

**CHARACTERIZATION OF THE MULTIPLE INTELLIGENCES - BY HOWARD
GARDNER - IN THE STUDENTS OF THE BACHELOR DEGREE
PROGRAM IN MODERN LANGUAGES ENGLISH - FRENCH OF THE
UNIVERSITY OF CAUCA, SANTANDER DE QUILICHAO, OF THE
SECOND ACADEMIC PERIOD 2018.2.**



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SCHOOL OF HUMAN AND SOCIAL SCIENCES
SANTANDER DE QUILICHAO 2019

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Project for obtaining the Degree of B.A. in Modern Languages,

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UNIVERSITY OF CAUCA
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The undersigned committee of Human and Social Sciences School approves the project developed by Natalia Yepez and Sebastian Palacios entitled:

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ABSTRACT

This study characterized the Multiple Intelligences - by Howard Gardner- of a sample of 199 students of the Bachelor Degree Program in Modern Languages of the University of Cauca, Santander de Quilichao, of the second academic period 2018.2. This is an exploratory quantitative study, in which the Multiple Intelligences Test (CUIM) was applied in order to gather the percentages of presence of each intelligence among students.

The conclusions of this study showed that the Multiple Intelligences have diverse presence among students, having the intrapersonal intelligence the predominant presence within the languages program with a 20% in which its equivalent goes approximately 42 people of the studied population. All the Multiple Intelligences were identified, categorized and exposed throughout this study.

Key words: Multiple Intelligences, Characterization, Students.

RESUMEN

Este estudio caracterizó las Inteligencias Múltiples – por Howard Gardner – de una muestra de 199 estudiantes de Licenciatura en Lenguas Modernas de la Universidad del Cauca, Santander de Quilichao, del segundo periodo académico 2018. Este es un estudio cuantitativo exploratorio, en el que el test de Inteligencias Múltiples (CUIM) fue aplicado con el fin de juntar los porcentajes de la presencia de cada inteligencia entre los estudiantes.

Las conclusiones de este estudio mostraron que las Inteligencias Múltiples tienen presencia diversa entre los estudiantes, teniendo la inteligencia intrapersonal la presencia predominante dentro del programa de lenguas con un 20% en el que su equivalente va aproximadamente a 42 personas de la población estudiada. Todas las Inteligencias Múltiples fueron identificadas, categorizadas y expuestas durante este estudio.

Palabras clave: Inteligencias Múltiples, Caracterización, Estudiantes.

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1. INTRODUCTION

Multiple Intelligences Theory by Howard Gardner, since 1993 on its second published edition: *Frames of the mind*, is recognized as an ideal pedagogical complement to strengthen student skills. Thus, Gardner worked on the theory as a contribution to the fields of developmental psychology to cognitive and behavioral sciences, he wanted at the same time, to expand the notions of intelligence to include not only results of written academic tests but also discoveries about the brain and sensitivity to different human cultures. Such a theory has exerted a remarkable influence on educative circles. (Gardner, 1993, p. 6)

It has motivated this characterization of the Multiple Intelligences of the undergraduate students of the Languages program of the University of Cauca, Santander de Quilichao. It was carried out in order to provide valuable and reliable information to the program, having a progress in the achievement in the PEP's purposes for the Languages program, also to contribute as a reference to future research within the University, Santander de Quilichao.

Likewise, the predominant intelligence that most of the students have, is being delivered as a result of the categorization of the Multiple Intelligences; it has been reached through quantitative-exploratory approach as a guide parameter for this study. The methodology used, has implied a Multiple Intelligences test implementation on the students in order to identify and categorize their intelligence; and exposing the data for future input theoretical research at University. Therefore, it would submit its correspondent characterization, due to the inexistent research alike this one within the Languages program of the University of Cauca, Santander de Quilichao.

2. JUSTIFICATION

Howard Gardner presented his theory on intelligence in his book, *Frames of Mind: The Theory of Multiple Intelligences* in 1993. Gardner redefined the term intelligence as the ability to solve everyday problems, to generate new problems, to create products or to offer services within the cultural sphere itself; In addition, Gardner suggested that intelligence implies a skill that can be developed.

The importance of the Bachelor Degree Program in Modern Languages, English and French of the University of Cauca, Santander de Quilichao, and in its effort to bring education and progress to the region, this research study of characterization of the multiple intelligences - of Howard Gardner - in the students of the program belonging to the 2018.2 academic period was proposed, in order to offer reliable and useful information about the predominant intelligences of the student population, and thus, to contribute to future research as an input to determine what has been considered practical within the subject itself, in addition to properly categorizing these intelligences. Suárez et al (2010) emphasize that the theory of Multiple Intelligences has been considered crucial to enhance the learning of children and youth; minimizes behavior problems; increases self-esteem in children and youth; develops cooperation and leadership skills, and increases interest and dedication.

By identifying the predominant intelligences of the students, it represented an advance in the achievement of the objectives established by the program, shedding light and useful data for the improvement of the constituent elements of the Languages Program in the University of Cauca. The Educational Process Analysis Space (*Espacio de Análisis del Proceso Educativo, EAPE*) makes in the course of the academic period in order to reflect and propose a plan of relevant

adjustments to the respective instances of the program, specifically in Santander de Quilichao.

(PEP, 2011. p 116)

3. PROBLEM STATEMENT

Within the bachelor degree program in modern languages, English and French, of the University of Cauca. Santander de Quilichao, there were no studies found that show the general status of their student population nor their intelligences or characteristics. Therefore, it has been found necessary to carry out this study as it seeks to characterize the multiple intelligences -by Howard Gardner- in the students in the bachelor' degree program, second academic period 2018.2 being this theory understood as one of the most important academic and pedagogical aspects in the last decades, given its impact inside the classroom, to it refers Ramírez (2016) when concludes that:

Nos encontramos con la importancia de la emoción en los procesos de aprendizaje y se plantea la necesidad de promocionar la teoría de las inteligencias múltiples en el aula. Las inteligencias múltiples entendida como 8 formas diferentes de inteligencia, que cada persona desarrolla en diferente nivel y profundidad, y que le sirven para desenvolverse diariamente, resolver conflictos y crear. La educación requiere una transformación que la lleve a conectarse y a trabajar para la vida, para el bienestar social y personal. (p. 17)

Such population information deficit, and in the same way, of relevant studies of the same order, may exist due to the novelty of the program and the presence of the university institution on this northern Cauca's sector, for, although there exist numerous studies among, by and for the students linked to the university's main seat, there haven't been given the case yet that other researchers may carry out such research works among the northern university's student population in Santander de Quilichao.

Given the above, with the intention to contribute with information about the student population on the bachelor degree program in Modern Languages, English and French, of the University of Cauca, this multiple intelligences characterization was carried out so it could be taken as a useful tool for possible revision, creation or implementation of pedagogical strategies for foreign languages teaching and learning, this way, this study allows to tackle the relevance of knowing the multiple intelligences –by Howard Gardner- among the students in the program. Besides, this would synthesize reliable information from the student population, establishing and quantifying data analysis and interpretation for academic purposes within the Languages Program. The above fulfills what was proposed in this **research statement**:

“The multiple intelligences that predominate, the common and the weak ones, in the students of the bachelor degree program in Modern Languages, English and French, of the University of Cauca, Santander de Quilichao”.

4. OBJECTIVES

4.1 General Objective

To characterize the multiple intelligences in the students of the bachelor degree program in Modern Languages, English and French of Santander de Quilichao, University of Cauca.

4.2 Specific Objectives

- To identify Multiple Intelligences of the students of the Modern Languages Program in Santander de Quilichao.
- To categorize the intelligences with the data found from the Multiple Intelligences of the students of the languages program.
- To expose the data analysis and interpretation extracted from the study projected here as a theoretical input to future research work of the Department of Foreign Languages of the University of Cauca.

5. METHODOLOGY

Throughout the history of science have emerged various school of thought and diverse interpretative frameworks that have opened different routes in the search for knowledge, research. However, and due to the different principles that bear them, since the last century they have been summarized in the main approaches of research: the quantitative approach and the qualitative approach. The approaches employed careful, methodical and empirical processes in their effort to generate knowledge so that the previous application of the research applies to both equally. (Hernández et al., 2014, p.37).

Quantitative, qualitative and mixed approaches constitute possible choices to face research problems and equally valuable results. They are, until now, the best ways for humanity to investigate and generate knowledge. (Hernández, R, 2014, p.35). In this way, this proposal has used the quantitative approach that consists of using data collection based on numerical measurement and statistical analysis, in order to test theories and generate knowledge. The data were analyzed using statistical methods and a series of conclusions were drawn from it. Therefore, the quantitative approach reflects the need to measure and estimate magnitudes of the research problem (delimited and concrete); thus, new observations and evaluations will be proposed to modify and base the ideas that will be proposed or even to generate others.

To carry out this study, in the established population: students of the Modern Languages Program of the University of Cauca, Santander de Quilichao, academic period 2018.2; the instrument used is the questionnaire, which is a document that collects in an organized way the indicators of the variables involved in the objective itself (Casas, et al., 2003: 528).

To identify the Multiple Intelligences -of Howard Gardner- of the students, a testing questionnaire for data validation was accomplished by students of the ninth semester as focal group. To do this, a validation pre-test was implemented with the research instrument called Multiple Intelligences Questionnaire: CUIM (*Cuestionario de Inteligencias Múltiples*), which was prepared by Aliaga, J. et al (2012) who based on the theoretical framework proposed by Gardner. The CUIM was elaborated with psychometric characteristics of reliability and validity that provided to each intelligence a score throughout the authors' statements, it means, an analysis of the items to specify the presence of each intelligence within an individual, from the highest to the lowest score.

Thus, the authors affirm that the information analyzed in their study maintains that the CUIM has factorial validity since its variables are interrelated. They consider that the CUIM is a valuable contribution in the systematization route of the measurement of Multiple Intelligences, which due to its format, applicability and norms have been useful for professionals of psychology and education updating its potential in the analysis of the profile of the Multiple Intelligences. Lately, the authors claim that by achieving the construction of the CUIM, they could achieve the most appropriate instrument for the measurement of Gardner's Multiple Intelligences. They applied it in 1291 students who were in their fifth year of high school and pre-university students, and others with similar characteristics in order to test reliability and validation with successful results. For that reason, it was decided to use the CUIM test as the Testing Questionnaire for Data Validation for this characterization of Multiple Intelligences in students of the Language Program in University of Cauca, Santander de Quilichao.

However, two applications of the test were performed in different weeks, in order to measure validity and reliability of the instrument in its results, to minimize variables and error factors.

After analyzing both results per participant and variables of the testing questionnaire, the CUIIM test was selected for this characterization of Multiple Intelligences, since both the pre-test and the test yielded similar results for each participant. Having confirmed its validity and reliability as a research instrument, it was applied to the student population of the program (199 students among 235 the student population in the languages program in 2018.2).

An informed consent to sign up was offered, informing that identity or data provided during the study might being kept confidential and under no circumstances names could being mentioned in the study. This questionnaire was applied to 199 students who signed up to take the test within the classrooms, under specific instructions to fulfill it.

The CUIIM test has got 8 categories (Multiple Intelligences), which have 10 items each, they describe and detail statements that should be identified by the participant using the Likert scale represented in numbers. For instance, 1 as it is not the case, 2 almost never, 3 sometimes, 4 regularly, 5 usually, 6 often, 7 is totally the case (Fig.1). This scale was explained to the participants in the test instructions.

1. Inteligencia Lingüística	PUNTAJE 1-7
1. Desde niño(a) he disfrutado mucho el leer libros, revistas u otros escritos.	1 2 3 4 5 6 7
2. Aprendo el significado de voces que son nuevas para mí	1 2 3 4 5 6 7
3. Establezco las diferencias que hay entre palabras con significado parecido.	1 2 3 4 5 6 7
4. Mis amigos dicen que tengo facilidad para explicar diversos temas.	1 2 3 4 5 6 7
5. Escribo pequeñas historias, poesías o artículos.	1 2 3 4 5 6 7
6. Acostumbro usar una variedad de palabras cuando hablo o escribo.	1 2 3 4 5 6 7
7. Prefiero los exámenes en los que pueda desarrollar por escrito mis respuestas.	1 2 3 4 5 6 7
8. Soy hábil para recordar largas listas de palabras.	1 2 3 4 5 6 7
9. Cuando escribo una composición, escojo las palabras justas y precisas.	1 2 3 4 5 6 7
10. Al redactar sobre un tema, reflexiono sobre el orden que deben seguir las palabras.	1 2 3 4 5 6 7
TOTAL:	

Figure 1. CUIIM Multiple Intelligences Questionnaire by Aliaga, J. et al (2012) who based on the theoretical framework proposed by Gardner. Section 1: Linguistic Intelligence

Now, the Likert scale is an interval attitude scale, using a series of items for getting response which is obtained from the tested individual. From its philosophy, the scale uses statements or propositions on which the individual has to manifest affirmation in a numerical scale (R. Likert,

1932). This scale is one of the most used in the measurement of attitudes represented in quantitative data, therefore it is the most suitable scale for this characterization of Multiple Intelligences.

In this way, Fig. 1 shows the CUIIM test with a Likert scale, in which, when adding each item, the total result for each intelligence in the participant arose. Afterward, these results were tabulated in a database by semester, assigning to each participant a number within the investigation and showing their scores distributed by intelligence, 10 being the lowest score and 70 the highest score (Fig. 2). Each participant revealed the presence of a predominant intelligence that has been determined by the highest score as total score of the items.

INTELIGENCIA	LINGÜÍSTICA	MUSICAL	LÓGICO-MATEMÁTICA	ESPACIAL	INTERPERSONAL	INTRAPERSONAL	KINESTÉSICA	NATURALISTA
PARTICIPANTE								
48	50	50	39	66	66	47	64	46
49	61	36	38	57	52	54	52	57
50	52	35	43	32	54	44	44	54
51	47	34	42	54	61	43	46	40
52	35	36	35	68	48	52	45	47
53	48	55	41	55	46	53	48	56
54	47	50	18	35	48	66	30	46
55	59	53	47	57	66	52	51	60
56	32	29	33	24	43	35	42	37
57	35	30	47	48	54	36	44	37
58	52	61	49	60	49	59	35	53
59	67	39	32	62	54	50	58	62
60	55	61	27	47	46	56	56	66
61	28	20	14	25	21	59	21	23
62	44	40	34	39	42	49	46	48
63	55	33	23	19	23	54	21	40
64	59	56	40	53	45	58	54	56
65	45	32	43	36	42	35	37	54
TOTAL	4	1	0	2	6	3	0	4

Figure 2. Predominant intelligences present in the third semester of the Modern Languages Bachelor Degree, Universidad del Cauca, Santander de Quilichao.

Thus, one intelligence has been exposed as predominant in each participant by semester, regarding to the highest score it might get in the test. By counting their repetition per presence within the semester, a total was bared alike to the number of repetitions in which an intelligence

predominates in the group. Subsequently, this total was tabulated so the highest amount of repetition disclosed it as predominant intelligence per participant (noticing that each semester have shown participants with the presence of one or two predominant intelligences). In this way, the repetitions per intelligence were added and provided with a percentage of presence into the group (Fig. 3), each intelligence was categorized in the total of repetitions of the predominant score by the participants.

INT. PREDOMINANTE	REPETICIONES	PORCENTAJE %
LINGUISTICA	4	20%
MUSICAL	1	5%
LÓGICO-MATEMÁTICA	0	0%
ESPACIAL	2	10%
INTERPERSONAL	6	30%
INTRAPERSONAL	3	15%
KINESTESICA	0	0%
NATURALISTA	4	20%
TOTAL	20	100%

Figure 3. Percentage of each intelligence with repetition of presence in the participants per semester. Graph taken from the results of the third semester of the Modern Languages Bachelor Degree, Universidad del Cauca, Santander de Quilichao.

Multiple Intelligences were plotted by percentages showing the predominant score by intelligence per semester. The bar chart determined the intelligence with the highest percentage, in his way, it was concluded which intelligence was corresponding with the most presence of predominance per semester. All in all, not only predominant intelligence was discovered, but also those intelligences with a low percentage of presence in the participants.

Consecutively, these procedures were repeated with all the information in the database, the predominant intelligences were collected semester by semester and counted in repetition by presence. Finally, by forming a single bar chart, the predominant intelligences in the program came out, their scores were characterized. Characterization is a descriptive phase with the

purpose of identifying, among other aspects, the components, events, actors, processes and context of an experience, a fact or a process (Sánchez Upegui, A. 2010)

In the same way, it would contribute to the achievement and effective exercise of the normativity of the trends of the educational project of the Modern Languages Program (PEP) that proposes solutions to the problems related to education in foreign languages, promotes changes in teaching and learning foreign languages, carrying out research projects related to the teaching and learning of foreign languages in their work context, understanding and using linguistic theories of learning and teaching foreign languages, as well as technical advances and technological in the field.

Lately, in quantitative research like this, generalizing the results found in a group (if necessary, the students of the Language Program). Disseminating the result extracted from the study projected here as a theoretical input to future research work of the Department of Foreign Languages of the University of Cauca. The derived conclusions contribute to the generation of knowledge. (Hernández et al., 2014, pp. 37-39).

6. REFERENCIAL FRAMEWORK

6.1 Background

6.1.1 Review of previous international studies

Reoyo, Marugán and Valdivieso (2012) in their document "Characterization of primary school students from the multiple intelligences of Howard Gardner" state that in the central objective of their research, they decided to identify by means of the multiple intelligences test of Gardner, what were the Multiple Intelligences perceived by university students, and establish their hierarchical organization. In order to obtain information that would allow knowing the characteristics of the students, their strengths and weaknesses, and thus develop and guide activities to optimize academic performance and adaptation to the university environment.

Based on the above, the evaluation of Gardner's Multiple Intelligences is discussed and how the authors have constituted a good starting point, which favored the identification of some relevant aspects of their perceptions of how they learn, what motivates them; offering them the possibility of adapting to their needs and therefore improving the quality of education and cognitive functioning of students (Pérez and Beltrán, 2006, cited in Reoyo, N. et al, 2012) (Pérez y Beltrán, 2006; citado en Reoyo, N. et al, 2012) as well as offering them the opportunity to examine and to determine in depth, which intelligences, analogies and examples are more likely to convey the essential aspects of a topic to the largest possible number of students.

It is significant for them to highlight how the inter and intrapersonal intelligences were some of the most outstanding among the students of Primary Education, a significant and relevant aspect for their teaching, although is this self-perception really accurate?, stopping to think about

the eminently practical field, few students really know that when they have to face and demonstrate these skills in class they put them into play, hence the consonance with the position of their linguistic ability that is among one of the lower scores.

In addition, they suggest that it is important that, from the point of view of university professors, these perceptions be taken into account in order to be able to carry out adequate methodological planning that obtains better results and in turn enhances the competency deficiencies found in the students.

Ali Al-Faoury, Khataybeh and Al-Sheikh (2011) in their document "Multiple Intelligences of Students at Jordanian Universities" establish that the purposes of the study were to identify and classify the multiple intelligences of the students in the participating universities in Jordan; and identify and classify the differences in multiple intelligences according to the following variables: gender, university (public or private), student averages, specializations of students and the academic year in which students are enrolled. The significance of this study is important because it is an aid for educators in Jordan to recognize the most common types of intelligences among students. Consequently, they could modify their pedagogy to adapt to the different types of students' intelligences, to help them become autonomous learners. Such a study could increase the awareness of teachers and students about the subject matter and provide a better understanding of individual differences in regard to the strengths and abilities of the students. It is hoped that this study will address these differences to help individual students realize their potential.

This study has revealed that interpersonal intelligence turned out to be the highest and most common intelligence among the student participants in Jordan. The following were intrapersonal, kinesthetic, linguistic, spatial, logical \ mathematical and musical intelligences, respectively.

This indicates the ability of students to understand themselves, their needs and interests.

Therefore, they could establish good relationships with others in the university and society.

Logical intelligence was found the least common among the Jordanian student participants who study in private universities because they have low averages and therefore join the private university. On the other hand, students with high averages join the public university and are expected to obtain higher levels of logical intelligence than their counterparts in private universities.

The findings of the study can provide information to instructors, administrators, curriculum developers, and even families to detect the type of intelligence students have and try to promote and strengthen it to obtain better results for the student and society as a whole. When considering the findings of this study, the instructor can design a learning environment that improves the intelligence of any student in the class by knowing their needs, interests and, above all, their intelligence. The use of skills to solve problems that incorporate the eight types of intelligence could promote the use of different intelligences. The researchers recommended more studies on multiple intelligences among students and how we can improve them when designing a learning environment. In addition, they recommended incorporating all types of intelligences into their pedagogy in order to satisfy individual differences among students regarding the subject in question.

According to the above, the studies reviewed to account for the awareness that universities in the international academic context have aroused around the realization of quantitative studies through characterizations that reflect the state of multiple intelligences of the student population in various fields professional and institutional.

Closas, Estigarriba, Castro, Rohde, and Dusicka (2017) carried out a non-experimental and exploratory research, with the title "Characterization of multiple intelligences in a sample of university students"; from which they obtained primary data about the preferences of the students, through a survey that associated them with the dimensions of the intelligence. The research was directed under the quantitative and cross-sectional approach. The seven types of intelligence, or latent variables that were quantitatively analyzed in this study correspond to the initial formulation of Gardner's theory: Linguistics, Musical, Logical - Mathematical, Spatial, Kinesthetic - bodily, Intrapersonal and Interpersonal. In this work, the Naturalist dimension was not considered, since it is considered that it is not relevant for the purposes of the present analysis.

However, the instruments can facilitate the elaboration of profiles related to multiple intelligences and are useful in some applied contexts (ie, vocational guidance, identification of talent), they suffer from the limitations of this type of tests: a) they cannot be applied in young children; and b) individuals may overestimate or underestimate their abilities. (Perez, 2013). Quoted of Closas, H. et al, (2017) .

Despite the aforementioned criticisms and based on the above, the analysis was approached from the different dimensions of intelligence provided by the initial theory of Gardner. It is proposed to carry out an exploratory analysis of its representation in a community of first-year university students, for which purpose the ability and validity of the applied instrument has been evaluated, in order to obtain a description of the main aptitude characteristics of the participants.

This research and the statistics analyzed already mentioned in the previous section, the results of those indicators that have seemed most convenient to characterize the sample in the total of the scale and in the seven dimensions that make up the test used.

6.2 Conceptual framework

In the prologue of the second edition of his book "frames of the mind" Gardner (1993, p. 13), Gardner analyzed the level of investigative progress that his theory could potentially have, according to his considerations at that date. He proposed four aspects of research through which his theory could develop new knowledge. These, briefly mentioned as:

1. Studies of the diverse contexts in which intelligences are developed and the ways in which they develop in such contexts.
2. Studies of the phenomena of human creativity and the best way to increase it.
3. An examination of the ethical dimensions of human intelligence.
4. A consideration of leadership in our time.

All the aspects that he proposed, are accurate visions and even proposals to what future researchers in different fields could develop around the Theory of Multiple Intelligences. However, it is considered essential that prior to the development of studies that understand or identify the events, scopes, and phenomena that can be theorized or concluded from the aforementioned Gardner's theory, it is necessary to characterize the intelligences to the population study.

To illustrate the above, Gardner (2011) said: "The educator should know as much as possible about the intelligences profile of each student for whom he has responsibility" (p. 17). In this way, Gardner made a brief characterization of the intelligences which, according to the acts of different personalities of our history, seemed to be dominant in them. Therefore, in this study it is necessary to list and conceptualize the key terms for the realization of the Characterization of Students of the Program in Modern Languages, English and French, of the Universidad Del Cauca, Santander de Quilichao:

6.2.1 Characterization: It is a descriptive phase with the purpose of identifying, among other aspects, the components, events (chronology and milestones), actors, processes and context of an experience, a fact, or a process. (Sánchez Upegüi, A., 2010)

6.2.2 Intelligence: It is a capacity to solve problems or create products that are valuable in one or more cultural environments. In addition, it evidences the existence of many and different intellectual faculties, or competences, each of which can have its own history of human development. (Gardner, 1993. p. 62)

6.2.3 Multiple intelligences: Thus, we can say that Multiple Intelligence is a cognitive model that describes how human beings use a series of intelligences to solve the problems that arise, creating solutions. This approach is different from the theories presented so far since it focuses on the way the human mind operates with its own environment, that is, with people, objects, sounds, emotions, etc. (Calvo Castro, 2014. p. 9). This theory proposes the existence of eight or more intelligences, namely: Logical-mathematical intelligence, Linguistic intelligence, Space intelligence, Musical intelligence, Body-kinesthetic intelligence, Intrapersonal intelligence, Interpersonal intelligence and Naturalistic intelligence.

6.2.3.1 Logical-mathematical intelligence: ability to think conceptually and abstractly, and capacity to discern logical and numerical patterns. Description:

- To analyze problems
- To detecting patterns
- To perform mathematical calculations
- The scientific reasoning and deduction
- To understand the relationship between cause and effect toward a tangible outcome or result

6.2.3.2 Linguistic intelligence: well-developed verbal skills and sensitivity to the sounds, meanings, and rhythms of words. Description:

- The use of written and to use spoken words
- To use interpretation and explanation of ideas and information via language
- Understanding the relationship between communication and meaning

6.2.3.3 Space intelligence: capacity to think in images and pictures, to visualize accurately and abstractly. Description:

- Interpretation and creation of visual images, pictorial imagination, and expression
- To understand the relationships between images and meanings and between space and effect

6.2.3.4 Musical intelligence: ability to produce and appreciate rhythm, pitch, and timber. Description:

- Awareness, appreciation and use of sound
- The recognition of tonal and rhythmic patterns
- To understand the relationship between sound and feeling

6.2.3.5 Body-kinesthetic intelligence: ability to control one's body movements and to handle objects skillfully. Description:

- Eye and body coordination
- Manual dexterity
- Physical agility and balance

6.2.3.6 Intrapersonal intelligence: capacity to be self-aware and in tune with inner feelings, values, beliefs and thinking processes.

Description:

- One's own needs for and reaction to change, ability to deal with change in the workplace
- One's relationship to others and the world
- Personal cognizance
- Personal objectivity
- The capability to understand oneself

6.2.3.7 *Interpersonal intelligence*: capacity to detect and respond

appropriately to the moods, motivations and desires of others. Description:

- Ability to relate to others
- Interpretation of behavior and communications
- To understand the relationship between people and their situations, including other people

6.2.3.8 *Naturalistic intelligence*: ability to recognize and categorize plants, animals and other objects in nature. Description:

- People relation to their natural surroundings.
- Having an affinity for animals and are good at training and understanding them

6.2.4 Validity: The validity of an instrument consists of measuring what it has to measure, authenticity (Testing Questionnaire for Data Validation, 2012). Therefore, validity is considered to refer to the degree to which the empirical evidence and the theory support the interpretation of test scores related to a specific use. (AERA, APA y NCME, 1999). Quote by Prieto y Delgado (2010, p.71)

6.2.5 Reliability: this designates the accuracy with which a set of test scores measure what they would have to measure (Ebel, 1977, quote by Fuentes, n.d. p.103) (Testing Questionnaire for Data Validation, 2012). The reliability (or

consistency) of a test is the precision with which the test measures what it measures, in a given population and in the normal conditions of application.

(Anastasi, 1982; Aiken, 1995). Quote by Aliaga Tovar (n.d, p.92)

6.2.6 Testing questionnaire for data validation: it is a Testing Questionnaire for Data Validation that has to guarantee the same conditions of realization as the real fieldwork. A validation pilot test administers the instrument to 20 or 30 people with characteristics that are homogeneous to that of the sample studied; performs a pre-test of the instrument before applying the valid instrument in a study; evaluates technical aspects, improve and correct all the deficiencies found in the instrument to adapt it and validate it for the real field. (Testing Questionnaire for Data Validation, 2012)

6.2.7 Likert scale: it is an interval attitude scale, using series of affirmations or items on which a response is obtained by the subject. From his philosophy, the scale uses statements or propositions, that is, affirmations, on which the individual has to manifest (R. Likert, 1932).

6.3 Theoretical framework

On his book “frames of the mind” Gardner proposed a theory that contributes to pedagogy with categories and terminology which revealed more about human potential as an intelligent being, dividing such capacity or intellectual ability into a series of “ability schemes”, that an individual might develop one above others. The above mentioned theory was the fundamental pillar to this characterization, which has been carried out over the student population on the modern languages program of the University of Cauca, Santander de Quilichao. To it obeys the definition of the terms Gardner himself defined to refer to intelligence as a general concept and then on his theory of multiple intelligences and how through them a population could be characterized.

6.3.1 Intelligence

The definition of “intelligence” has varied from an author to other through time, however, while there are more advances on the knowledge of the human mind and its learning processes, it becomes evident that some coincidences are starting to glimpse among the finding and definitions from an author to other. In this sense Robert Sternberg (n.d. Quote from Abel Méndez, 2017) affirms that *“La mente humana funciona como una especie de ordenador (...) Por lo tanto, la inteligencia se basa en el hecho de acumular conocimientos como consecuencia de la transformación de los datos sensoriales que captamos en conocimiento”* (p. 10)

It is to say that he states that human mind could metaphorically be considered as a “computer” or sponge, it is to say, mind is an empty sponge, which is filled day by day in the academic world through knowledge acquisition. These are expelled or shared when squeezing the sponge and, after an I.Q. test it can be determined which sponges are more suitable than others at the time of absorbing and “squeezing” knowledge. Definitely, human mind evolution

and its intelligence is shown as a gradual expansion of the “sponge” making of it an example of information processing. parallel to this example, it is highlighted that human mind is like a Swiss knife, but that the kind of blades that it contains can vary from person to person due to the cultural context that forges and shapes its innate nature. (Mithen, 1998. Quoted from Abel Méndez, 2017. p 11).

It is remarkable to notice that Gardner (2011) says “*My review of earlier studies of intelligence and cognition has suggested the existence of a number of different intellectual strengths, or competences, each of which may have its own developmental history*” (p. 63)

In this order of ideas, Suárez, Maíz and Mesa (2010. p. 83) agree that:

La inteligencia puede definirse de varias maneras y desde diferentes perspectivas; como un fenómeno de carácter complejo, ya que ésta varía dependiendo del enfoque disciplinario en la que se utiliza. Es por ello que las definiciones de inteligencia se pueden organizar en varios grupos, a saber: las psicológicas, las biológicas y las operativas, tomando el cariz particular de cada una de estas disciplinas

However, they stick to Gardner’s intelligence definition affirming that Gardner (1999) poses intelligence as a bio psychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture (p. 34).

6.3.2 Multiple intelligences

Even though there are many researchers and authors who have been concerned with approaching intelligence as their object of study, some have observed it from a physiological perspective, such as the anatomist and anthropologist Paul Broca; or from the psyche, like Alfred Binet and Theodore Simon; or the renowned Piaget and his studies on the development of

intelligence in children. All of them are precursors in the field of efforts to understand the human mind and its processes.

However, this work is limited to the understanding and approach to the theory of multiple intelligences theory by Howard Gardner, in order to obtain its characterization into the population participating in the study. To fulfill this, it is important to understand the role that this theory plays today in the academic community. Sight under which, it is understood that for Gardner then intelligence is not one but multiple: linguistic, musical, logical-mathematical, spatial, corporal, personal (intra-inter); these usually act harmoniously, but are relatively autonomous. All this derived from the fact that the multiple abilities and behaviors are manifestations of intelligent beings.

Likewise, Steven Pinker (n.d. Quoted from Abel Méndez, 2017. p 15), complements this notion by affirming the specialization of the mind and the multiplicity of intelligences within the individual, since the mind is seen as a source of information processing of innate nature (logic, lived experiences, interpersonal relationships, language, language, spaces and emotions imparted by the social and moral world of the individual).

Now, to talk about the theory of multiple intelligences, one must take into consideration that as such, it appears in 1983; under the conclusions reached by Howard Gardner in his study of intelligence and human potential, which he synthesized in his book "Frames of the mind" with the intention of placing his work within the general history of the efforts to conceptualize the intelligence; he managed to propose a concise theory that divides intelligence into multiple groups of skills that, categorized, conform distinctive characteristics of a learning style based on the ability that the individual develops in greater quantity and under which it develops with greater alacrity, it refers to the 8 intelligences denominated: visual-linguistic, logical-

mathematical, interpersonal, intrapersonal, naturalistic, kinesthetic, spatial and musical (Gardner, 1983).

This is defended by Valcàrcel and Del Teso Martín (2017, p. 47) who declare that:

Un breve estudio acerca del funcionamiento de la mente nos indica que ésta se compone de diferentes módulos o inteligencias, cada una de ellas encargadas de resolver diferentes tipos de problemas cotidianos. Esta tesis tiene consecuencias claras en la educación y, en particular, en la enseñanza de lenguas extranjeras. Esto es así porque implica que, como profesores, no podemos enseñar a todos los estudiantes de la misma manera.

Thus, the pedagogical aspect of the theory as such, offers theoretical foundation enough to affirm that just as no one learns in the same way, the student's intelligence cannot be measured under a single standard and therefore knowing the condition and the predominance of each type of intelligence in this population is vital for the implementation of strategies and pedagogical models that adjust and are appropriate to the modern vision of teaching. Also, according to Suarez, Maiz and Mesa (2010, p. 84):

La teoría propuesta por Gardner (2004, p. 217) es una vía interesante y creativa para lograr tal propósito; ésta plantea la existencia de ocho o más inteligencias a saber: Inteligencia lógica-matemática, Inteligencia lingüística, Inteligencia espacial, Inteligencia musical, Inteligencia corporal-kinestésica, Inteligencia intrapersonal, Inteligencia interpersonal e Inteligencia naturalista.

This list of intelligences considered only the names given to each one of them, although each intelligence name brings some light about the fields each one covers and develops, it is meaningful to know that Gardner (1983) proposed seven intelligences to be considered as his

first attempt to understand from the developmental psychology field, how human mind works in terms of its capacities to learn and think. In later editions of his theory, Gardner added the Naturalistic intelligence to the list. The above has led authors and researchers to create ways to understand better how these intelligences proposed by Gardner work. Then, listed and explained by Mercadé (2012), these intelligences cover aspects such as:

6.3.2.1 Logical-mathematical intelligence: Some professional profiles related to this type of intelligence are engineers, scientists, economists; since it implies the ability to use the scientific method and the inductive and deductive clinical reasoning, but also formulate and verify hypotheses. Thus, it is considered the closest to the traditional concept of intelligence.

6.3.2.2 Linguistic intelligence: this intelligence is related to verbal skills, it also implies a very well developed capacity to understand the meaning and order of words when using communicative skills as writing, listening or speaking. It is also considered closely related to the abilities of writing and speaking efficiently. Also, it is strongly linked to political professions and those that have to do with religion, poetry and writing.

6.3.2.3 Space intelligence: This intelligence is linked to those who are capable to create a mental model in three dimensions of the world. This intelligence is present in professions as diverse as engineering, surgery, sculpture, navy, architecture, design and decoration.

It is linked to skills such as presenting ideas visually, create mental images, perceive details visually, draw and make sketches, make visual creations and visualize with precision. Despite the above, this intelligence is related to careers as artists, photographers, architects, designers, publicists, etc.

6.3.2.4 Musical intelligence: This intelligence is considered as one of the most interesting ones, since it can manifest itself very early in a person's life, some of the abilities that it implies are the ability to listen, sing and / or play instruments.

It is also related to the creation and analysis of music; composers, musicians, music critics are professional profiles that are attributed it.

6.3.2.5 Body-kinesthetic intelligence: In a similar way to musical intelligence the natural aptitudes of this type of intelligence often manifest from an early age.

Those who have this intelligence as their predominant have the ability to use their body to solve problems or perform activities that involve eye-global coordination, use their hands to create or make repairs, express themselves through the body or carry out activities that require strength or flexibility. Within this type of intelligence are athletes, surgeons and dancers.

6.3.2.6 Intrapersonal intelligence: This type of intelligence allows individuals to form an accurate image of oneself; it allows to understand our needs and characteristics, as well as our qualities and defects.

People with this intelligence can be considered as mature individuals with a rich and deep self-knowledge, since it involves the ability to set goals, assess personal skills and disadvantages and control one's own thinking. It is also related meditate, exhibit discipline, keep composure and give their best.

6.3.2.7 Interpersonal intelligence: This one is based on the ability to handle human relationships, empathize with people and recognize the motivations, reasons and emotions that move them. This intelligence alone is a fundamental complement to the previous ones, as it allows individuals to understand how others might feel or think.

Most of the activities that people daily do depend on this type of intelligence. It is therefore essential that a leader has this type of intelligence and also make use of it, given the capabilities involved that characterize it as working with people, helping people to identify and overcome problems, as well as related skills such as recognizing and respond to the feelings and personalities of others. People with this type of intelligence fit into professions such as administrators, teachers, psychologists, therapists.

6.3.2.8 *Naturalist Intelligence:* This type of intelligence is used when observing and studying nature. Represents the ability to study our surroundings, a way to stimulate this type of intelligence is always to look at the natural aspects with which we live. Biologists are the ones who have developed it the most. This intelligence was added to the theory in 1995.

Having defined the concepts of Intelligence and Multiple Intelligences, which are fundamental to understand what the theoretical foundation of the work proposed here becomes, it is necessary to define the key word -characterization- format under which the delivery of information about the participating population is delivered.

6.3.2.9 *The theory in practice: Multiple Intelligences into the classroom*

Gardner points out that every single person has the eight intelligences. This idea is linked to the fact that the theory describes the mind performance, and it demonstrates that the nature of mind is multiple since cognitive skills. Thus, it cannot be confused about the wrong idea that some individuals possess couple of those intelligences and no other more.

Otherwise, Gardner confirms that intelligences can be develop along the life, until achieving a high level of dexterity in each one; but also human beings differ from one another and there is absolutely no reason to teach and assess all individuals in the

identical way. Rather, in the future, good practice should particularize the modes of presentations as well as the manner of assessment as much as feasible; and that individuals should be based on our understanding of the intellectual profiles of learners.

It is well known that every teacher has an own teaching methodology, but, does it fit in the students' needs or way of learning? A teacher or educator could bound, without being noticed, students' way of learning, while privileging those students who have similar cognitive preferences to the teacher (Gallego, 2008, pag. 277). It is to say that a teacher with high cognitive presence of interpersonal intelligence, would perform a class with educational practices in which students interact each other and cooperative work, team work. But, those students with this intelligence more developed than others, are going to shine brighter in the classroom; they have more chances of success than students with a different cognitive profile, it is to say with a different intelligence more developed.

Learning activities, which are varied or at least some of them relate to the learner's strengths, will be more likely to be appraised positively because they will be more comfortable and thus more pleasant, they will certainly be more compatible with his or her self-concept. For example, learners with high visual-spatial intelligence who do an activity requiring them to draw pictures of four things that are important to them and then in the foreign language ask each other about their drawings, it would probably appraise the activity in a favorable way and therefore their **motivation** towards the activity and the context in which it is carried out would be increased (Arnold & Fonseca, 2004).

One factor that influences the foreign language learning is the motivation. This is linked to the personal reasons for the student to learn it. The clue is in knowing which factors affect

motivation in students. Schuman (1997) distinguished these motivation factors in the foreign languages learning context:

1. Tasks must be innovative for students
2. Tasks must produce pleasure or satisfaction in every student
3. Tasks must be compatible with students' interests and objectives
4. Tasks must be possible to accomplish and accessible
5. Tasks must fit in the context and social principles.

Likewise, inclusive curriculum planning at regarding Multiple Intelligences, increase the students' interest and motivation for foreign languages learning. For instance, a student who is an athlete or musician (or any other talent and skill), could be the most dedicated and potential student with a teacher who takes advantage of his talents and skills as long as the teacher structures suitable materials and learning environments for the needs, focusing in their strong skills. (Rogers, 2003).

Making sure that Multiple Intelligences are an instrument for helping to plan lessons in order to fulfill students' needs, allows the teacher to avoid monotony and a curriculum planning focused on content or objectives that sometimes are not motivation for students' need to learn a foreign language. Gallego (2008) argues:

Las inteligencias múltiples pueden ayudar a los maestros a que sus elecciones pedagógicas no sean fruto de la casualidad o estén condicionadas por el perfil cognitivo propio, sino, que sean algo planificado de forma consciente desde la reflexión, la necesidad y el deseo de llegar a todos los estudiantes.

Skills in the classroom could be more than letters and contents; it could be a significant learning for every student while being aware of the presence of Multiple Intelligence in the

classroom. Armstrong (2009) has declared “the theory of multiple intelligences suggests that the classroom environment—or classroom ecology, if you will—may need to be fundamentally restructured to accommodate the needs of different kinds of learners” (p. 99).

All in all, the students not only should know about Multiple Intelligences and be aware of his intelligences in order to develop them; but also, teachers should guide them into this theory for recognizing themselves, their cognitive profile and to create accurate learning environments for them all. According to Armstrong (2009):

Multiple Intelligences theory can greatly affect students’ behavior in the classroom simply by creating an environment where individual needs are recognized and attended to throughout the school day. Students are less likely to be confused, frustrated, or stressed out in such an environment. (p. 120)

6.3.3 Characterization

As a tool to deliver a concrete statistic of the states of predominance of multiple intelligences and which are common and weak in the students of the Modern Languages Program of the University of Cauca, Santander de Quilichao.

This population characterization is framed as the best way to present the data. it is referred to as a descriptive phase with the purpose of identifying, among other aspects, the components, events (chronology and events), actors, processes and context of an experience, a fact or a process, From a research perspective (Sánchez Upegui, 2010. Quoted from Fundación Universitaria Católica del Norte, 2010).

Characterization is a type of qualitative description that can use data or numbers in order to deepen knowledge about something. To qualify that something previously, the data must be identified and organized; and from them, described (characterized) in a structured way; and later,

establish its meaning (systematize in a critical way) (Bonilla, Hurtado & Jaramillo, 2009. Quoted from Fundación Universitaria Católica del Norte, 2010).

6.3.4 Validity

According to Corral, Y. (2009) who defends that the validity must respond to the question: what is the fidelity of the correspondence between the universe or population and the attribute that is going to be measured? It is considered that an instrument's validity will consist of measuring what it has to measure (it will have authenticity), to comply it, some procedures to be used are: Know groups (ask known groups), Predictive validity (check behavior) and Cross-check -questions (compare previous data). He also assures that when estimating validity, it is necessary to know with certainty what features or characteristics we wish to study. For this feature or characteristic is called the criterion variable.

In this regard, this is done to know how well the positions of the individuals correspond in the distribution of the scores obtained with respect to their positions in the continuum that represents the criterion variable (Ruiz Bolívar, 2002, taken from Corral, Y, 2009). He mentions that there are three types of validity: content validity, construct validity and predictive validity or external or empirical criteria. However, below, what is considered most appropriate for validation purposes of the instrument used in this study is developed more broadly:

6.3.4.1 Content Validity: which refers to the degree to which an instrument reflects a specific domain of the content of what is to be measured, it is about determining to what extent the items or reagents of an instrument are representative of the content universe of the characteristic or feature that you want to measure, answers the question: how representative is the chosen behavior as a sample of the universe you are trying to represent?

6.3.5 Reliability

In order to ensure the credibility and accuracy of the results of the research, Corral, Y. (2009) considers it important that before starting the fieldwork, the questionnaire should be tested on a small population group. they call this measure a "pilot test" that has to guarantee the same conditions of realization as real field work, recommending then a small group of subjects that do not belong to the selected sample but to the population or a group with similar characteristics of the study sample, it is recommended that it be approximately between 14 and 30 people. so, in this way, estimate the reliability of the questionnaire.

Thus, Reliability answers the question: how accurately do the items, reagents or tasks represent the universe from which they were selected? Then, the term reliability designates the accuracy with which a set of test scores measure what they would have to measure (Ebel, 1977, quoted by Fuentes. p.103). Among the methods for estimating reliability, there is a Testing Questionnaire Method For Data Validation that is decisive to determine how reliable is the instrument to be used in this work:

- ***Test-Retest method:*** it is a Testing Questionnaire for Data Validation that has to estimate the reliability of a test or questionnaire; it must be administered twice to the same group and the scores obtained, must be correlate, as explained by Corral Y. (2009). This method has the disadvantage that the scores can be affected by recall, practice, etc. This procedure is not suitable for applying to knowledge tests but for the measurement of physical and athletic skills, personality tests and motors.

Having defined the concepts to be developed, through the characterization process more broadly, it is important to mention that its application obeys the need to provide an input from and for the student community which originates from a theory that, until now, is considered a

reference for self-knowledge and the development of the student population. Therefore, this theoretical framework has been written starting from a theoretical explanation of the fundamental concepts that give rise to this work and, later, on the terms that serve as criteria to confirm the viability of the used instrument, as well as the reliability and validity of the results that are reached here through it.

6.4 Contextual framework

The Department of Cauca is located in the southwest of the Republic of Colombia, between the Andean and Pacific regions. It has an area of 29,308 Km², which represents 2.56% of the national territory and with 1'379.169 inhabitants (DANE 2015 projection). Its capital is the city of Popayan, which has 277,540 inhabitants (DANE 2015 projection); the city that has cradled the University of Cauca since its foundation on November 11, 1827.

The University of Cauca (main campus) was created in Popayan as the Third District by decree of April 24, 1827. Consequently, to respond the demand of High Schools, the Bachelor in Modern Languages, English and French was created through the Agreement 026 of February 6, 1991, issued by the Superior Council, under the administration of the Faculty of Education, today Faculty of Exact Natural Sciences and Education.

The Modern Languages Program began on February 28, 1972 under the name of Philology and Languages, attached to the Faculty of Education, called nowadays Faculty of Exact Natural Sciences and Education. In September of the same year, in coherence with the components of foreign language in the secondary curricula, the programs Spanish - English and Spanish - French were opened, responding to the need to carry out a work where, both the Mother Tongue and Foreign Language, were recognized as constituent elements to stimulate their acquisition and use. From 1975 onwards, some reforms aimed at strengthening the work with languages and

their articulation with the pedagogical, linguistic and socio-humanistic components were carried out, taking care of recommendations and advisory visits by ICFES, which led to the renewal of the operating license of the Modern Languages Degree, according to the Agreements: 75 April 18, 1975, 3953 from 1977 and 276 from 1981. The Language Department deployed its Education, Research, Training, Updating and Improvement activities of teachers, and Extension, from the issues defined by the University namely: Teaching, Research and Social Projection.

In this way, years later, the University of Cauca began its permanent presence in the municipality of Santander de Quilichao in 1998 with the purchase of its first headquarters, called "La Casona". Since 2013, with the adoption of a new concept of Regionalization, which involved the establishment of the Regionalization Center, the offering of undergraduate programs began permanently. For this purpose, there were the opening of the Law and Modern Languages (English and French) programs, both holders of the recognition of high quality accreditation by the Ministry of National Education. This academic growth implied the need to increase the infrastructure in the place, on the one hand signed an agreement of institutional cooperation with the *Universidad del Valle* and a loan to share the place called "*Campus Carvajal*".

Now, the municipality of Santander de Quilichao is located in the northern of the Department of Cauca, 97 km north of Popayan and 45 km south of Santiago de Cali, Valle del Cauca. It has an extension of 518 km² and its urban extension is 8.58 km². Considering the data of the projections of municipal population 2005 - 2020 of the DANE, for the year 2013 the municipality concentrates 6.7% of the total of inhabitants of the Department of the Cauca. Due to the proximity to these cities and nearby *Norte Caucanos* towns, Santander de Quilichao is a student meeting point, for which the University of Cauca decided to extend its academic offer, opening the Modern Languages, English and French Program in 2013.

Since then, the language program at Santander de Quilichao has developed successfully and has got a large student presence; the program has got 235 student population so far.

7. PARTICIPANTS

The participants in this study were the students of the Modern Languages Program at the University of Cauca, Santander de Quilichao. In the second academic period 2018.2, the Languages program had a population of 235 students in Santander de Quilichao, of which 199 students successfully participated voluntarily in this study. They were active students of the program, who have been living the learning process of the languages, which is the greatest characteristic that stands out in this student population.

In this way, and with their consent, the participants were introduced to the main aspects of the project and the role they had in it, which was relevant for the development and quality of the program in which they have been growing personally, academically and professionally. Thus, they were asked to answer a survey with closed questions with a Likert scale on multiple intelligences -according to Howard Gardner. A survey that disclosed the results of this study, achieving the objectives and shedding light to new research at the University of Cauca, Santander de Quilichao.

8. DATA ANALYSIS AND INTERPRETATION

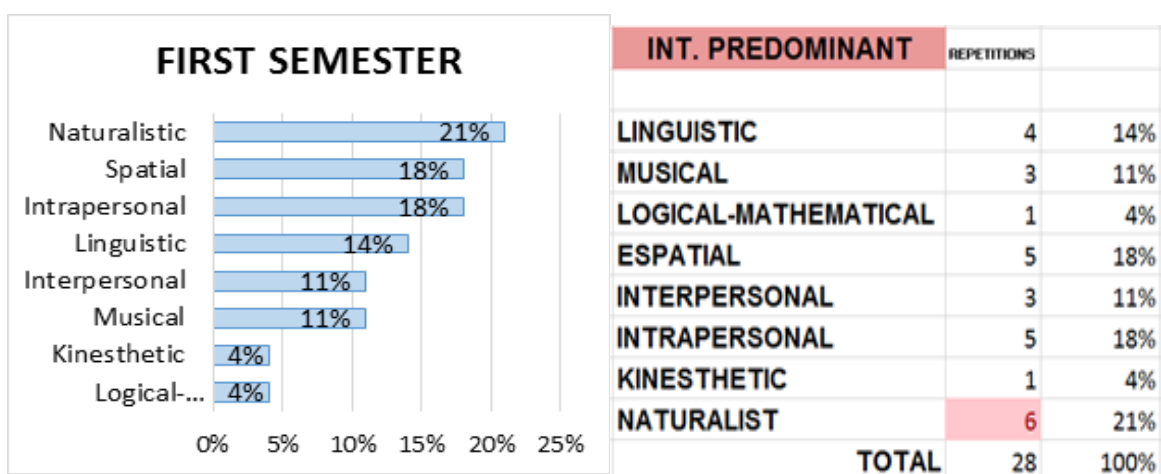
According to the quantitative approach proposed in the methodology and after the instrument's application stage, data recollection proceed with the meticulous recount of the information collected person to person, and obtaining a series of percentages which represented the number of times an intelligence was predominant in each participant per semester. However, it must be taken into account that during the person to person data analysis stage, it was noticeable that some people have developed more than one of the intelligences as their predominant ones as it was proposed by Gardner. In a classroom with a total of 24 students taking part of, it could easily turned out that four of the students might have two intelligences as their predominant ones, so the total of students could be considered more than 24 due to the double predominance of the four students might have, for instance.

In addition, the highest percentage of the intelligence presence that each participant provided in the CUIM test have been exposed in the following graphics, which was gathered by semester, presenting a bar chart each that is the result of adding those percentages together. Moreover, the quantity of times an intelligence has appeared as predominant within the participants of a semester, it is considered as a "repetition". Therefore, the graphics did not completely reflect the status of the above mentioned intelligences individually but the total presence (amount of repetitions) that intelligences have among the studied population.

Consequently, this study achieved the Languages Program graphic that shows the presence of each intelligence on the semesters conforming the program, characterizing them by percentage; and also it might be helpful to understand which intelligence has predominated over each semester and the program itself, according to the percentage it may have reached. Then, by

tabulating the intelligences presence percentages, semester to semester the program bar chart came out exposing the following results that have been reached.

It is remarkable that the predominant intelligence within each semester is implicitly shown through the descending order of the bar graphics: the intelligence occupying the highest percentage would be the predominant for the semester, and the one scoring the lowest percentage should be considered as the weak one within the semester. It works alike for the program graphic results, exposing the characterization of Multiple Intelligences in the Languages Program bar chart.

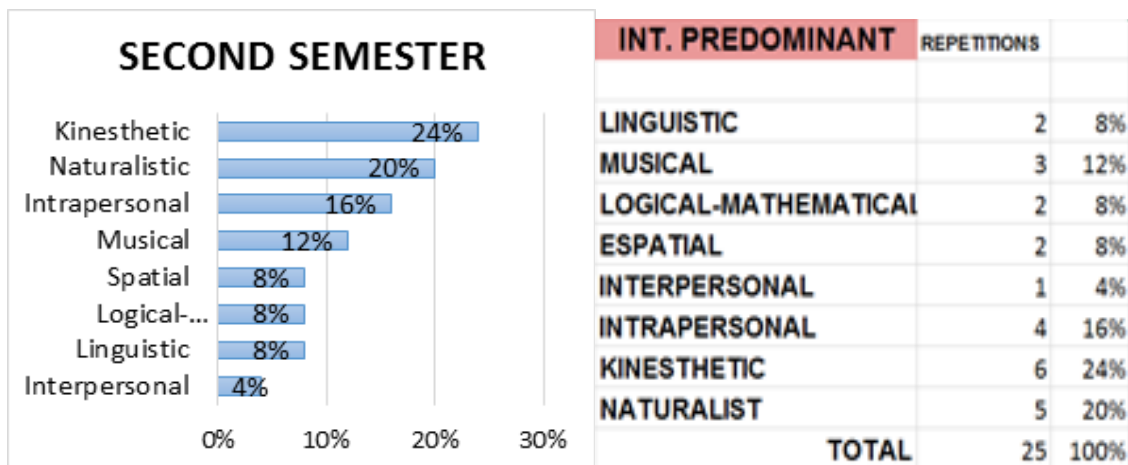


Graph 1. Bar chart of predominant multiple intelligences present in the first semester

The interpretation of the presence of the 8 intelligences by percentage, on the first semester of the modern languages program, as shown on the graphic 1 throws that the Naturalistic intelligence has occupied a 21% equivalent to 6 repetitions, this means that among the 24 participants of the study this intelligence as described by Gardner either is present and predominant on six people within the classroom or some students manifest two predominant intelligences including this one. A review of the data shows that for this intelligence there are actually 6 people who have it as their predominant one, making the naturalistic intelligence the predominant within this semester. This intelligence was closely followed by the Spatial and

Intrapersonal intelligences with a minuscule difference of 2% scoring a 18% both with a total of 5 repetitions within the semester, in the intrapersonal intelligence case, the 5 repetitions are a real count of 5 people having it as their predominant, although for the spatial intelligence, there was a participant who shared the predominance of this intelligence along with the linguistic intelligence. Then, the Linguistic intelligence scored 14%, a considerable diminution of repetitions, counting only 4 people within the semester and taking into account that one of them shared this intelligence's predominance along with the spatial intelligence as stated above.

Thus, came the musical intelligence scoring an 11% of presence within the semester, same as the Interpersonal intelligence which counts a total of 3 repetitions for each of this two intelligences, it is worthy to highlight that among the three repetitions that each one counts, there was found that one member of this semester shared both intelligences as his/her predominant ones. To finally reach Logical-Mathematical and Kinesthetic intelligences, being the lowest scored intelligences; occupying a 4% of presence each among the students on the semester, meaning that each one counted only one repetition whitening the studied population conforming this semester, however the participant who manifested the logical-Mathematical intelligence as his/her predominant shares this one with the linguistic intelligence and, in the other hand the only participant who manifested the kinesthetic intelligence as his/her predominant within this semester doesn't share this intelligence's predominance with no other.

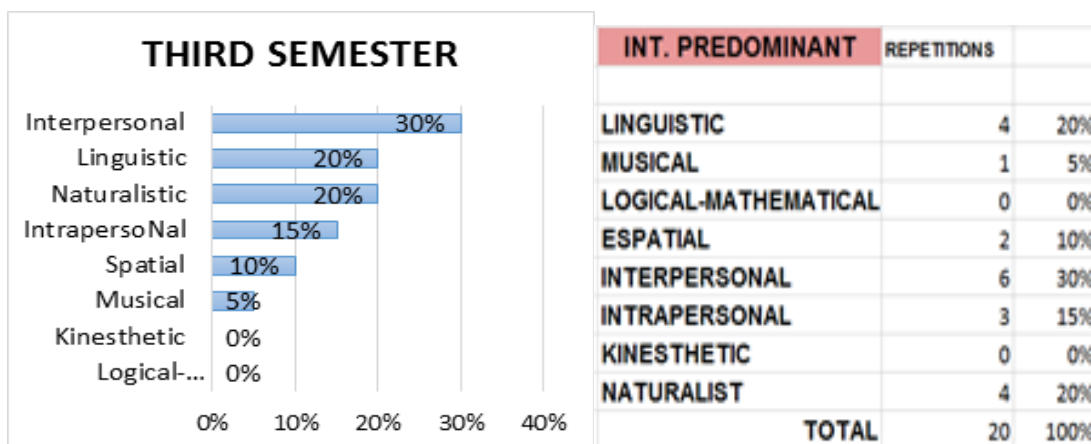


Graph 2. Bar chart of multiple predominant intelligences present in second semester.

As it can be seen on the graphic 2, multiple intelligences in second semester has shown that the 24% corresponded to the Kinesthetic intelligence this is traduced to an amount of 6 repetitions of this intelligence as a the predominant for the studied population in this semester, although the data has shown that one participant shares the predominance of this intelligences along with the interpersonal intelligence and other with the linguistic intelligence.

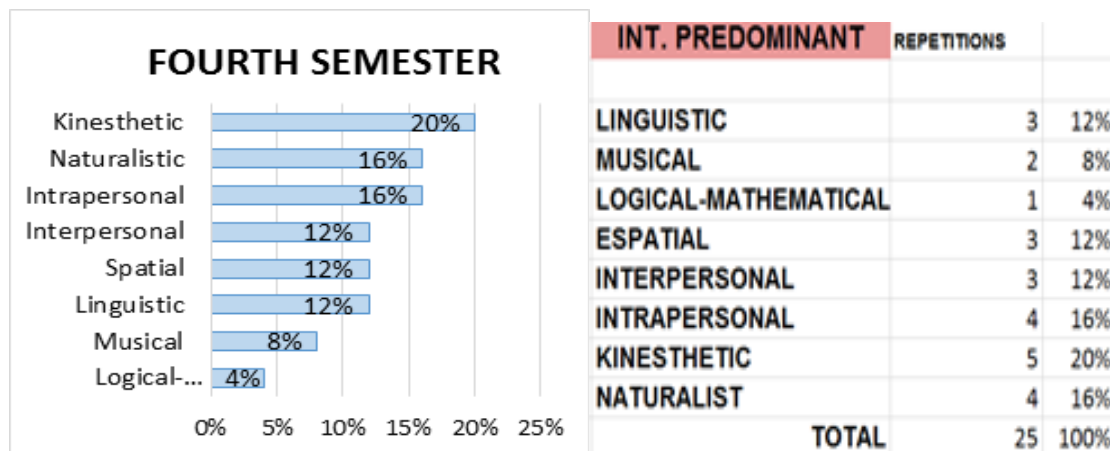
However, this is still the highest scored intelligence in terms of presence within the semester. The Naturalist intelligence, in the other hand, scored a 20% of predominance or presence within the studied population with a difference of 4% in relation to the kinesthetic intelligence, for this intelligence counts only 5 repetitions among the participants in this semester; then a 16% of predominance within the semester was linked to Intrapersonal intelligence which counts an amount of 4 repetitions within the semester's members. The Musical intelligence scored a 12% taking into account that there are only 3 repetitions for this intelligence as predominant within the participants in the semester. It is also seen that Linguistic, Logical-Mathematical and Spatial intelligences have got the 8%, having had the same percentage and 2 repetitions each within the semester, it is remarkable that the only one of this three intelligences which shares its predominance with another intelligence was the Linguistic intelligence as it is narrated above.

Finally, being the lowest percentage, the Interpersonal intelligence has scored the 4% with only 1 repetition or to be precise, only 1 person having it as his/her predominant in the semester.



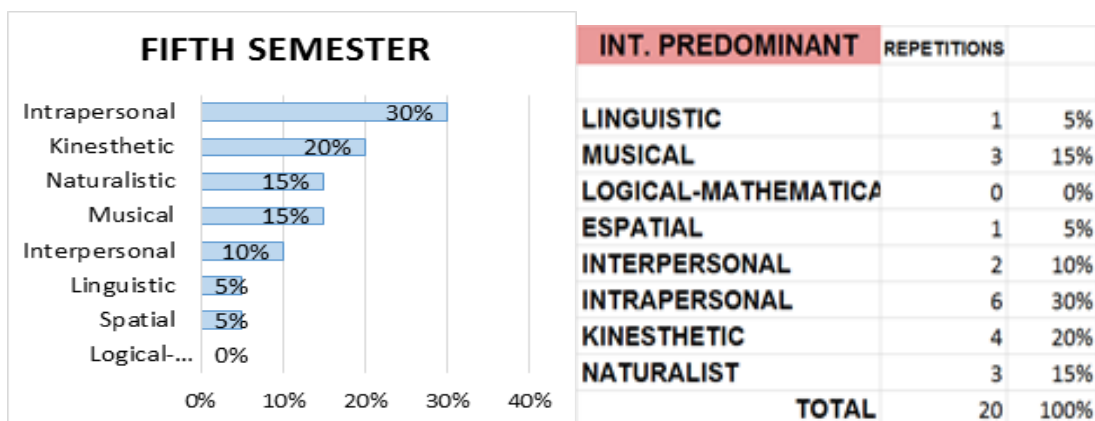
Graph 3. Bar chart of multiple predominant intelligences present in third semester.

Here, graphic three shows that in third semester, the Interpersonal intelligence reached a 30% of predominance, which means an amount of 6 repetitions of this intelligence as predominant among the classroom members, where one student shared this intelligence as predominant with the Spatial intelligence and other with the Naturalistic intelligence, the following intelligences in terms of presence and predominance with a 20% on a tie score were Linguistic and Naturalistic intelligences, it is remarkable that there is a 10% of difference between these intelligences and the interpersonal intelligence, taking into account that both counted 4 repetitions among the members of this semester. Then, the Intrapersonal intelligence scored a 15% counting three repetitions in the studied population of this semester, then the Spatial intelligence had a 10% of presence or predominance within this group, as it counted only 2 repetitions to finally reach the Kinesthetic and Logical-mathematical intelligences which scored 0% of presence in the semester each.



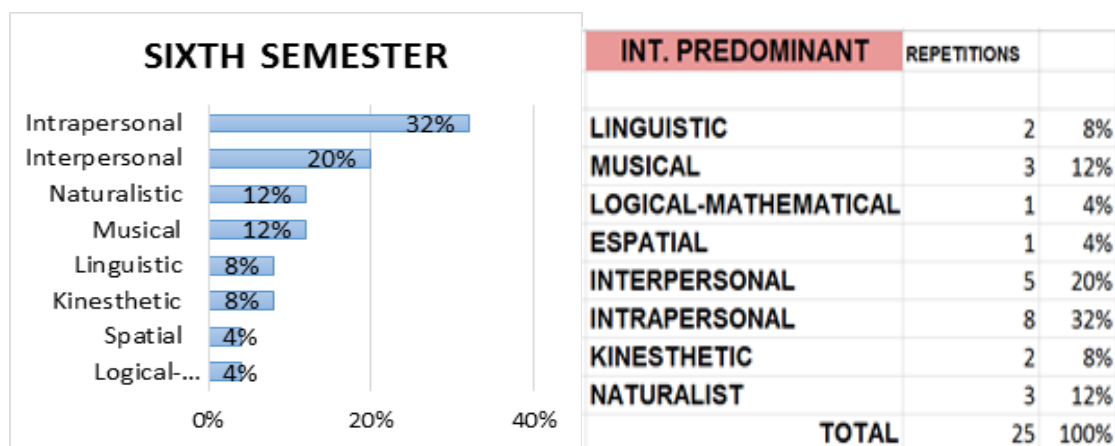
Graph 4. Bar chart of multiple predominant intelligences present in fourth semester.

On this semester, the gathered results have thrown that the highest scored intelligence within the semester was the kinesthetic intelligence, which occupies a 20% of presence among the tested students, counting an amount of 5 repetitions, it is remarkable that the predominance of this intelligence tends to be total, as none of the five person who conform the repetitions of the kinesthetic intelligence as predominant showed more than this one as predominant. This intelligence was closely followed by the naturalistic and intrapersonal intelligences that scored 16% each meaning that each one counted 4 repetitions. In this order, the Spatial, Interpersonal and Linguistic intelligences occupied each a 12% of presence on the semester, with a number of repetitions of 3 for each one; ultimately followed by the musical intelligence with an 8% or 2 repetitions of this intelligence as predominant in 2 members of this semester, finally the logical mathematical which only scored a 4%, which means only one person had it as his/her predominant in this group. It is remarkable that in this classroom no student had more than one intelligence as their predominant, making this semester one of the most compact ones in terms of statistics and graphics accuracy.



Graph 5. Bar chart of multiple predominant intelligences present in fifth semester.

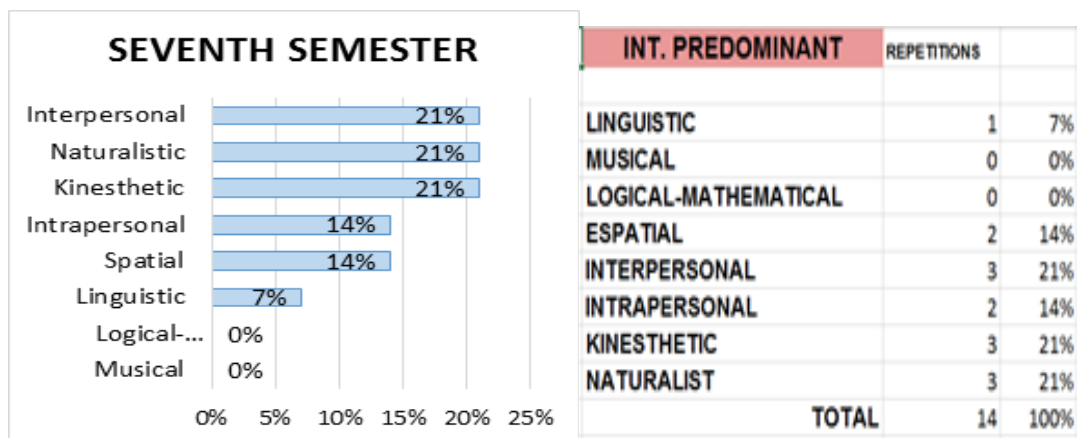
Here, it was found that the intrapersonal intelligence was the highest scored with a 30%, this is a not insignificant figure, if we take into account that among 18 participants, the number of repetitions to produce such a result is 6, where, in addition, only one of them shares the predominance of this intelligence with the Intrapersonal intelligence. Afterwards, scoring a 20% came the kinesthetic intelligence which among the group members counted a number of 4 repetitions as predominant within the semester's members, followed by both Musical and naturalistic intelligences scoring a 15% where both obtained a number of three repetitions that lead to such a percentage of presence in the semester, in the case of the Naturalistic intelligence repetitions, there was a participant who shared as his/her predominant this intelligence and the spatial intelligence, then the interpersonal intelligence with a 10% of presence which means that there are 2 repetitions of this intelligence as predominant among this group's students, to finish with a number of 1 repetition for both linguistic and spatial which gives this intelligences an score of 5% of presence in this semester and finally the logical-mathematical intelligence which did not obtained repetitions as predominant within the tested students on this group, reason why it has obtained a 0% of presence in the fifth semester.



Graph 6. Bar chart of multiple predominant intelligences present in sixth semester.

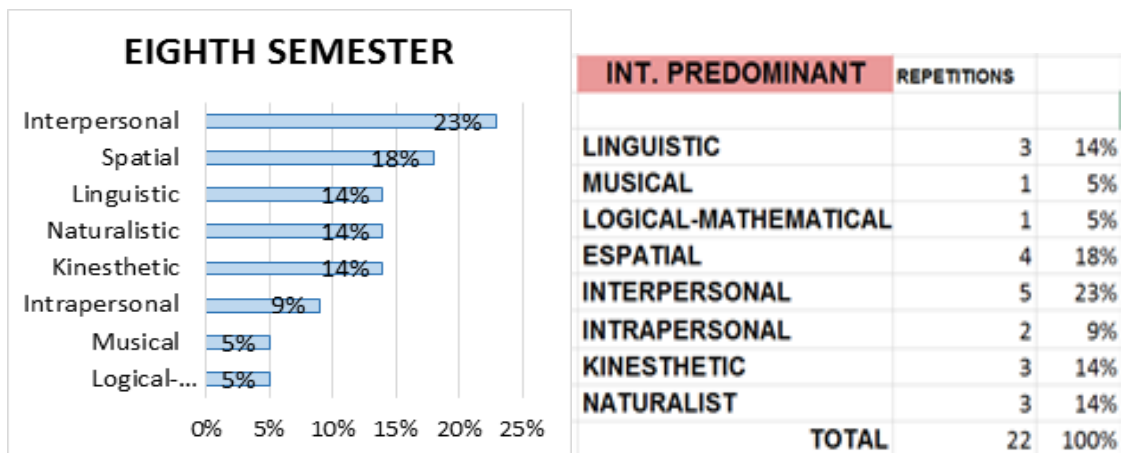
Sixth semester has had a similar percentage score. The 32% went to Intrapersonal intelligence, result obtained when among the 23 students whom by that time conformed this semester the amount of repetitions this intelligences had as predominant was 8, which means that 8 people scored this intelligences as their predominant. It is worth to highlight that none of this 8 people had more than this only intelligences as their predominant. Then, with 5 five repetitions a 20% of presence went for the Interpersonal intelligence in this semester; these percentages represented the highest in the students of this semester, making the intrapersonal intelligence the predominant one within this semester.

The Musical and Naturalistic intelligence scored 12% both, occupying only 3 repetitions each and in the particular case of the Naturalistic intelligence, two people shared its predominance with the Interpersonal intelligence positioning the last one up in the list given this particular case, to finish the 8% went for Linguistic and Kinesthetic as they counted only 2 repetitions each, and a tie low score of 4% each Spatial and Logical- mathematical with only 1 repetition for each one.



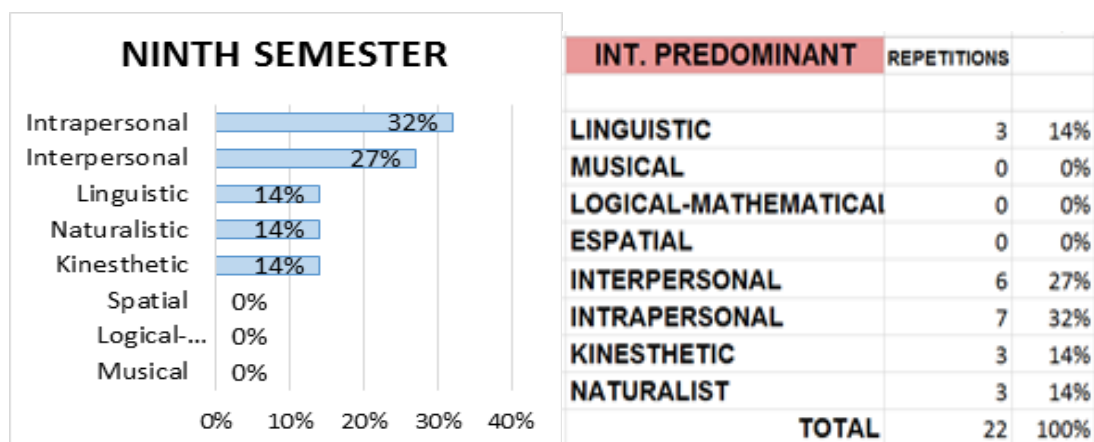
Graph 7. Bar chart of multiple predominant intelligences present in seventh semester

On this seventh semester, the peculiar case was that the Interpersonal, Kinesthetic and Naturalistic intelligences all have scored a 21%, such a result may be due to the lower amount of people tested on this semester where the amount of repetitions counted for each of these three intelligences was 3 for each, in a total of 14 people conforming the tested population in this semester. Next, there are the Intrapersonal and Spatial intelligences, both scoring a 14%, translated on an amount of 2 repetitions for each one. Finishing with the linguistic intelligence with a 7% or simply 1 repetition or only one person with this intelligence as their predominant, and a 0% for both musical and logical-mathematical intelligences. The data revision showed also that none of this semester's members had more than one intelligence as their predominant one.



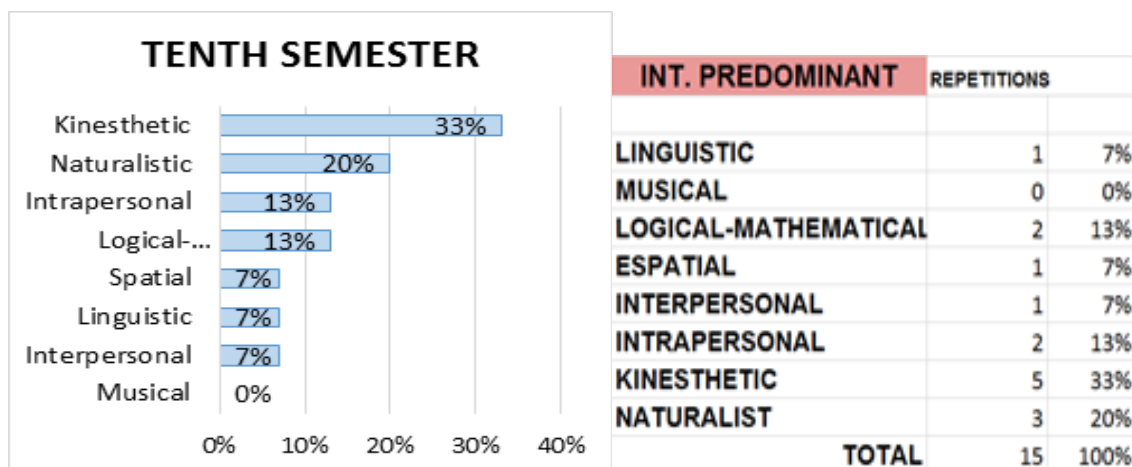
Graph 8. Bar chart of multiple predominant intelligences present in eighth semester

On the eighth semester, the interpersonal intelligence had a total of 5 repetitions as predominant among the tested students with only one person sharing this intelligence predominance with the Intrapersonal intelligence, reason why it scored a 23% of presence within the semester; making it the predominant one in the eighth semester, closely followed by the spatial intelligence scoring an 18% given the 4 repetitions it counted among the students in the group, it must be told that among this 4 repetitions there was one person who shared this intelligence predominance with the Interpersonal intelligence. Thus, came kinesthetic, naturalistic and linguistic intelligences, all of them scoring a 14% and counting 3 repetitions each one. The Linguistic intelligence shared its predominance at least 1 time with the Naturalistic intelligence of presence within the semester and so did the Kinesthetic intelligence and the Spatial intelligence, to end with the intrapersonal intelligence, with a 9% or 2 repetitions and a 5% or 1 repetition for both musical and logical-mathematical intelligences.



Graph 9. Bar chart of multiple predominant intelligences, present in ninth semester

On the ninth it has been found that the Intrapersonal intelligence scored the highest percentage with a 32% of presence among the students as it counted 7 seven repetitions as predominant among the total of 21 students tested in this semester; also only one student in this semester shared the predominance of this intelligence with the Logical-Mathematical intelligence; next, it is remarkable that the Intrapersonal intelligence scored a 27% of presence among the student coursing this semester by the time of the study, obtaining 6 repetitions as predominant among the students, this means that it would have probably been in a draw with the Intrapersonal intelligence if only this last one wouldn't have shared 1 repetition with the Logical- Mathematical intelligence. The intrapersonal was followed by the Linguistic, Kinesthetic and Naturalistic intelligences; they all tied with a 14% or 3 repetitions for each one among the students on the semester, just as did the musical, spatial and logical mathematical with a 0% of presence on this semester.

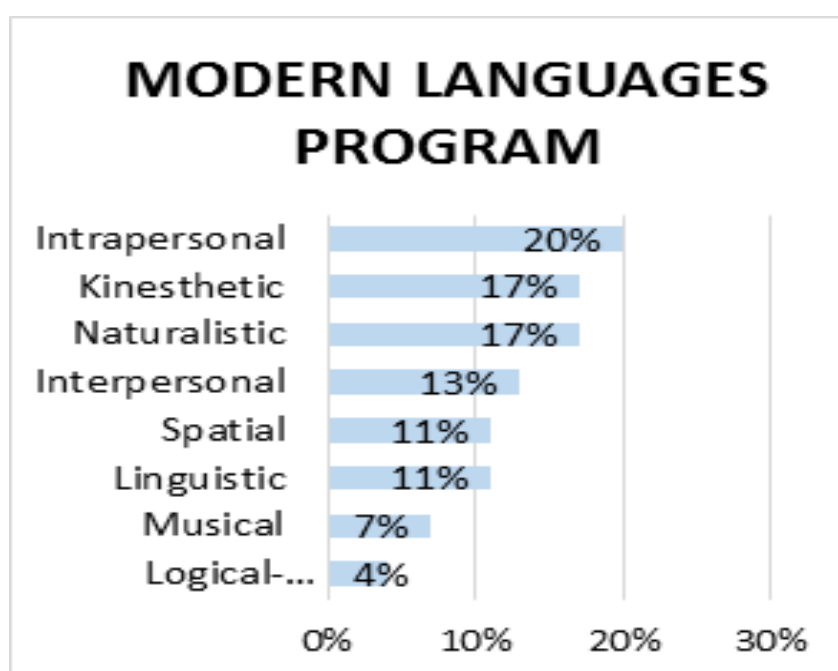


Graph 10. Bar chart of multiple predominant intelligences, present in tenth semester

To finish this brief resume of the state of the intelligences by semester, it has been found that in tenth semester the Kinesthetic intelligence counted 5 repetitions as the predominant one among the students conforming the group scoring a 33% of presence in the semester, becoming the predominant one in this semester, then the Naturalistic intelligence obtained a 20% of presence in the semester, or from another perspective it counted 3 repetitions as predominant within the tested students on the group; being followed by both Logical-mathematical and Intrapersonal intelligences tied with 13% or simply counting 2 repetitions each one, followed by the Spatial and Linguistic intelligences, both scoring a 7% of presence within the semester being the ones that only counted one repetition, it is worth to highlight that this is one of the semesters where no student manifested more than one intelligence as their predominant one. Finally, it has also been found that the Musical intelligence scored a 0% presence within this group.

Having portrayed the state of the multiple intelligences semester to semester; and having organized them from those with greater presence in their respective semester, to those that can least be found among the students of each course, it is necessary to speak of the presence translated as percentages in the language program, that is, among all the students that make part

of it, without discriminating in their semesters. It is also necessary to clarify that if, for example, naturalistic intelligence is predominant in the fifth semester, it could not be so for the program as a whole, since in order to achieve the percentage result of each intelligence in the whole population, it is necessary to observe how many times it was each intelligence “predominant” among all the students in the program, not per semester as described before, to obtain the overall percentage of the program with respect to the intelligences present in it.



Graph 11. Bar chart of predominant multiple intelligences present in the Modern Languages English - French Program.

INT. PREDOMINANT	REPETITIONS	
LINGUISTIC	24	11%
MUSICAL	16	7%
LOGICAL-MATEMATICAL	8	4%
ESPATIAL	24	11%
INTERPERSONAL	29	13%
INTRAPERSONAL	42	20%
KINESTHESIC	36	17%
NATURALIST	37	17%
TOTAL	216	100%
199 ESTUDIANTES		
17 WITH 2 PREDOMINANT INT.		

Graph 11.1. Table of Bar chart of predominant multiple intelligences present in the Modern Languages English - French Program.

According to the graphic 11. By percentage, intelligences such as Intrapersonal intelligence reached a 20% of presence within the population, traduced in an amount of 42 repetitions as the predominant intelligence among the studied population, being one of the few intelligences among this list that did not shared its predominance with any other intelligence on any member of the studied population, making of this intelligence, given its higher presence on the program, the predominant intelligence on the bachelor of Modern Languages, English and French in the University of Cauca. Followed by The Kinesthetic and Naturalist intelligences that achieved the same score, 17% with 36 and 37 repetitions respectively.

Then with 29 repetitions as a predominant intelligence among the students, the Interpersonal intelligence that have got the 13% of presence in the program. Then, the Linguistic and Spatial intelligences have got the 11% each and 24 repetitions as the predominant intelligence on the students. Finally, The 7% belonged to the Musical intelligence which had only 16 repetitions as predominant among the students in the program and then with only 8 repetitions, there is the Logical- mathematical intelligence with a 4% of presence in the whole program.

9. CONCLUSIONS

This Multiple Intelligences study has accomplished the vision of the Bachelor Program in Modern Languages, English and French, which is committed to contributing to the educational development of the community by training educators in languages, integral, suitable, critical and supportive. It is to say that this study has complemented some topics in the *Proyecto Educativo de Programa (PEP)* of the University of Cauca. The PEP promotes not only the cognitive, psycho-affective and social development of the student, but also changes in the teaching and learning of foreign languages.

The data analysis of the 199 students who signed the informed concern and participated of this study, and the interpretation of the 216 repetitions or amount of times that an intelligence was predominant on an individual; have shown that the predominant intelligence within the program is the intrapersonal intelligence, with a 20% of the studied population having it as their predominant intelligence, this one is related to introspection and self-knowing, people with this intelligence developed are considered to be independent and have a good sense of their strengths and shortcomings. This intelligence is also considered as: *“la más interna de todas y necesita ser auxiliada por otras para poder ser estudiada y descrita.”* (Blanes Villatoro, n.d. p. 5).

Also, It is at least unexpected that the kinesthetic intelligence appears as the second ranked intelligence with a 17% of presence and predominance among the students of the program, tied with the Naturalistic intelligence, such consistency on the percentages scored by the three higher ranked intelligences within the program suggest that, in time, the Modern Languages career might favor the development of this intelligences over the others through the contents it develops semester by semester.

What comes to be perplexing is that within the program, Interpersonal intelligence, one closely related to the teacher's professional profile scored only a 13%, a matter to be widely discussed in later sections of the study.

Consequently, the results allow to observe that the Linguistic intelligence only scored an 11% of presence among the studied population even though, as Blanes Villatoro explains, usually this intelligence manifests itself along with Intrapersonal intelligence, due to its personal and internal character. However, this one is ranked among the least scored inside the program, a matter of concern and consideration, since linguistic intelligence has greater affinity with the career that the tested population studies. Similarly, the spatial intelligence also scored an 11% of predominance, it is not that strange to find it on such position considering that the main characteristics that are related to such intelligence would be appreciated in other academic areas of study, apart from languages.

It is fundamental, for the research purposes of characterization, to mention that the "weak" intelligences within the program are well recognizable just by observing the tendencies through the graphics 1 to 10. however, in regards of general statistics within the program the Musical intelligence scored a 7% of predominance within the whole program; making it one of the weak intelligences present in the studied population, but it comes to be clear by the single sight of the program's graph (**Graph 11**) that the Logical - Mathematical intelligence tend to be the weakest among the students conforming the English - French Program of the university, representing only a 4% of the population studied. Inverse to what was suggested about the three intelligences that occupy a greater percentage of predominance in the program, the results suggest that these last two could be the least developed through the thematic contents of the career, a situation that would disadvantage the development of these intelligences and the individual and academic

growth of those who possess them as their predominant intelligences within the studied population.

Finally, and in order to fulfil the objectives of the research, it is pertinent to conclude that: the Predominant intelligence, within the program by the period this study was carried out, was the Intrapersonal intelligence. On the other hand, the weakest one was the Logical-Mathematical intelligence.

To summarize, as it has been discussed in previous sections of this study, characterizing the population might help to understand how they learn but also, speaking about statistics, it helps to understand how many among the studied population share a common intelligence to, hopefully, aid future researchers and the university itself to know more about those that conform the languages program in terms of the way how they learn; in order to propose or create pedagogical tools involving the knowledge that this characterization provides about the state of the intelligences considered as predominant or weak within the program. All in all, Multiple Intelligences were identified, categorized and exposed in order to be characterized for academic purposes.

10. SUGGESTIONS

Regarding to the Multiple Intelligences theory, it is suggested that through the relation among foreign languages teaching and learning (in their academic context), members of the Modern Languages Program of the University of Cauca, Santander de Quilichao, develop and produce methodological techniques and approaches to boost the process of understanding and expression in foreign languages (*Proyecto Educativo de Programa*, PEP, 2011). Also, this study could be a reference for designing educational future research projects or studies within the program,

Having studied Multiple Intelligences in students of foreign languages has realized that investigating about teaching and learning of foreign languages and on the educational reality of their environment, generate conditions that allow the continuous improvement of research, teaching and learning within the program.

Through the developing of Multiple Intelligences into the classroom, the languages students of the University of Cauca, Santander de Quilichao, are closer of being professionals capable of developing critical attitudes of self-evaluation (metacognition) to achieve a better and higher quality performance at learning and teaching foreign languages. Otherwise, it is also suggested that teachers and educators of the Languages program notice and apply the Multiple Intelligences Theory – by H. Gardner; because in that way they can identify, develop and potentiate those intelligences present in the languages student within the classroom. It is known that recognizing different skills and strengths in students makes learning more effective and efficient the Languages learning.

This study has been supported by experts in the topic and theoretical foundation, recommends teachers and the program itself to:

- Perform didactic activities into the classroom that allows him to explore the multiple intelligences in his students.
- Be aware of the students' behavior and thoughts in their daily life in classroom and university spaces, because it may evidence the kind of cognitive profile and intelligences which are predominant in the students.
- Provide to the students the opportunity and support to know, explore and develop their intelligences through the Multiple Intelligences Theory; having the metacognition as the main tool for student to understand their way of learning and to be able to solve problems by themselves. Also, for encouraging them to acquire Autonomous Learning and motivation to keep learning.
- Taking for granted that all students learn equal or assessing them in the same way, activity or material could be changed. Educational innovation would be the perfect tool for solving it, at getting to know the students and using their diversity, skills and strengths to have a cooperative work within the classroom.
- While being teaching “*seminarios de pedagogía*” it is suggested to focus on this Multiple Intelligences Theory in order to get students involved, and whenever student get to *Orientación de Proceso Educativo* (OPE) student acquire special skills and learning strategies regarding the Elementary school students' intelligences. It will facilitate own learning and developing teaching strategies and material production

On the other hand, academic preparation of students and teachers for the presentation of different standardized tests that allow the educational community to participate in scholarship offers, royalty projects, undergraduate and postgraduate studies, internships, professional development offers and others to which they may apply is something that the PEP has suggested

as well. The results above have shown the percentages of presence of every intelligence per semester and the program itself, this could be taken for research or studies about consolidating learning strategies to succeed in the standardized test *Saber Pro*.

All these suggestions were thought in order to provide to the program valuable and suitable information through the characterization of Multiple Intelligences – by Howard Gardner- in students of the bachelor degree program in Modern Languages, English and French of the University of Cauca, Santander de Quilichao, of the second academic period 2018.2.

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<http://portal.unicauca.edu.co/versionP/acerca-de-unicauca/facultades>
<http://portal.unicauca.edu.co/versionP/acerca-de-unicauca/facultades/facultad-de-ciencias-humanas-y-sociales>
<http://www.unicauca.edu.co/versionP/oferta-academica/programas-de-pregrado/lenguas-modernas>
<http://portal.unicauca.edu.co/versionP/boletin-estadistico>

12. APPENDIX:

12. 1 Test CUIM



UNIVERSIDAD DEL CAUCA
PROGRAMA DE LICENCIATURA EN LENGUAS MODERNAS INGLÉS-FRANCÉS
SANTANDER DE QUILICHAO, COLOMBIA
CUESTIONARIO DE INTELIGENCIAS MÚLTIPLES



Proyecto de investigación:

Caracterización de las inteligencias múltiples - de Howard Gardner- en los estudiantes del Programa de Licenciatura en Lenguas Modernas Inglés - Francés de la Universidad del Cauca, Santander de Quilichao, del segundo periodo académico 2018.2.

ESTIMADO PARTICIPANTE, Bajo su consentimiento y habiendo firmado el documento de consentimiento informado previo a la entrega de este formato, por favor conteste las siguientes preguntas:

Participante:	Semestre:
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INSTRUCCIONES: A Continuación hay una serie de frases. Ud. tiene que decidir si lo dicho en esas frases es o no cierto en su caso. Para responder, use la escala situada abajo. Si piensa que lo dicho en la frase es totalmente cierto en su caso. Marque con una equis (X) el número 7. Si piensa que lo dicho en la frase de ninguna manera es cierto en su caso, marque con una equis (X) el número 1. Si piensa que lo dicho en la frase es más o menos cierto en su caso, escriba el número entre el 1 y el 7 que mejor lo describa a usted.

1 2 3 4 5 6 7

De ninguna manera es cierto en mi caso

Es totalmente cierto en mi caso

Por favor, de acuerdo a su propio criterio responda tan acertadamente como le sea posible.

1. Inteligencia Lingüística	PUNTAJE 1-7
1. Desde niño(a) he disfrutado mucho el leer libros, revistas u otros escritos.	1 2 3 4 5 6 7
2. Aprendo el significado de voces que son nuevas para mí	1 2 3 4 5 6 7
3. Establezco las diferencias que hay entre palabras con significado parecido.	1 2 3 4 5 6 7
4. Mis amigos dicen que tengo facilidad para explicar diversos temas.	1 2 3 4 5 6 7
5. Escribo pequeñas historias, poesías o artículos.	1 2 3 4 5 6 7
6. Acostumbro usar una variedad de palabras cuando hablo o escribo.	1 2 3 4 5 6 7
7. Prefiero los exámenes en los que pueda desarrollar por escrito mis respuestas.	1 2 3 4 5 6 7
8. Soy hábil para recordar largas listas de palabras.	1 2 3 4 5 6 7
9. Cuando escribo una composición, escojo las palabras justas y precisas.	1 2 3 4 5 6 7
10. Al redactar sobre un tema, reflexiono sobre el orden que deben seguir las palabras.	1 2 3 4 5 6 7
<i>TOTAL:</i>	

2. Inteligencia Musical	PUNTAJE 1-7
1. Desde que era niño(a), la música es lo que más me ha agradado.	1 2 3 4 5 6 7
2. Entre las cosas que tengo, lo más importante son mis discos, casetes CD's o DVD's de música	1 2 3 4 5 6 7
3. Puedo recordar fácilmente las melodías de las canciones.	1 2 3 4 5 6 7
4. Recuerdo cosas, por ejemplo números de teléfonos, cuando sus nombres los repito a un ritmo musical.	1 2 3 4 5 6 7
5. Cuando escucho música, puedo decir qué instrumentos se están tocando	1 2 3 4 5 6 7
6. Una de las cosas que hago, es tocar un instrumento musical.	1 2 3 4 5 6 7
7. Cuando escucho música, puedo decir cuándo una nota no armoniza con las demás.	1 2 3 4 5 6 7
8. En el lugar que me encuentre, estoy atento a la música que se escuche.	1 2 3 4 5 6 7
9. La gente dice que tengo "buen oído" para la música o el canto.	1 2 3 4 5 6 7
10. Creo piezas musicales	1 2 3 4 5 6 7

TOTAL:	
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3. Inteligencia Lógico- Matemática	PUNTAJE 1-7
1. Desde niño(a), me han gustado las matemáticas.	1 2 3 4 5 6 7
2. Puedo hacer muchos cálculos mentalmente.	1 2 3 4 5 6 7
3. Disfruto resolviendo problemas lógicos y enigmas.	1 2 3 4 5 6 7
4. Me gusta jugar los juegos que exigen desarrollar el pensamiento lógico.	1 2 3 4 5 6 7
5. Con frecuencia me pregunto sobre el porqué de las cosas y busco aclararlas.	1 2 3 4 5 6 7
6. Las personas dicen que tengo una “calculadora” en mi cabeza.	1 2 3 4 5 6 7
7. Me es fácil resolver problemas matemáticos.	1 2 3 4 5 6 7
8. Para mí todo tiene una explicación lógica.	1 2 3 4 5 6 7
9. Pienso que las cosas son más claras cuando son medidas o cuantificadas.	1 2 3 4 5 6 7
10. Descubro fallas lógicas en lo que las personas dicen o escriben.	1 2 3 4 5 6 7
TOTAL:	

4. Inteligencia Espacial	PUNTAJE 1-7
1. Desde niño(a), he tenido facilidad para hacer buenos dibujos.	1 2 3 4 5 6 7
2. Me agrada diseñar modelos, o hacer maquetas a escala.	1 2 3 4 5 6 7
3. Recuerdo mejor la información cuando empleo gráficos	1 2 3 4 5 6 7
4. Encuentro fácilmente la ruta apropiada en zonas que no conozco.	1 2 3 4 5 6 7
5. Yo puedo imaginar cómo un objeto podría aparecer en diferentes posiciones.	1 2 3 4 5 6 7
6. Me es fácil leer mapas y trazarlos	1 2 3 4 5 6 7
7. Me gusta resolver los juegos de palabras cruzadas, laberintos o enigmas visuales.	1 2 3 4 5 6 7
8. Puedo imaginar con nitidez los lugares que he visitado.	1 2 3 4 5 6 7
9. Cuando diseño algo, puedo unir fácilmente sus partes en mi mente.	1 2 3 4 5 6 7
10. Me gusta desarmar un artefacto y luego armarlo tal como estaba.	1 2 3 4 5 6 7
TOTAL:	

5. Inteligencia Interpersonal	PUNTAJE 1-7
1. Me considero una persona que puede solucionar los problemas que pudieran existir entre mis amigos	1 2 3 4 5 6 7
2. Me doy cuenta rápidamente de cómo otras personas se sienten.	1 2 3 4 5 6 7
3. Las personas me consideran un líder o lideresa.	1 2 3 4 5 6 7
4. Me resulta fácil hacer amigos/as.	1 2 3 4 5 6 7
5. Prefiero los deportes que se juegan en grupo como el fútbol o el vóleybol.	1 2 3 4 5 6 7
6. Trabajo mejor en grupos donde puedo discutir los problemas con otros.	1 2 3 4 5 6 7
7. Me desagrada trabajar solo.	1 2 3 4 5 6 7
8. Frecuentemente participo en la organización de actividades sociales, deportivas o culturales.	1 2 3 4 5 6 7
9. Me desenvuelvo mejor cuando interactúo con otras personas.	1 2 3 4 5 6 7
10. A menudo comparto mis ideas y sentimientos con otros.	1 2 3 4 5 6 7
TOTAL:	

6. Inteligencia Intrapersonal	PUNTAJE 1-7
1. Me doy un tiempo exclusivo para pensar sobre los grandes asuntos de la vida.	1 2 3 4 5 6 7
2. La gente me ve como una persona solitaria.	1 2 3 4 5 6 7
3. He asistido al psicólogo u orientador para aprender más sobre mí.	1 2 3 4 5 6 7
4. Tengo una afición o interés especial que guardo sólo para mí.	1 2 3 4 5 6 7
5. Normalmente, yo sé cuáles son mis sentimientos sobre algo.	1 2 3 4 5 6 7
6. Yo prefiero pasar una tarde libre en casa que en una fiesta.	1 2 3 4 5 6 7
7. Reconozco con facilidad mis emociones.	1 2 3 4 5 6 7
8. Me es fácil describir lo que siento.	1 2 3 4 5 6 7
9. A menudo, me planteo preguntas acerca de los valores y creencias de las personas.	1 2 3 4 5 6 7
10. Mi manera de ser afecta el como yo aprendo	1 2 3 4 5 6 7

TOTAL:	
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7.Inteligencia Kinestésica	PUNTAJE 1-7
1. Regularmente participo en un deporte o una actividad física.	1 2 3 4 5 6 7
2. Yo puedo dominar nuevos deportes fácilmente	1 2 3 4 5 6 7
3. Me gusta trabajar haciendo cosas con mis manos.	1 2 3 4 5 6 7
4. Yo disfruto mucho el baile.	1 2 3 4 5 6 7
5. Me agrada estar en buena forma física, por lo cual hago bastante ejercicio.	1 2 3 4 5 6 7
6. Desde que estudie la primaria me han gustado las clases de educación física.	1 2 3 4 5 6 7
7. Frecuentemente hago gestos con las manos u otros movimientos del cuerpo cuando converso con alguien.	1 2 3 4 5 6 7
8. Tengo tendencia a tocar los objetos para sentir y examinar su textura.	1 2 3 4 5 6 7
9. Yo tengo una buena coordinación muscular.	1 2 3 4 5 6 7
10. Me han dado un premio o felicitación por una buena actuación en una competencia deportiva.	1 2 3 4 5 6 7
TOTAL:	

8.Inteligencia Naturalista	PUNTAJE 1-7
1. Me es fácil notar similitudes y diferencias que hay entre árboles.	1 2 3 4 5 6 7
2. Puedo reconocer y nombrar diferentes tipos de pájaros.	1 2 3 4 5 6 7
3. Cuando puedo, prefiero estudiar al aire libre.	1 2 3 4 5 6 7
4. Distingo y nombro diferentes tipos de plantas. 3	1 2 3 4 5 6 7
5. Me gusta sembrar plantas.	1 2 3 4 5 6 7
6. Prefiero pasar mi tiempo libre en el campo o cerca del mar.	1 2 3 4 5 6 7
7. Desde niño(a) me ha gustado estar en contacto con la naturaleza.	1 2 3 4 5 6 7
8. Aprendería mejor sobre los animales si los observara directamente en el campo.	1 2 3 4 5 6 7
9. Participo en actividades de protección del medio ambiente.	1 2 3 4 5 6 7
10. Disfruto estudiando temas de biología, anatomía, botánica o zoología	1 2 3 4 5 6 7
TOTAL:	

¡GRACIAS POR PARTICIPAR DE ESTE CUESTIONARIO!

ADAPTADO DE: Aliaga, J. et al (2012) Test CUIM. Las inteligencias múltiples: evaluación y relación con el rendimiento en matemática en estudiantes del quinto año de secundaria de lima metropolitana.

12.2 Testing Questionnaire for Data validation: CUIM data analysis first and second test; results (focal group: 3 samples)



UNIVERSIDAD DEL CAUCA
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SANTANDER DE QUILICHAO, COLOMBIA
CUESTIONARIO DE INTELIGENCIAS MÚLTIPLES



Proyecto de investigación:

Caracterización de las inteligencias múltiples - de Howard Gardner- en los estudiantes del Programa de Licenciatura en Lenguas Modernas, Inglés y Francés de la Universidad del Cauca, Santander de Quilichao, del segundo periodo académico 2018.2.

En el presente documento se registran los resultados obtenidos del **primer y segundo pilotaje** del Cuestionario de Inteligencias Múltiples (CUIM), aplicado el día 4 y 12 de Septiembre del 2018, bajo el consentimiento de los 21 estudiantes firmantes de noveno semestre, testigo - profesor Sandra Chacon, los investigadores y la asesora de la investigación.

Rango de puntaje: 70 (predominante) – 0 (débil).

- **PARTICIPANTE 164:**

PRIMER PILOTAJE	
INTELIGENCIA	PUNTAJE
Inteligencia Intrapersonal	51
Inteligencia Naturalista	46
Inteligencia Kinestésica	44
Inteligencia Lingüística	34
Inteligencia Lógico-matemática	29
Inteligencia Interpersonal	26
Inteligencia Espacial	26
Inteligencia Musical	20

SEGUNDO PILOTAJE	
INTELIGENCIA	PUNTAJE
Inteligencia Intrapersonal	48
Inteligencia Naturalista	37
Inteligencia Interpersonal	36
Inteligencia Kinestésica	33
Inteligencia Lógico-matemática	26
Inteligencia Lingüística	21
Inteligencia Musical	21
Inteligencia Espacial	17

- **PARTICIPANTE 165:**

PRIMER PILOTAJE

INTELIGENCIA	PUNTAJE
Inteligencia Intrapersonal	63
Inteligencia Naturalista	51
Inteligencia Musical	44
Inteligencia Espacial	40
Inteligencia Interpersonal	37
Inteligencia Lógico-matemática	33
Inteligencia Lingüística	32
Inteligencia Kinestésica	20

SEGUNDO PILOTAJE

INTELIGENCIA	PUNTAJE
Inteligencia Intrapersonal	50
Inteligencia Naturalista	40
Inteligencia Musical	38
Inteligencia Interpersonal	38
Inteligencia Lingüística	33
Inteligencia Lógico-matemática	26
Inteligencia Espacial	26
Inteligencia Kinestésica	19

- **PARTICIPANTE 166:**

PRIMER PILOTAJE

INTELIGENCIA	PUNTAJE
Inteligencia Kinestésica	66
Inteligencia Lógico-matemática	59
Inteligencia Lingüística	42
Inteligencia Interpersonal	41
Inteligencia Intrapersonal	40
Inteligencia Espacial	39
Inteligencia Naturalista	26
Inteligencia Musical	24

SEGUNDO PILOTAJE

INTELIGENCIA	PUNTAJE
Inteligencia Kinestésica	53
Inteligencia Lógico-matemática	53
Inteligencia Interpersonal	40
Inteligencia Espacial	38
Inteligencia Lingüística	34
Inteligencia Musical	31
Inteligencia Naturalista	24
Inteligencia Intrapersonal	23

12.3 Informed concern signatures paper



UNIVERSIDAD DEL CAUCA

DEPARTAMENTO DE LENGUAS EXTRANJERAS

PROGRAMA DE LICENCIATURA EN LENGUAS MODERNAS INGLÉS-FRANCÉS

SANTANDER DE QUILICHAO, COLOMBIA

FORMATO DE CONSENTIMIENTO INFORMADO

Proyecto de investigación:

Caracterización de las inteligencias múltiples - de Howard Gardner- en los estudiantes del Programa de Licenciatura en Lenguas Modernas Inglés - Francés de la Universidad del Cauca, Santander de Quilichao, del segundo periodo académico 2018.2.

El siguiente formato de consentimiento informado, se suministrará a los participantes como herramienta para caracterizar las inteligencias múltiples en predominantes, comunes y débiles.

De esta manera, los datos aportados durante la realización del estudio se mantendrán confidenciales y bajo ningún motivo se mencionarán sus nombres en el estudio, su participación es apreciada y de gran ayuda para los propósitos de desarrollo de la investigación, si el participante desea conocer el resultado de su prueba, deberá comunicarse con la asesora de la investigación, Adriana Idrobo. Así pues, el cuestionario a realizar por ustedes, participantes, es un compendio de preguntas cerradas que arrojarán mediante la suma de los puntos equivalentes a cada respuesta que contesten, un promedio correspondiente al tipo de inteligencia predominante, común y débil. Los resultados obtenidos serán valederos para la investigación al firmar este documento. En caso de presentar dudas después de leer el documento, siéntase libre de exponerlas a los investigadores, quienes las resolverán en la medida de lo posible, de forma que usted tenga claridad y confianza acerca de los métodos y forma del estudio. La decisión de participar del estudio es voluntaria.

Firmado en Santander de Quilichao el 1 de octubre del 2018, siguiendo el siguiente modelo de consignación de firmas (hojas de firmas en 20 folios adjuntos):

Las personas abajo firmantes, hemos leído y escuchado satisfactoriamente las explicaciones sobre este estudio y hemos tenido la oportunidad de hacer preguntas. Autorizamos el uso de la información para los propósitos de la investigación. Expresamos nuestro acuerdo para participar voluntariamente en este estudio por medio de nuestra firma y número de identificación.



• Firma: [Firma]
 Nombre del participante: Liliana Salgado Mesa
 Número de identificación: 1110566990

• Firma: [Firma]
 Nombre del participante: Donela Andrea Vargas
 Número de identificación: 1020802050

• Firma: [Firma]
 Nombre del participante: Astrid Tulema Cruz Murcia
 Número de identificación: T.I.: 3067453356

• Firma: [Firma]
 Nombre del participante: Janiel Andrea Perce M.
 Número de identificación: 1060325711

• Firma: [Firma]
 Nombre del participante: Juan Camilo Bonilla Asilar
 Número de identificación: C.C. 105992046

• Firma: [Firma]
 Nombre del participante: Carolina Córdoba Alvar
 Número de identificación: CC. 1084239808

• Firma: [Firma]
 Nombre del participante: Juan Pablo Gómez G.
 Número de identificación: 112.483.586

• Firma: [Firma]
 Nombre del participante: Johanna Andrea Cabrera
 Número de identificación: 1062379722

• Firma: [Firma]
 Nombre del participante: Harrison Rivera Tigue
 Número de identificación: 1.112.495.375

• Firma: [Firma]
 Nombre del participante: Gabriela Rodríguez
 Número de identificación: 1.151.970.542

• Firma: [Firma]
 Nombre del participante: Oscar Alfonso Osunaga
 Número de identificación: 1061429070

• Firma: [Firma]
 Nombre del participante: Greicia Fernanda Lara
 Número de identificación: 1144194119



• Firma: Estefania Ordoñez
 Nombre del participante: Yulissa Estefania Ordoñez Bastidas
 Número de identificación: 1006848504

• Firma: Samuel Marin
 Nombre del participante: Samuel E. Marin Londoño
 Número de identificación: 1144101295

• Firma: Lisbeth Pil Z.
 Nombre del participante: Lisbeth Pil Zetty.
 Número de identificación: 1060106839A

• Firma: Yamileth Ramos
 Nombre del participante: Yamileth Ramos
 Número de identificación: 1007348551

• Firma: JALMIN ALFONSO VELASCO
 Nombre del participante: JALMIN ANDREA ALFONSO VELASCO
 Número de identificación: 1007753722

• Firma: [Firma]
 Nombre del participante: Nathalia Sánchez
 Número de identificación: 1004573054

• Firma: Laura Marcela Ramírez
 Nombre del participante: Laura Marcela Ramírez
 Número de identificación: 1002962913

• Firma: Malen Sálvez
 Nombre del participante: Márlen S
 Número de identificación: 1-008-234.169

• Firma: Catherine Taguinas
 Nombre del participante: Catherine Taguinas
 Número de identificación: 1006205726

• Firma: Valentina Castaño F
 Nombre del participante: Valentina F.
 Número de identificación: 1005969443

• Firma: [Firma]
 Nombre del participante: Yerson Pillimue
 Número de identificación: 1002947477

• Firma: Kate Dorado Ll. Lantén
 Nombre del participante: Kate Angelique Dorado Llantén
 Número de identificación: 1002957084



• Firma: [Firma]
 Nombre del participante: Jhonatan Jaramillo
 Número de identificación: 1062330737

• Firma: [Firma]
 Nombre del participante: Daniela Zambrano Palomino
 Número de identificación: 1061777407

• Firma: [Firma]
 Nombre del participante: Eyden Deyed Botinos
 Número de identificación: 1003371031

• Firma: [Firma]
 Nombre del participante: Elisabet Lorena B.
 Número de identificación: 1006189338

• Firma: [Firma]
 Nombre del participante: Carlos Manuel Chicangana S.
 Número de identificación: 1107518571

• Firma: [Firma]
 Nombre del participante: Yuri Natalia Jimenez
 Número de identificación: 1.112.496.438

• Firma: [Firma]
 Nombre del participante: Christian Steven Cordoba
 Número de identificación: 1113692599

• Firma: [Firma]
 Nombre del participante: Alejandro Mora
 Número de identificación: 1002326189

• Firma: [Firma]
 Nombre del participante: Julian Felipe Villegas
 Número de identificación: 1130620494

• Firma: [Firma]
 Nombre del participante: Gabriela Araujo
 Número de identificación: 1062336117

• Firma: [Firma]
 Nombre del participante: Jobant Montano
 Número de identificación: 1062719473

• Firma: [Firma]
 Nombre del participante: Yineth Lorena Gosa
 Número de identificación: 1061799349



• Firma: Marela Mury

Nombre del participante:
Marela Marcela Mury
Número de identificación:
1023902027

• Firma: Karen Orozco

Nombre del participante:
Karen Johana Orozco
Número de identificación:
1062327322

• Firma: Mayra Molato

Nombre del participante:
Mayra Brighith Molato Bonilla
Número de identificación:
1034988507

• Firma: Jose Edwin

Nombre del participante:
Jose Edwin Zapata Fony
Número de identificación:
101815011797

• Firma: [Firma]

Nombre del participante:
LUIS ALBERTO MEDINA PEÑA
Número de identificación:
1062310114

• Firma: Gilmer Chayo

Nombre del participante:
Gilmer Kenny Chayo Caso
Número de identificación:
1060108134

• Firma: Daniela Medina

Nombre del participante:
Daniela Medina
Número de identificación:
1114890610

• Firma: Juliana Campo V

Nombre del participante:
Juliana Campo V
Número de identificación:
1062302085

• Firma: [Firma]

Nombre del participante:
Oscar Camilo
Número de identificación:
1062286471

• Firma: [Firma]

Nombre del participante:
Julio Cesar Torres
Número de identificación:
1004623425

• Firma: Astrid Quiroga

Nombre del participante:
Astrid Quiroga
Número de identificación:
7062313390

• Firma: [Firma]

Nombre del participante:
[Firma]
Número de identificación:
1107527091



• Firma: Jhon Herrera
 Nombre del participante: Jhon Heredia Mesa Gomez
 Número de identificación: 1007476212

• Firma: Tatiana Díaz
 Nombre del participante: Jaime Tatiana Díaz G.
 Número de identificación: 1005965180

• Firma: Ehymy villa
 Nombre del participante: Ehymy Daniela Villa
 Número de identificación: 1007115891

• Firma: Diego Pablo Quiñones M.
 Nombre del participante: Diego Pablo Quiñones Meneses
 Número de identificación: 1005893894

• Firma: Braycen Davan Suárez
 Nombre del participante: Braycen Davan Suárez M.
 Número de identificación: 1007626539

• Firma: Lizeth Daryana Otero
 Nombre del participante: Lizeth Daryana Otero
 Número de identificación: 1062332900

• Firma: José Jarama
 Nombre del participante: José Cerón Jurado
 Número de identificación: 1067820694

• Firma: ANER DAVID
 Nombre del participante: ANER DAVID NARVAEZ ROSADA
 Número de identificación: 1.062.335.605

• Firma: Luisa Cuero
 Nombre del participante: Luisa Fernanda Cuero Mosquera.
 Número de identificación: 1.005.868.982

• Firma: Mauricio Pabón
 Nombre del participante: Edilson Mauricio Pabón Pabón
 Número de identificación: 1084260879

• Firma: Natalia Guerra S.
 Nombre del participante: Natalia Guerra Sánchez
 Número de identificación: 112246889

• Firma: Eulín Castro
 Nombre del participante: Eulín Johana Castro
 Número de identificación: 1.062.329.590

Jessica Ariza
Número de identificación:

1007685.310

• Firma:

Jenny Coque

Nombre del participante:

Jenny Coque López

Número de identificación:

1062312543.

• Firma:

Laura Escobar

Nombre del participante:

Laura Beth Escobar Lasso

Número de identificación:

1112.497.470

• Firma:

Caterine Ipiá J.

Nombre del participante:

Caterine Ipiá J.

Número de identificación:

1114.894.951

Johan Campo Urbano C.
Número de identificación:

1062327942

• Firma:

[Signature]

Nombre del participante:

Radharoni Mezu

Número de identificación:

1062331375

• Firma:

Nestor Ansolada P.

Nombre del participante:

Nestor Ansolada Ramos

Número de identificación:

1112492957

• Firma:

[Signature]

Nombre del participante:

Diana Rojas Ruales

Número de identificación:

1086697042.



• Firma: Javier S

Nombre del participante:
Javier Semanate y
Número de identificación:
1002810765

• Firma: Leonardo Fabio Muñoz

Nombre del participante:
Leonardo Fabio Muñoz
Número de identificación:
1004730933

• Firma: Angela P. Amu, Minda

Nombre del participante:
Angela Patricia Amu Minda
Número de identificación:
1062314831

• Firma: Natalia Rosero Zamunáte

Nombre del participante:
Yanifer Natalia Rosero Zamunáte
Número de identificación:
1062320890

• Firma: Laura P.

Nombre del participante:
Laura P. Hurtado
Número de identificación:
1107100738

• Firma: Yud Celeny Medina B

Nombre del participante:
YUD CELENY MEDINA BENAVIDEZ
Número de identificación:
1112487150

• Firma: Juliana Pino

Nombre del participante:
Juliana Pino
Número de identificación:
1767092206

• Firma: Danyela Betancur C.

Nombre del participante:
Danyela Betancur
Número de identificación:
1062321964

• Firma: Jeniffer Gómez R.

Nombre del participante:
Jeniffer Gómez Rivera
Número de identificación:
1062.297189

• Firma: Josephanny Gc

Nombre del participante:
Josephanny Giveto Castaño
Número de identificación:
1112493721

• Firma: Lina Vanessa Balanta

Nombre del participante:
Lina Vanessa Balanta 2
Número de identificación:
11070.92359

• Firma: Pedro JTH

Nombre del participante:
Pedro Jose Torres Hurtado
Número de identificación:
1006972300



• Firma: Valeria Lucumi
 Nombre del participante:
Valeria Lucumi Vasquez
 Número de identificación:
1130951175

• Firma: Diego Heimon Medina
 Nombre del participante:
Diego Heimon Medina
 Número de identificación:
1060104325

• Firma: Isabela Chocó
 Nombre del participante:
Isabela Chocó
 Número de identificación:
1003392950

• Firma: Geraldine Jiménez G.
 Nombre del participante:
Geraldine Jiménez González
 Número de identificación:
1007140594

• Firma: Daniela Solís Lizcano
 Nombre del participante:
Daniela Solís L.
 Número de identificación:
1059990782

• Firma: Andrés Castillo
 Nombre del participante:
Andrés Felipe Castillo C.
 Número de identificación:
1062330764

• Firma: Gizeth Ramos Viáfara
 Nombre del participante:
Gizeth Ramos V.
 Número de identificación:
1062324900

• Firma: Darysury G.
 Nombre del participante:
Darysury Granada J.
 Número de identificación:
1007151136

• Firma: Nasly Judith Pavi
 Nombre del participante:
Nasly Judith Pavi Flóndez
 Número de identificación:
1061789208

• Firma: Morles Angulo C.
 Nombre del participante:
Morles Angulo C.
 Número de identificación:
94439765

• Firma: Luis E. Barona
 Nombre del participante:
Luis E. Barona Barona
 Número de identificación:
1061438756

• Firma: Angélica M^a Merd
 Nombre del participante:
Angélica María Meram.
 Número de identificación:
1062309802



• Firma: David Estiben medina
 Nombre del participante:
David Estiben medina
 Número de identificación:
1062322761

• Firma: [Firma]
 Nombre del participante:
David Gonzalez
 Número de identificación:
1062374853

• Firma: Donela Samboni
 Nombre del participante:
101814010756 cod.
 Número de identificación:

• Firma: Andrés Orlando Zúñiga M.
 Nombre del participante:
Andrés Orlando Zúñiga Martínez
 Número de identificación:
1062319576

• Firma: Viviana P. Iyaji Samboni
 Nombre del participante:
Viviana P. Iyaji Samboni
 Número de identificación:
1113682373

• Firma: [Firma]
 Nombre del participante:
Carolina Fernández S.
 Número de identificación:
1062299862

• Firma: [Firma]
 Nombre del participante:
Eliana Lizeth Collahuazo
 Número de identificación:
1062311218

• Firma: Valeria Flórez Jiménez
 Nombre del participante:
Valeria Flórez Jiménez
 Número de identificación:
1'113.678.826

• Firma: Erick Barwe Camayo
 Nombre del participante:

 Número de identificación:
1060106447

• Firma: [Firma]
 Nombre del participante:
Francisco González
 Número de identificación:
1062320566

• Firma: Juan Carlos Escue Morales
 Nombre del participante:

 Número de identificación:
1062315024

• Firma: Aector M. Loayza
 Nombre del participante:

 Número de identificación:
1062290836



• Firma: Maira Vasquez
 Nombre del participante:
Maira Alejandra Vasquez
 Número de identificación:
1007433084

• Firma: Maria Cecilia Campuzano
 Nombre del participante:
Maria Cecilia Campuzano
 Número de identificación:
10623350939

• Firma: Valeria Perez
 Nombre del participante:
Valeria Perez
 Número de identificación:
1144171734

• Firma: Stiana H. Casmey
 Nombre del participante:
Stiana Marcela Casmey
 Número de identificación:
1061810598

• Firma: Yesica Fernandez Gomez B.
 Nombre del participante:
Yesica Fernandez Gomez Balunas
 Número de identificación:
1058974223

• Firma: Maria I Casme F.
 Nombre del participante:
Maria Isabel Casme F
 Número de identificación:
1005872783

• Firma: Diana S Gomez
 Nombre del participante:
Diana Michelle Sandomen
 Número de identificación:
1007145396

• Firma: Natalia Ruiz Ross
 Nombre del participante:
Natalia Ruiz Ross
 Número de identificación:
1005873051

• Firma: Julietta Marcela Burgos
 Nombre del participante:
Julietta Marcela Burgos
 Número de identificación:
1114733809

• Firma: Nataly Ortiz
 Nombre del participante:
Nataly Ortiz Claros
 Número de identificación:
1082780236

• Firma: Xiomara Velasco
 Nombre del participante:
Xiomara Velasco V.
 Número de identificación:
1002961345

• Firma: Nidia Valencia
 Nombre del participante:
Nidia Isabel Valencia Ortiz
 Número de identificación:
1192892046



• Firma: JENNIFER ALEXANDRA REVELO
 Nombre del participante: Jennifer Alexandra Revelo
 Número de identificación: 1062328481

• Firma: Katherin Cortez Cerón
 Nombre del participante: Katherin Cortez Cerón
 Número de identificación: 7.144.204.124

• Firma: Natalia Morera Figueroa
 Nombre del participante: Natalia Morera Figueroa
 Número de identificación: 1002951837

• Firma: Angie Tello Cb
 Nombre del participante: _____
 Número de identificación: 108532456

• Firma: Vanesa Herrera
 Nombre del participante: Jady Vanesa Herrera
 Número de identificación: 1.088.598.577

• Firma: Daniela C. Hernández
 Nombre del participante: Daniela Ceros Hernández
 Número de identificación: 1062 336 397

• Firma: Karol Yuliana Dorado
 Nombre del participante: Karol Yuliana Dorado
 Número de identificación: 1003102432

• Firma: Kevin Osorio
 Nombre del participante: Kevin Miguel Osorio Prieto
 Número de identificación: 1144193501

• Firma: Luisa María Cobo Rivera
 Nombre del participante: Luisa María Cobo Rivera
 Número de identificación: 1007786095

• Firma: Cristian A.
 Nombre del participante: Cristian Azaña Salazar
 Número de identificación: 1062329499

• Firma: Jheisson A.
 Nombre del participante: Jheisson Andrey Fernández
 Número de identificación: 1061.544.210

• Firma: Leicy Palindara
 Nombre del participante: Leicy Karina Oreyuela
 Número de identificación: 1062 333 610



• Firma: Kama Suarez Diaz
 Nombre del participante:
Kama Daniela Suarez Diaz
 Número de identificación:
1112485175

• Firma: Nereida C Perez.
 Nombre del participante:
Nereida Cuchimba Pérez.
 Número de identificación:
1062333336

• Firma: Linda Lucia Herrera
 Nombre del participante:
Linda Lucia Herrera
 Número de identificación:
1062328849

• Firma: Linda Zapata
 Nombre del participante:
Linda Zapata
 Número de identificación:
1062331763

• Firma: Yicela Orozco Ospina
 Nombre del participante:
Yicela Orozco Ospina.
 Número de identificación:
1107078772

• Firma: Juan Morales Carcedo
 Nombre del participante:
Natalia Morales Carcedo
 Número de identificación:
1002888772

• Firma: Juan Pablo Lara.
 Nombre del participante:
Juan Pablo Lara Cuetia
 Número de identificación:
1062321335

• Firma: Alexy Fernanda Saez
 Nombre del participante:
Alexy Saez
 Número de identificación:
1001438181

• Firma: Juan Sebastian Campo
 Nombre del participante:
Juan Sebastian Campo Garcia
 Número de identificación:
1062329962

• Firma: Juan Sebastian Sepia
 Nombre del participante:
Juan Sebastian Sepia
 Número de identificación:
1002970436

• Firma: Lida Magaly Veigara Diaz
 Nombre del participante:
Lida Magaly Veigara Diaz
 Número de identificación:
1.060.363.182

• Firma: July checa
 Nombre del participante:
July marcela Herrera checa
 Número de identificación:
1.143.875613.



• Firma: Yerson Reyes

Nombre del participante:
Yerson Alexander Montoya Reyes
Número de identificación:
1062523397

• Firma: Luis Mauricio

Nombre del participante:
Luis Mauricio Guerrero
Número de identificación:
1112495720

• Firma: Luis David

Nombre del participante:
Luis David Castillo
Número de identificación:
1005860599

• Firma: [Firma]

Nombre del participante:
Cristian Muñoz
Número de identificación:
1002967047

• Firma: Valentina Rendón

Nombre del participante:
Daniela Valentina Rendón
Número de identificación:
1061817688

• Firma: José David

Nombre del participante:
José David Jiménez
Número de identificación:
1005783747



• Firma: Alejandro S.

Nombre del participante:
Alejandro Sábata Novoa
Número de identificación:
1062319158

• Firma: Martury Garcia T.

Nombre del participante:
Martury Garcia Culuaga
Número de identificación:
1006997796

• Firma: Angie Valentina Ariad

Nombre del participante:
Angie Valentina Ariad
Número de identificación:
1002946076

• Firma: Natley

Nombre del participante:
Natalia Mulcove Hurtado
Número de identificación:
1063488435

• Firma: Flora M. Torrey Hurtado

Nombre del participante:
Flora Maria Torrey Hurtado
Número de identificación:
1066972299

• Firma: Juliana Cabezas

Nombre del participante:
Juliana Cabezas
Número de identificación:
1144185988



• Firma: J. David C.B.
 Nombre del participante:
Julian David Castillo Burbano
 Número de identificación:
1.194.203.793

• Firma: Paola Rodriguez
 Nombre del participante:
Paola Andrea Rodriguez Canter
 Número de identificación:
1.112.495.407

• Firma: Natalia M. Paz
 Nombre del participante:
LEIDA NATALIA MOSQUERA PAZ
 Número de identificación:
1.061.792.306

• Firma: Geraldin Zapata L.
 Nombre del participante:
Geraldine Zapata López
 Número de identificación:
1.062.333.757

• Firma: MARIA CAMILA PAZ BURTICA
 Nombre del participante:
MARIA CAMILA PAZ BURTICA
 Número de identificación:
1062325391

• Firma: JHAN Jairo Peña M.
 Nombre del participante:
JHAN JAIRO PEÑA MORA
 Número de identificación:
1062332402

• Firma: Tania Zuley Tumbala
 Nombre del participante:
Tania Zuley Tumbala Escobar
 Número de identificación:
1062331143

• Firma: [Firma]
 Nombre del participante:
Hector Nina Garcia
 Número de identificación:
1060419209

• Firma: Antonio J. Rojas
 Nombre del participante:
Antonio José Rojas S
 Número de identificación:
1.061.769.244

• Firma: Luis Manuel Sardon M.
 Nombre del participante:

 Número de identificación:
1061439216

• Firma: Natalia Sandoval A.
 Nombre del participante:
Natalia Sandoval A.
 Número de identificación:
1.112.408.526

• Firma: Valeria Florez Rodriguez
 Nombre del participante:
Valeria Florez Rodriguez
 Número de identificación:
1062331456



• Firma: Mabel Otero Osna

Nombre del participante:
Mabel Otero Osna
Número de identificación:
1007476996

• Firma: Heidy Farioly Velasco B.

Nombre del participante:
Heidy Farioly Velasco Becerra
Número de identificación:
1062316419

• Firma: Samuel León

Nombre del participante:
Samuel David León Acevedo
Número de identificación:
1062330895

• Firma: Diana Melissa Mosquera M.

Nombre del participante:
Diana Melissa Mosquera M.
Número de identificación:

• Firma: Henio Gutierrez B.

Nombre del participante:
Henio Gutierrez Balanta
Número de identificación:
1062330438

• Firma: Daniela Motato Tronchet

Nombre del participante:
Daniela Motato Tronchet
Número de identificación:
1061539147

• Firma: Ana María Burbubana M.

Nombre del participante:
Ana María Burbubana Mafrey
Número de identificación:
1062315683

• Firma: Yany M. Muñoz Gómez

Nombre del participante:
Yany M. Muñoz Gómez
Número de identificación:
1424316384

• Firma: Juan

Nombre del participante:
Juan Sebastián Hernández
Número de identificación:
1099847288

• Firma: Daniela Lasso Chocó

Nombre del participante:
Daniela Lasso Chocó
Número de identificación:
1007151300

• Firma: KM

Nombre del participante:
Kelly Dahiana Montero y
Número de identificación:
CC. 1062334580

• Firma: _____

Nombre del participante:

Número de identificación:



• Firma: Dayanna L.

Nombre del participante:
Dayanna Cecilia Lerma
Número de identificación:
1.113.537.293

• Firma: Christian L. Heredia

Nombre del participante:
Christian Leonardo Heredia Muñoz
Número de identificación:
1.062.326.701

• Firma: Dulce Zúñiga

Nombre del participante:
Dulce Zúñiga
Número de identificación:
37617882

• Firma: Freyder Estacio C.

Nombre del participante:
Freyder Estacio Calzada
Número de identificación:
1062325818

• Firma: Astid P. Bolaños

Nombre del participante:
Astid Priscilla Bolaños
Número de identificación:
1.062.306.904

• Firma:

Nombre del participante:

Número de identificación:

• Firma: Melanny Arias

Nombre del participante:
Melanny Arias
Número de identificación:
1059066804

• Firma:

Nombre del participante:

Número de identificación:

• Firma: Donela Andrea Vargas

Nombre del participante:
Donela Andrea Vargas
Número de identificación:
1.020.802.050

• Firma:

Nombre del participante:

Número de identificación:

• Firma:

Nombre del participante:

Número de identificación:

• Firma:

Nombre del participante:

Número de identificación:



• Firma: Geraldine Garna Ramos
 Nombre del participante: Geraldine Garna Ramos
 Número de identificación: 1062032758

• Firma: _____
 Nombre del participante: _____
 Número de identificación: _____

• Firma: Eliana Zambrano
 Nombre del participante: Eliana Zambrano
 Número de identificación: 1178224853

• Firma: _____
 Nombre del participante: _____
 Número de identificación: _____

• Firma: Andrés Felipe Gómez
 Nombre del participante: Andrés Felipe Gómez O.
 Número de identificación: 1061766755

• Firma: _____
 Nombre del participante: _____
 Número de identificación: _____

• Firma: Gioergui Diaz P
 Nombre del participante: Gioergui Diaz P
 Número de identificación: 1059067286

• Firma: _____
 Nombre del participante: _____
 Número de identificación: _____

• Firma: Carolina Orozco
 Nombre del participante: Carolina Orozco
 Número de identificación: 34614419

• Firma: _____
 Nombre del participante: _____
 Número de identificación: _____

• Firma: Angie Gabriela Mueses
 Nombre del participante: Angie Gabriela Mueses
 Número de identificación: 1088778207

• Firma: _____
 Nombre del participante: _____
 Número de identificación: _____



• Firma: Enna J. Hernandez
 Nombre del participante: Enna Julieth Hernandez V
 Número de identificación: 1149696660

• Firma: Christina Jimenez V.
 Nombre del participante: Christina Jimenez Valencia
 Número de identificación: 1062312021

• Firma: Alexandra Bages
 Nombre del participante: Dayana Alexandra Bages Guelio
 Número de identificación: 1062325120

• Firma: _____
 Nombre del participante: _____
 Número de identificación: _____

• Firma: Daniel Andres
 Nombre del participante: Daniel Andres Morero Obena
 Número de identificación: 1062314271

• Firma: _____
 Nombre del participante: _____
 Número de identificación: _____

• Firma: Ana Maria Garcia Caracas
 Nombre del participante: Ana Maria G.
 Número de identificación: 1.144.088.731

• Firma: _____
 Nombre del participante: _____
 Número de identificación: _____

• Firma: Francisco J. Forero G.
 Nombre del participante: Francisco Javier Forero G.
 Número de identificación: 1062290996

• Firma: _____
 Nombre del participante: _____
 Número de identificación: _____

• Firma: Maira Alejandra Vargas M.
 Nombre del participante: Maira Alejandra Vargas Mejia
 Número de identificación: 1.143.851.705

• Firma: _____
 Nombre del participante: _____
 Número de identificación: _____



Nombre del investigador: Sebastián Palacios Vidal

Número de identificación: 1.061.437.746

Firma: [Firma manuscrita]

Nombre del investigador: Natalia Yopez Perdomo

Número de identificación: 1.062.323.082

Firma: NATALIA YOPÉZ P.

Nombre de la asesora de la investigación: Adriana Idrobo Hurtado

Número de identificación: 54571909

Firma: [Firma manuscrita]

Testigo: Sandra Lilibiana Chacón Flor

Número de identificación: 34.329.173 Pop.

Firma: [Firma manuscrita]

Fecha: 01-10-2018