

Phonetic-Vowel Inference of Kichwa-Speaking People in the Province of Chimborazo Compared to the use of Spanish by the Inhabitants of the Region

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Abstract

The incorrect pronunciation of the phonemes generates a deficient phonetic pronunciation in the students who have emerged in their ability to express themselves with agility in their ideas, made up of the association and relationship of words. The objective of this research work is to carry out a phonetic-vocalic study in the Kichwa-speaking students of the "Monsignor Leonidas Proaño" Intercultural Educational Unit of the Riobamba canton, year 2022. A mixed investigation was carried out, because it collects and analyzes statistical data using as an instrument, an interview with five Kichwa-speaking students, in addition, qualitative and quantitative data were analyzed. The most frequent phonological interferences identified by the PRAAT tool were: bilabial - fricative and dental - fricative, because the spectrograms obtained in relation to fricative interference had low frequencies. Regarding vowel interference, the students changed the vowel "e" to "i" and "o" to "u". In addition, a bilabial point of articulation appeared; there was a point of dental articulation, in which the tongue also acts against the upper incisors, while at the velar point the tongue acts against the mobile area of the palate; each of these points acted in conjunction with a fricative mode of articulation, this indicates that there is a narrowing of the articulatory organs without impeding the passage of air.

Keywords: *phonology, vowels, pronunciation, Kichwa-speaking students.*

INTRODUCTION

Kichwa, like Spanish, is one of the most widely spoken languages in Ecuador; both languages are official and were established in the constitution of Ecuador that is still in force; Intercultural Bilingual training has not had much acceptance, both in society and among students, many prefer to go to public schools, or schools where Kichwa is not spoken. This is how the problem arises, parents who migrate to the cities for a better future for their children, in addition to the change that children have when they leave the schools in the countryside when they arrive in the city since they are forced to speak Spanish. In Kichwa there are no 5 vowels, there are only 3, in the same way there is no

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complete alphabet, there are only 18 vowels and consonants, in this way confusion occurs, and therefore a mispronunciation.

Language is a set of signs of a social, immutable and abstract nature: social, that is, known by a whole society and found within it; When we talk about immutable, this means that no matter how long it takes, there will be no change, for example, no one can come out of nowhere and add or remove a word or vowel; As for the abstract condition, it refers to the fact that it is in the mind of a linguistic community.

Speech, on the other hand, is a specific and singular expression of language extended into a series of vowel units emitted or produced by articulated organs. The only signs of human language are sounds, although the written word is more reliable. Human language, whether expressed in language or speech, consists of several levels: phonic, morphological, syntactic.

Kichwa, being a language of oral tradition, that is, that it has been transmitted from generation to generation, is the second most important language in Ecuador, being an official language it has a structure and is made up of phonemes, morphemes and grammar, as it is well known as well as Spanish which has the same structure, In the background, when a Kichu speaker speaks in Spanish, there is a clash of phonemes, morphemes and grammar, causing a gap in these language structures causing them to suppress or omit vowels and some consonants.

Kichwa speakers have faced this, when using another language that is different, many times they had to use a mixture between Spanish and Kichwa, to speak a mixture of Spanish with Kichwa, in order to fit into a society where Spanish was already standardized. When they arrived at education, they had to learn Spanish to be able to communicate, since the teachers only taught in Spanish, in this way they presented confusion since they already had a structural knowledge of Kichwa and it was difficult for them to know the structure of the Spanish language.

Many children of indigenous nationalities live in bilingual environments. Their mother tongue, usually Kichwa, is the predominant language, although at school and in other settings they hear Spanish and sometimes even speak it.

The purpose of this research is to make a phonological-vowel study in the Bilingual Intercultural Educational Unit "Monsignor Leonidas Proaño", being one of the bilingual schools it is necessary to know and investigate that, since there are many Kichwa speaking students.

The Kichwa language is an official language of Ecuador with approximately 109,000 speakers from the six Amazonian provinces according to the 2010 census. Since the conquest of the Spaniards to America, the natives, unable to communicate with the invaders, decide to learn another language, thus giving birth to phonological and vowel inferences, different expressions, different way of speaking, makes this problem occur, there is no research. However, we have considered some research as a reference for the development of our research.

This research had the contribution for the university, through the result a pedagogical research proposal aimed at the achievement of reading comprehension was obtained; In addition, students are interested in both recreational and academic reading. (Mila, 2018)

Analysing the subject, a research work has been found in Spain, at the International University of La Rioja, Faculty of Education, Bachelor's Degree in Education whose title is called Project to encourage motivation to read in 2nd year of primary school. Under the authorship of Carla Hospital Fortes, in the year .(2018)

This research contributed to the university, through the result of these activities proposed in the project, it is intended that students in the first cycle of primary school enjoy reading, an immense source of pleasure and a fundamental key to learning and school

success. These activities encourage reading aloud, active listening, discussion about readings, silent reading and the discovery of the library as a learning tool. (Hospital, 2018)

Analyzing the subject, a research work has been found in Colombia, at the Universidad Corporación Universitaria Adventista, Faculty of Education, Bachelor's Degree in Spanish and English whose title is called "Didactic strategies to encourage reading in the students of the seventh year of the Adventist school". Under the authorship of Navarro Montaña, Martínez Fernández and Castañeda Yepes, in the year .(2019)

METHODOLOGY

Research Focus

The focus of this research is mixed, because it collects and analyzes statistical data using the interview as an instrument, in addition to an inquiry in different electronic media, bibliography, among others. (Ochoa y otros, 2020)

Research Design

The design of the research is quasi-experimental, since qualitative and quantitative data are analyzed, which allowed to establish the conclusions through an analysis of the information of the variables, giving a solution to the problem (Manterola & Otzen, 2015)

1) Type of Research

Descriptive:

The study was descriptive, due to the collection of primary and secondary information, using population and sample statistical data to represent them through the PRAAT software for subsequent interpretation. (Morales, 2012)(Universidad de Cordoba, 2018)

By the Objectives

Basic, since the research contributes to the educational field, it was also developed by approaching the phenomenon of study and in such a way identifying the characteristics and conditions of the subject to be developed.

2) Around the venue

Bibliographic

A bibliographic review was carried out in different media such as scientific articles, electronic journals, books and results of other research, considering the information according to the topic of study. This allowed us to obtain detailed and relevant information in the field of phonetic-vowel interference. Field(Gómez Luna y otros, 2019)

The research was carried out in the field because it was carried out at the Monsignor Leonidas Proaño Intercultural Educational Unit in the Riobamba canton, with the Kichwa-speaking students in whom the problem was identified.(Tevni Grajales, 2018)

3) By Time

According to the time in which the research was developed, it is cross-sectional, because it was carried out in a certain period of time.(Tevni Grajales, 2018)

POPULATION AND SAMPLE

4) Population.

The unit of analysis of the study of this research work was the students of the aforementioned educational institution, the population with which we worked were 30

Kichwa-speaking students of the Intercultural Educational Unit "Monsignor Leonidas Proaño".

5) Sample.

Due to the fact that the population was not extensive, inclusion criteria were applied such as: parents who only speak Kichwa, social circle where they communicate only in Kichua but at school they communicate in Spanish, speak Kichua and Spanish for at least 5 years. Therefore, we worked with a sample of 5 Kichwa-speaking students from the Intercultural Educational Unit "Monsignor Leonidas Proaño".

DATA COLLECTION TECHNIQUES AND INSTRUMENTS

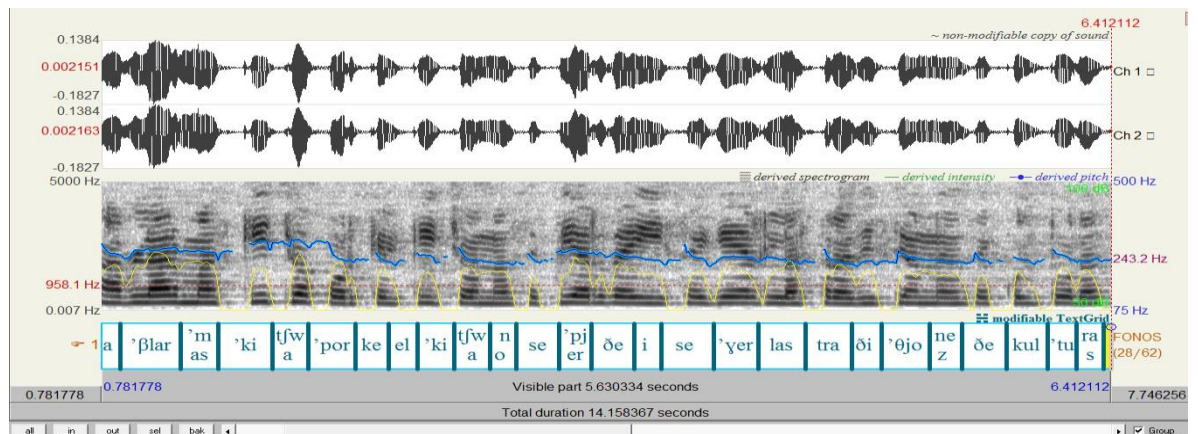
6) Techniques

An interview consisting of a script of directed questions was used as a technique students Kichwa speakers of the educational unit. (García Hernández y otros, 2019)

7) Instruments for the collection of information.

The instrument for the collection of information was a script of 5 questions addressed to the students Kichwa speakers (Caro, 2019).

RESULTS AND DISCUSSION



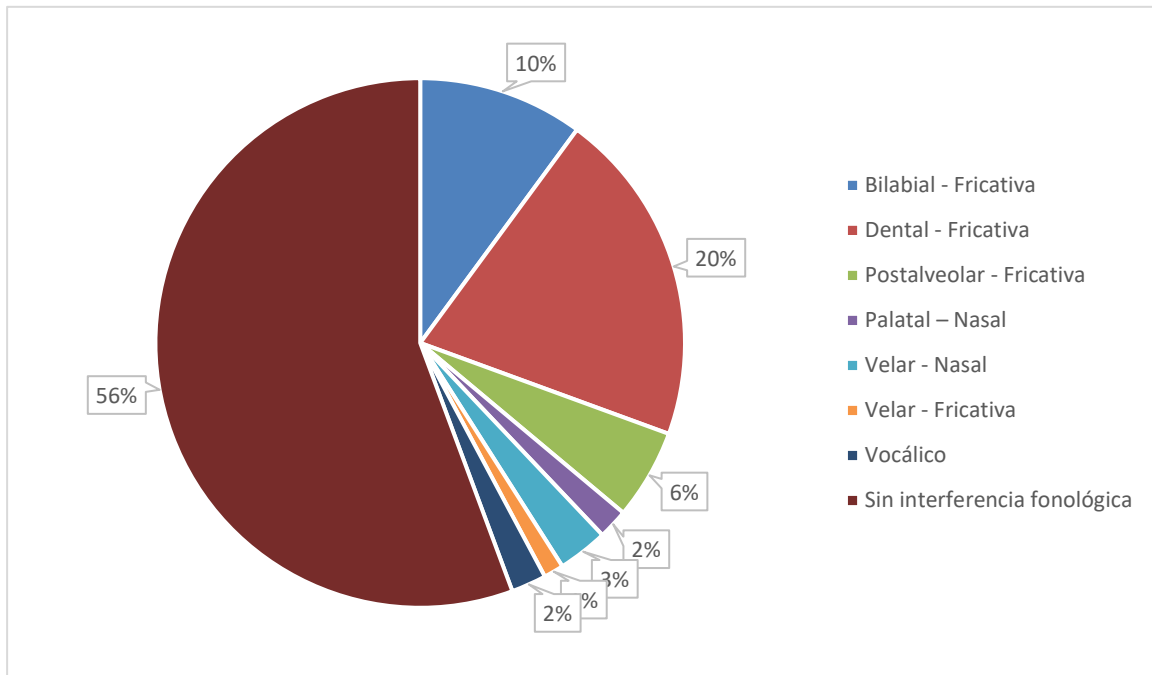
Analysis of the interviewee's voice 1 through PRAAT software

1 Board 1. Vowel phonological interference from interview 1

Phonological interference	Quantity	Percentage
Bilabial - Fricative	33	10%
Dental - Fricative	67	20%
Postalveolar - Fricative	18	6%
Palatal – Nasal	6	2%
Velar - Nasal	10	3%
Velar - Fricative	4	1%
Vocalic	7	2%
No interference	182	56%
Total	327	100%

Source: Interview with Kichua-speaking students

Prepared by: Galo Silva



Graphic 1. Phonological-vowel interference in the interview 1

Source: Interview with Kichua-speaking students

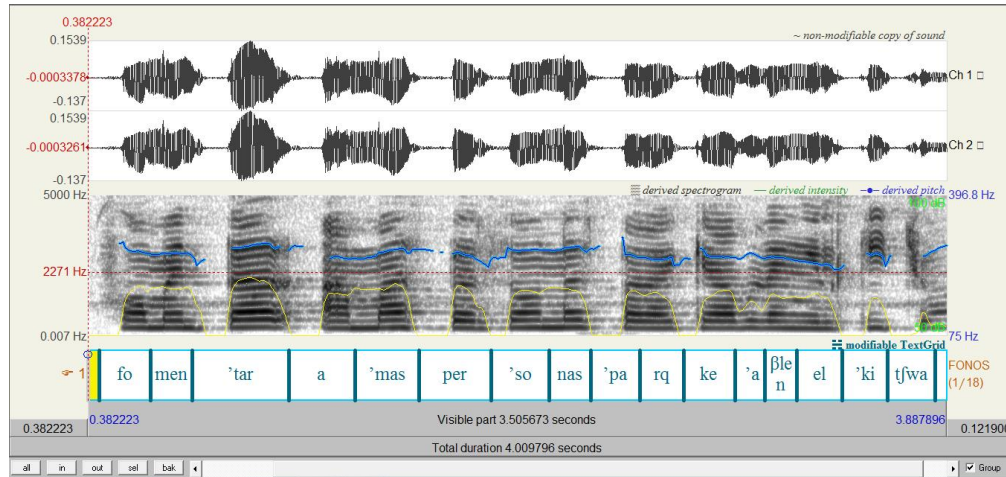
Prepared by: Galo Silva

Analysis and interpretation

The PRAAT tool was used to obtain the spectrogram of the interview conducted with interviewee 1, in which there were phonological and vowel interferences. In relation to vowels, the student changed the vowel "e" to "i" and the "o" to the "u". The obstructive segments in the interview were mainly fricatives, they were identified through the analysis of the spectrograms, these oppose great resistance to the exit of the air due to their narrowing at the point of articulation, but they do not completely prevent it. The velar was identified in the spectrogram by vertical striations, in addition, these have lower frequencies. Table 1 and graph 2 show the results obtained, out of a total of 327 phonemes used, it was identified that 10% correspond to bilabial – fricative interferences, 20% are dental – fricative, 6% correspond to postalveolar – fricative, 2% are palatal – nasal, 3% are velar – nasal and 1% are velar – fricative. According to Julca (2019) The phonemes identified in the interview are mainly consonant, because they are produced with an obstruction in the mid-sagittal region of the upper oral cavity, unlike vowels, since in the latter the tongue should not be raised; Most are dental - fricative and bilabial - fricative

Question 5. What would you do to make our language prevail or what would you do to ensure that it is not lost?

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Analysis of the interviewee's voice 2 through PRAAT software

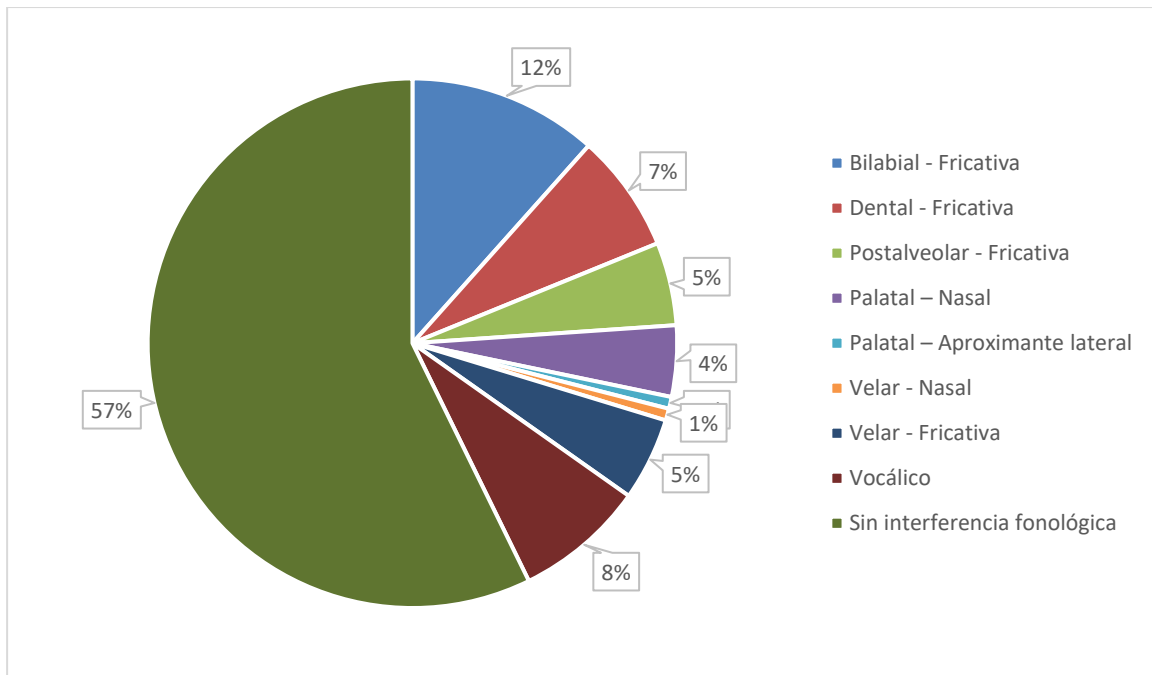
Analysis

Board 2. Vowel phonological interference from interview 2

Phonological interference	Quantity	Percentage
Bilabial - Fricative	16	12%
Dental - Fricative	10	7%
Postalveolar - Fricative	7	5%
Palatal – Nasal	6	4%
Palatal – Lateral Approximant	1	1%
Velar - Nasal	1	1%
Velar - Fricative	7	5%
Vowel	11	8%
No phonological interference	79	57%
Total	138	100%

Source: Interview with Kichua-speaking students

Prepared by: Galo Silva



Graphic 2. Phonological-vowel interference from interview 2

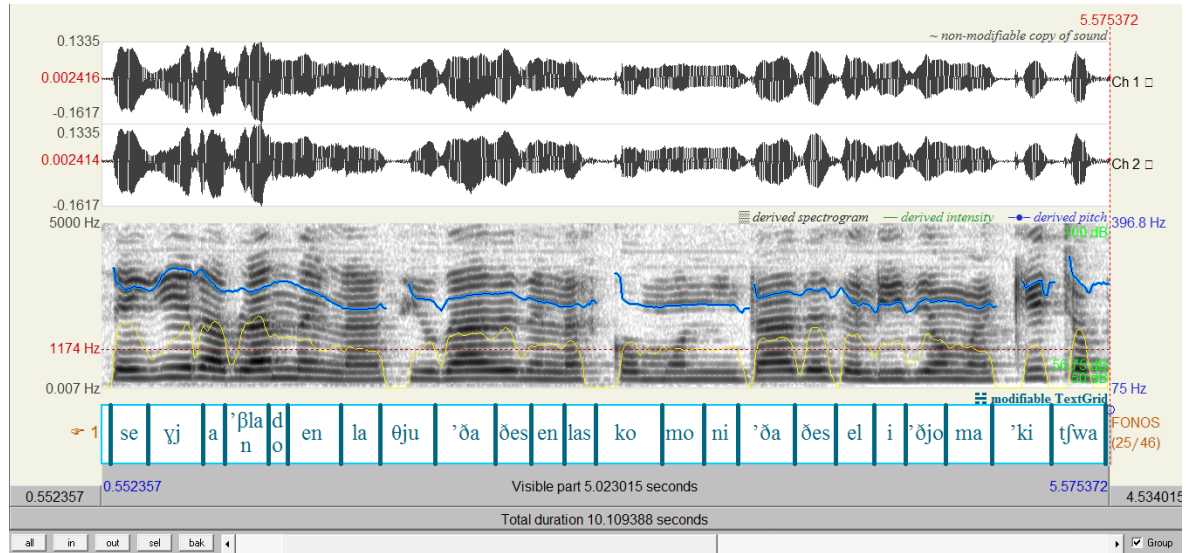
Source: Interview with Kichua-speaking students

Prepared by: Galo Silva

Analysis and interpretation

The PRAT tool was used to obtain the spectrogram of the interview conducted with interviewee 2, in which there were phonological and vowel interferences. In relation to vowels, the student changed the vowel "e" to "i" and the "o" to the "u". The obstructive segments in the interview were mainly fricatives, they were identified through the analysis of the spectrograms, these oppose great resistance to the exit of the air due to their narrowing at the point of articulation, but they do not completely prevent it. The velar was identified in the spectrogram by vertical striations, in addition, these have lower frequencies. Table 2 and graph 3 show the results of the interview: of a total of 138 phonemes used, it was identified that 12% correspond to bilabial – fricative phonological interferences, 7% are dental – fricative, 5% correspond to postalveolar – fricative, 4% are palatal – nasal, 1% are palatal – lateral approximant, 1% are velar – nasal and 5% are velar – fricative.

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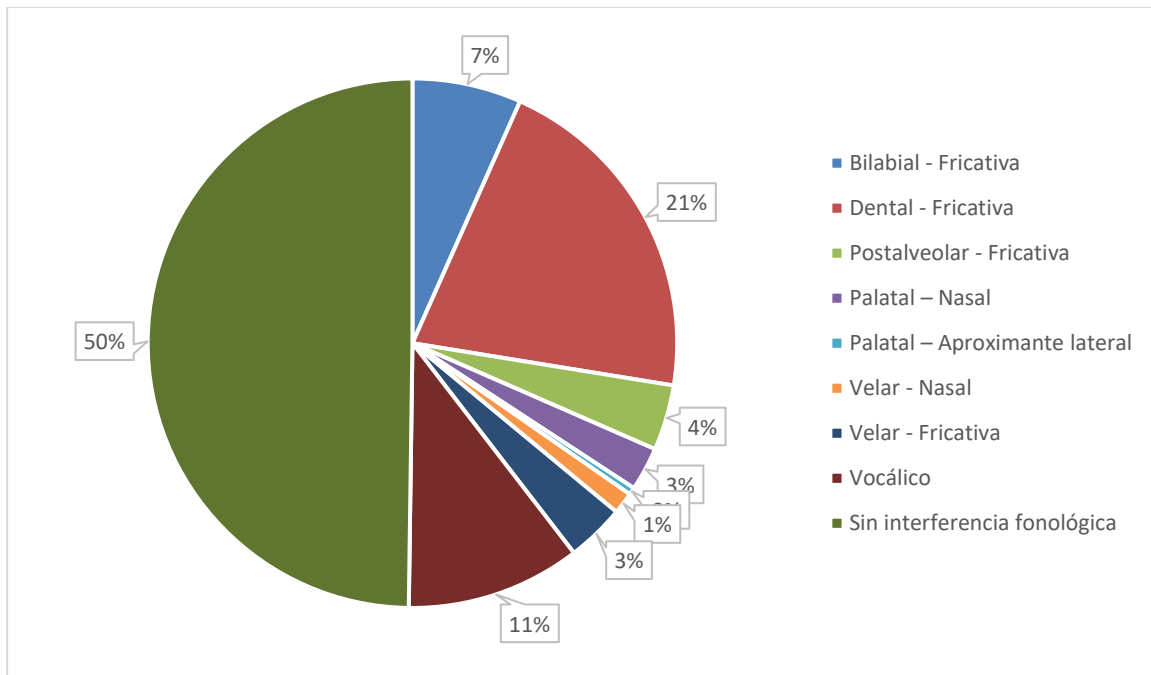


Analysis of the interviewee's voice 3 through PRAAT software

Analysis

Board 3. Vowel phonological interference from interview 3

Phonological interference	Quantity	Percentage
Bilabial - Fricative	15	7%
Dental - Fricative	47	21%
Postalveolar - Fricative	9	4%
Palatal – Nasal	6	3%
Palatal – Lateral Approximant	1	0%
Velar - Nasal	3	1%
Velar - Fricative	8	3%
Vowls	24	11%
No phonological interference	112	50%
Total	225	100%



Graphic 3. Phonological interference from interview pronunciation 3

Analysis and interpretation

The PRAAT tool was used to obtain the spectrogram of the interview conducted with interviewee 3, in which there were phonological and vowel interferences. In relation to vowels, the student changed the vowel "e" to "i" and the "o" to the "u". The obstructive segments in the interview were mainly fricatives, they were identified through the analysis of the spectrograms, these oppose great resistance to the exit of the air due to their narrowing at the point of articulation, but they do not completely prevent it. The velar was identified in the spectrogram by vertical striations, in addition, these have lower frequencies. Table 3 and graph 4 show the results of the interview, out of a total of 225 phonemes used, it was identified that 7% correspond to bilabial – fricative phonological interferences, 21% are dental – fricative, 4% correspond to postalveolar – fricative, 3% are palatal – nasal, 0% are palatal – lateral approximant, 1% are velar – nasal and 3% are velar – fricative. According to Montaluisa Chasiquiza, L. the phonemes identified in the interview are mainly consonant, unlike Spanish, Kichwa does not have several consonants such as: *f/v/x/z/b/g/d* this causes phonetic inferences to exist, mainly bilabial – fricative, because they are produced with an obstruction in the mid-sagittal region of the upper oral cavity unlike vowels, for in the latter the tongue should not be raised. In relation to vowel pronunciation, the students changed the /e/ to the /i/ and the /o/ to the /u/, since in the Kichwa alphabet there are only three vowels (a, i, u). (2019)

CONCLUSIONS.

An interview was conducted with three Kichwa-speaking students from the Intercultural Educational Unit "Monsignor Leonidas Proaño" of the Riobamba canton, the results obtained were analyzed through the PRAAT tool and justified with the information published by several authors linked to the topic of study. The students presented phonological interferences, mainly bilabial – fricative, dental – fricative, postalveolar – fricative, palatal – nasal, palatal – lateral approximant, velar – nasal and velar – fricative, in addition to vowel interferences.

The most frequent phonological interferences identified by the PRAAT tool were: bilabial – fricative and dental – fricative, in the graphs of the spectrograms obtained the

fricative interference presented low frequencies. In relation to vowels, the student changed the vowel "e" to "i" and the "o" to the "u". In interview 1, it was identified that 10% correspond to bilabial-fricative interferences and 20% are dental-fricative, in interview 2, 12% correspond to bilabial-fricative phonological interferences, 7% are dental. In interview 3, 7% corresponded to bilabial-fricative phonological interference and 21% were dental-fricative, in interview 4, 12% corresponded to bilabial-fricative phonological interferences, 19% were dental-fricative. Finally, in interview 5, 12.30% corresponded to bilabial – fricative phonological interference, 22% were dental – fricative. In addition, of the 5 students interviewed, 3 of them presented palatal-lateral approximant interference with a low percentage.

What characterizes the Kichwa-speaking students of the "Monsignor Leonidas Proaño" Intercultural Educational Unit is that they belong to a local generation and origin, in this case indigenous. The phonological fricative interference puts up great resistance to the exit of the air due to its narrowing at the point of articulation, but it does not prevent it completely, in addition, according to the revised theory the students presented a point of bilabial articulation, that is, the two lips act; there was also a point of dental articulation, in which the tongue acts against the upper incisors. while at the velar point the tongue acts against the mobile area of the palate; Each of these points acted in conjunction with a fricative articulation mode, which indicates that there is a narrowing of the articulatory organs without impeding the passage of air. In addition, there was a palatal articulation point, in which the tongue acts against the hard palate, together with velar and palatal there is a nasal articulation mode, this occurs when the oral cavity is closed and the air stops through the nostrils

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