview guide, and survey.

1. Contextual observation form. - This instrument consists of 14 items to explore university access, installations and technical supports for the attention of students

with disabilities. Authors adjusted to the instrument from Spanish used in Spain to Castellan language used in Ecuador. The instrument was examined by a panel of experts affiliated to the University Laica Eloy Alfaro de Manabí. They were professionals in the fields of Psycho didactics, language, and educational inclusion. The experts panel advised to concentrate the items to the students hearing loss condition. A total of 6 observations were executed in the period Oct/2020 to Oct/2021.

2.- **In-deep interview guide.** - This instrument purpose is to collect from local professionals' information concerning to technical supports to students with hearing impairment. The interviews categories are: (1) university installations and (2) technical supports required by students with hearing disability. The instrument was examined by a panel of experts affiliated to the University Laica Eloy Alfaro de Manabí in Ecuador. The experts panel advised to reduce the number of items from 14 to 8. The in-deep interviews were realized using the application zoom considering the local regulations to reduce the infections of COVID-19.

3.- **Survey.** - This instrument was used to determine the population of students with different levels of hearing impairment. The instrument was used by the informants using a google form.

Procedure and instruments: The investigation consists of five stages that are explained below.

Stage 1: review of the bibliographic information regarding the fundamental concepts such as reading competence, hearing deficit in young people and inclusive education. For its execution, the review of specialized repositories in the field of national and international hearing loss available on the Internet was reviewed.

Stage 2: The stage of empirical work. - The first activity carried out in this stage was the selection of the instrument of Real (2011) on educational inclusion in universities, this instrument was initially developed for the Spanish context, so it was necessary to make a stage of adjustment to the reality of Ecuador. The document was used through an observation process in the facilities of 3 universities domiciled in the province of Manabí. It consisted in the application of data collection instruments.

Stage 3: Survey. - In this stage the research team executed a survey to determine the population of students with hearing impairment in the 3 universities.

Stage 4: In-deep Interview. - The research team organized 3 in-deep interviews with researchers and professional of inclusive education and experience in attention to students with hearing impairing.

Stage 5: Information analysis. - This stage was carried out by tabulating and analyzing the observations made. At this stage, the facilities and methodologies, classroom conditions and trends regarding access barriers for students with hearing impairment in the context of a public university were identified through the file.

RESULTS

The presentation of the results follows the order of the research questions that appear in the introduction section.

1. Access of students with hearing impairment to Ecuadorian universities

The information presented in table 1 corresponds to the observations made regarding to students' access to university in Manabí. Logistical facilities and infrastructure in universities for attention of hearing impairment students.

Table 1. Logistical facilities and infrastructure in universities for attention of hearing impairment students - Factor access

Parameters	University 1	University 2	University 3	Trend
Accessibility	Good: Exit of the city. Safe area.	Acceptable: Exit of the city. Lonely area of the city	Good: Exit of the city. Safe area.	The participating universities show good accessibility, located in strategic points of development.
University entrance	Organized, fast. 4 access doors. There is no control of entry of people. If of vehicles.	Organized, fast. 2 access doors. There is no entry control. If of vehicles.	Organized, crowded. 3 access doors. There is no control of entry of people. If of vehicles.	The participating universities have a vehicular control, but the control of the students must be improved, to avoid problems.

Source: Contextual observations using questionnaire (Real, 2011).

The universities have guardianship, but it concentrates on the control of vehicle entry. Presentation of identification is not required upon entry. There is no signage for

inclusive purposes, guards not trained to care for people with hearing deficit. In addition, they have a logical location for development.

Table 2. Logistical facilities and infrastructure in universities for attention of hearing impairment students - Adaptation of didactic materials/resources in the classroom

Parameters	University 1	University 2	University 3	Trend
Classrooms	Complies with lighting. Some with air conditioning. 50% of the classrooms are equipped with projector. 10% have touch screens	Complies with lighting. Some with air conditioning. 60% of the classrooms are equipped with projector. 10% have touch screens	Complies with lighting. Some with air conditioning. 30% of classrooms are equipped with projector, 10% have touch screens	Most universities have air conditioning and relate their pedagogy to ICTs using touch screens in classrooms.
Laboratories	Deficient: Laboratories are scarce, but they have lighting and air conditioning. No heating is required.	Deficient: Laboratories are scarce. Lighting and air conditioning. No heating is required. They have institutional agreements to access chemistry laboratories.	Deficient: Laboratories are scarce. Insufficient equipment for the number of students. Lighting and air conditioning. No heating is required.	The universities studied demonstrate a state of deficient laboratories, despite having basic access, they do not have access adapted to people with hearing deficit or technology that allows them to be part of that.
Internet access for all students	Good. Wifi.	Enough. Wifi.	Good. Wifi.	Despite having Wifi and being used by a large mass of students, internet access is heavy and slow on many occasions.
Libraries	Medium library. No access to audiobooks.	Good large library. Access to audiobooks through online libraries.	2 small libraries. Limited. Access to audiobooks through online libraries.	Most of the time libraries are small and the virtual libraries they present do not have audiobooks or something similar inclusive.

Source: Contextual observations using questionnaire (Real, 2011).

The universities showed that have not access to laboratories, and classrooms. Nor they have not high speed Wifi to contribute excellently to the class hours. They offer academic platform that allows the use of people with hearing deficits to perform autonomous work at home.

Table 3. Didactics used in the inclusive education

Parameters	University 1	University 2	University 3	Trend
Strategies that facilitate care for students with hearing impairment	Use of videos with capture that facilitate the understanding of the topics of the syllable.	Use of videos with capture that facilitate the understanding of the topics of the syllable.	Use of videos with capture that facilitate the understanding of the topics of the syllable.	All demonstrate an inclusive didactic by showing strategies that allow them to learn.
Teachers use sign languages	No	No	Yes, some teachers know sign language	Most teachers lack training or projects focused on learning sign language.
Teachers feel qualified to teach people with hearing deficits	No	No	Yes. Teachers have been trained.	Not having enough training will be a challenge when finding students with hearing deficit, some universities if they have been trained.
The teaching staff makes curricular adaptations in the evaluation, according to the student's disability	If when the students processed their case before student welfare so that curricular adaptations can be made.	If when the students processed their case before student welfare so that curricular adaptations can be made.	If when the students processed their case before student welfare so that curricular adaptations can be made.	Universities demonstrate that teachers must compulsorily adapt curricular evaluations when the student processed with student welfare.

Source: Contextual observations using questionnaire (Real, 2011).

The information allows to researchers to affirm that, universities have a lack of teacher training for sign language learning, also because they do not have students with hearing disabilities regularly, they do not make use of curricular adaptations or extracurricular activities with special assistance.

Table 3. University faculty and educational inclusion.

Parameters	University 1	University 2	University 3	Trend
Teachers make adaptations in the contents of some subjects	Yes	Yes	Yes	Teachers do make adaptations in the contents of certain subjects.
Flexible times to deliver work to students with hearing impairment	No	Yes	Sometimes it does.	Most of them show that a special deadline is given for the delivery of work to students with hearing deficit.
The teacher provides information using sign language or other alternatives	No	Yes	No	It shows that most teachers have not adequately learned sign language.

Source: Contextual observations using questionnaire (Aguado and Real, 2011).

The information shows that the three universities have reached a moderate level of inclusive education. It facilitates subject programs in an understandable way, making curricular adaptations, in a certain way they make work more flexible for students with hearing deficits and the lack of training for the use of sign language is evident. University teachers excel in the use of resources adapted to hearing disabilities.

2. Population of students with hearing impairment attending three universities in the province of Manabí

Table 4. Presence of students with hearing deficits in the universities of Manabí

Levels of deafness of students Hearing loss	Universities			Trends
	1	2	3	
Slight deaf	2	4	3	It is shown that in universities there is currently a considerable percentage of mild deaf people between 25 and 40 dB.
Medium deaf or semi-deaf	2	0	3	It is exposed in the survey that universities have a less considerable level of semi-deaf ranging between 50 and 64 dB.
Deep deaf	0	0	0	It is indicated according to what has been obtained the low level of deep deaf that its level is between 80 dB or more.

Source: Survey executed in the universities of Manabí/2021.

The result of the survey is medium or semi-deaf deaf with a fairly considerable level that is between 50 and 64 dB, then the least frequent and considerable level is in light deaf ranging from 25 to 40 dB. The other levels are scarce in the universities surveyed. Therefore, greater attention should be paid to this group of people with hearing impairment.

3. Technical supports implemented in Ecuadorian universities for the attention of students with hearing disabilities

Table 5. University teachers' practices used for the care of hearing-impaired students.

Categories	Evidence	Challenge
Educational environment for students with hearing impairment	<p>Doc. 1. "... Classrooms that have all the necessary tools to develop efficient teaching processes have not been implemented."</p> <p>Doc. 2. "The educational environment in the university does not have all the availability of materials since it is very difficult to get materials that the university itself lends or facilitates."</p> <p>Doc. 3. "No, the institutional infrastructure is not adequate, the institution's budget is not enough to implement efficient tools for the educational process."</p>	High teaching materials and scarce resources for an inclusive environment
Technical support offered to students with hearing impairment	<p>Doc. 1. "There are areas that are very scarce in technological equipment necessary to develop activities."</p> <p>Doc. 2 "Precisely not, and it is due to the fact that in the classroom there are no students with hearing disabilities, but in my previous institution where I worked, I had an experience with a person with hearing impairment but the DECE took care of that since the level of deafness was serious. "</p> <p>Doc. 3 "Not since we simply rely on curricular adaptations executed in the classroom also as a university if we maintain tools aimed at teaching and acquiring the English language for people with hearing deficits."</p>	<p>Low motivation for learning through ICT</p> <p>Limited use of the computer in explanations of classes.</p> <p>The campus lacks technical support installed.</p>
Curricular Accommodations for Students with Hearing Impairments	<p>Doc. 1. "I believe that there has not been a continuous process within the curricular adaptations, which hinders academic progress in these students."</p> <p>Doc. 2 "Naturally, the inclusion of students with disabilities has led to changes in the organization of schools, curricular adaptations and implementation of more flexible and functional teaching methods."</p> <p>Doc. 3 "If we make mandatory curricular adaptations of type 1, 2 and 3 that at the same time we have training and permanent research work on disability".</p>	Some teachers do not make curricular accommodations if specialized disability tests do not exist.
	<p>Doc. 1 "It is a latent problem in Ecuador, however, respect for people with SEN or, to be more specific, with students with hearing deficits is not always encouraged."</p>	Deficient teacher-student communication.

Training of teachers on attention to diversity	Doc. 2 <i>"The university lacks training for working with people with hearing deficits."</i> Doc. 3 <i>"If we constantly stay in trainings about diversity and student disability."</i>	Negative attitudes in teachers towards the disability of students. Lack of interest and commitment of teachers
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Source: Interview with professors from universities in Manabí, Ecuador (2022).

4. How to improve reading skills in students with hearing impairment?

Table 6. Route to improve reading comprehension of students with hearing deficit

Objective	Strategy
1. Improve class work for hearing-impaired students	1.1. Communication strategies: Start talking when the student makes eye contact with the instructor -The teacher must speak when there are no background noises that distract the attention of the students -Avoid talking while a circumstantial noise lasts -Instruct the student when necessary to raise or lower the intensity of the voice.
2. Offer strategies to promote the communication of the deaf child with the teacher and with their peers in the ordinary classroom.	Communicative relationship strategies: 2.1. Provide students with hearing deficits in the classroom with the same opportunities for participation and expression as hearing peers, helping them overcome shyness and consolidate their self-confidence. 2.2. Provide feedback to fellow listeners about the impact of deafness in relation to communication and information management. 2.3. Provide the deaf student with "extra time" to interpret the information given by the teacher, or provided by the interpreter.
Show strategies aimed at establishing the most appropriate location of the Deaf child in the ordinary classroom.	Strategies of the student classroom environment: 3.1. The location of the deaf student in the classroom must be close to the teacher, in order to perform a correct lip reading, appreciate the teacher's body attitude and facial expression. 3.2. -In situations of group interaction, the deaf student must adapt his situation so that he can see all the classmates who speak to enable lip reading and participate when necessary.
4. Create appropriate reading habits and attitudes.	4.1. Encourage the love of reading in class and outside of it. 4.2. Work on texts related to the student to promote the acquisition of learning. 4.3. Work on the reading of short texts.

Source: In-deep Interview (2021).

DISCUSSION

The literature review regarding educational inclusion, hearing disability, and reading skills allow this work author to confirm that the interaction between

professors and students diagnosed with hearing impairment promotes trust. Thus, professors should look for a specific method and sometimes use several teaching-learning strategies to interact with students with any disability. In simpler terms, this work ratifies professors as crucial elements for inclusive education in Ecuadorian universities in harmony to the statements of Corral et al. (2015); Macias and Villafuerte (2020).

Training for reading practice in the English language

Technological advances allowed foreign language learners to be more interactive and dynamic, developing new learning strategies. These conscious voluntary decisions have a specific objective, making effective use of ICT tools in the hope of having better access to a quality education system.

Regarding the logistics and infrastructure of the Universities where this study was applied, the teachers made known the needs to which a student with a hearing disability is exposed when entering the classroom and when imparting knowledge. However, higher education institutions lack the tools to care for people with hearing disabilities. In addition, the commitment of teachers to carry out the substantive university functions of academia, research, and liaison with the community is still being determined.

Barriers to access for students with hearing impairment in the university context

Teachers, in many cases, do not believe that students are in this condition and attribute the low performance of these students to a lack of interest in learning. This result confirms the position of Matos and Fukuda (2016) that the main barrier to serving students with disabilities is centered on the attitudes of fellow students and teachers, who have not put the necessary dedication into cooperative work to serve students with disabilities.

Students need teachers to carry out interactive curricular adaptations in their entirety aimed at their auditory attention deficit, where materials and technological tools are used that help their significant learning. On this point, the authors join the position of Velázquez and Villafuerte (2020) regarding the use of playful games to work on language in students with special educational needs.

Development of persuasive communication. -In order to obtain a response or an action from the other person, it is necessary to work on the communication styles of teachers, especially the use of suggestive and motivational language that promotes learning and overcoming events that can affect the student march.

The route to improving the attention of students with hearing and communication disabilities:

The innovation of teaching-learning processes. - It is understood that innovation contemplates technological, didactic, and pedagogical aspects for improving learning processes. At this point, the research team suggests seeking innovation in the English teaching processes involving educational technology.

Strength of teaching skills for inclusive education. - It tends to be a process in which a teacher's skills, abilities, and to determine the instructors' knowledge regarding inclusive education. The continuous training of teachers is crucial for designing strategies and programs to improve the care of students with disabilities or special educational needs.

CONCLUSIONS

Based on the review of the literature and the results of the empirical work, the fulfillment of the objective proposed in this research is declared. It is concluded that there is still a lack of attention to students with hearing and communication deficits in universities located in the province of Manabí; situation that influences the reading competences and its implication on the academic performance.

This research was able to determine that university professors stand out among their colleagues, by motivating students with hearing and communication deficits, improving their participation in the practices of the target language, through interactive, meaningful and memorable classes, employment of educational technology and the use of suggestive language. They have managed to implement curricular adaptations at the initial level, but they require specialized training and institutional support to advance in the application of

adaptations for grade three, where the contents and learning objectives of the subjects are reconsidered. In addition, the observation process of the higher education institutions of Manabí allows ratifying the need to invest in technical support to improve the attention of students with hearing and communication deficits who are integrated into university life.

The limitation of this study lies in the small number of cases studied. The intention is to direct this research by expanding the number of institutions participants that allows presenting generalizations that contribute to the formulation of better social inclusion policies and the formulation of projects at the level of educational establishments to improve inclusive cultures and practices in Ecuador. For this purpose, the scientific community is invited to replicate this study in other locations in Ecuador and the region.

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TÍTULO DEL ARTÍCULO EN EL IDIOMA PRINCIPAL

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