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Mechanisms And Strategies To Address Special Educational Needs For The Visually Impaired.

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Abstract
The inclusion of people with disabilities in regular education is especially important. Higher education institutions have a social responsibility to facilitate the incorporation of these minorities in this level because they have no other training alternatives. There is a group of blind and visually impaired students in the various educational programs at the Universidad Estatal de Guayaquil. The current study's objective was to analyze the aids and instructional support needed by the target population for their effective inclusion in the university's programs. The case study is the methodological reference of the project. To accomplish our research objective, open-ended interviews were conducted with seven students registered in the institution. The interview results are presented as a cross analysis or contrasting cases, which reveal the degree of vision as an incident in their pathways, and the need for support that should be promoted at this University.
Keywords: attention, inclusion, disability, blindness, performance,

INTRODUCTION

In the educational field, the inclusion of people with disabilities is of special importance for making the social integration of any country a reality, where higher education plays a significant role in achieving this. With educational inclusion, for example (Martinez, 2021), the aim is to promote the expansion and democratization of training opportunities within the framework of lifelong learning and education as a right (Barragán, 2023).

In this context, special attention must be paid to marginalized and vulnerable groups—people and groups who cannot exercise their right to education—to develop the full potential of each individual. An inclusive and quality education is based on the right of all students to receive an education of high quality that meets their basic learning needs (Tacusi, 2023), as all children have the right to an inclusive education. However, in this inclusive perspective, it is ironically the middle and higher education levels that are excluded, as the focus is on basic education (Paz, 2020).

In Ecuador, there are 49,034 people with visual disabilities; the attention to this group in the country has been focused on the foundation of special schools, which do not use appropriate teaching strategies for students with visual disabilities (Jaramillo, 2022). This constitutes an act of segregation, as it is based on an exclusionary process where students with visual disabilities are segregated from regular schools. Therefore, in Ecuador, special education offerings have been oriented toward basic education, which includes Primary Education, with the creation of institutions that teach essential knowledge through specific support systems such as the Braille system for people with visual impairments.

Despite these initiatives, it was not until 2008 that Ecuador passed the General Law for People with Disabilities, which

served as a precursor to the General Law for the Inclusion of People with Disabilities, enacted in 2011. This second law, in addition to broadening and clarifying the prerogatives of people with disabilities in various areas of national life, introduces the term "inclusion" in its title and emphasizes the concept of human rights in its content. Its purpose is to promote, protect, and ensure the full exercise of the human rights and fundamental freedoms of people with disabilities (Hernández and Samada, 2021), ensuring their full inclusion in society within a framework of respect, equality, and equal opportunities (Rodríguez et al., 2021).

Given the inclusion problems of people with disabilities in Ecuador and considering the high prevalence of people with visual problems, the objective of this research was to identify the mechanisms and strategies to address the special educational needs of people with visual disabilities, highlighting the advantages and disadvantages of these mechanisms, as well as their feasibility of use in the Ecuadorian educational system for a truly inclusive education.

Theoretical Framework

Contextualization of the Problem

According to the National Council for Disability Equality (CONADIS), there are 49,034 people with some form of visual disability nationwide, with 10,733 people identified in the province of Guayas, representing 21.89% of the total, which is above the national average. Despite this, no law has been issued within the province of Guayas to aid the social inclusion of people with this type of disability and to help integrate this population into the labor, educational, cultural, and social sectors (Álava et al., 2022).

In Ecuador, a little over a quarter of this minority (26.3%) lack education; this figure is 3.5 times higher than the percentage of people without disabilities. The average education level for people with disabilities is 4.5 years, equivalent to four years of primary school. By age group, the difference in the highest level of education attained shows significant delays in the attention given to young people and adults with disabilities (Ramirez et al., 2023).

Particularly, in higher secondary education, the difference between young people with disabilities and their counterparts without disabilities is twelve percentage points. In higher education, the difference between adults with and without disabilities is eleven percentage points (CONADIS, 2016). The figures above highlight the vulnerable situation of this population group.

In the country, there is already a population with some form of disability who have completed their high school education (Flores and Álava, 2020) and are in a position to continue their professional studies. This is a situation that higher education institutions will likely face, and they must modify certain policies and infrastructure to serve the growing population with disabilities, as they have not yet created special programs.

The creation of special higher education institutions for this population is an unfeasible and exclusionary idea. Regular public universities, whether public or private, must assume the social responsibility of welcoming these students and create policies, programs, and strategies that facilitate their transition and encourage the completion of their professional studies to help them achieve true individual autonomy (Andrade et al., 2020).

Educational Attention to People with Visual Disabilities: From the Assistive Model to Educational Inclusion

Educational attention to people with visual disabilities is not new in our country or in the world. The concern for educating people with visual disabilities dates back long before the 18th century, when the first school for visually impaired children and adolescents was created in France. This marked the beginning of the development of special education for the visually impaired, or "typhlopedagogy," the object of which is the education and the teaching-learning process for children and adolescents with visual disabilities (Vásquez and Cancino, 2022).

In this context, attention to people with visual disabilities began in the 19th century when Valentin Haüy founded the first school for the visually impaired in Paris in 1784; later, in 1804, Johan Klein founded a similar school in Vienna, followed by others in 1832 in the United States and in Cuba in 1878. In the 20th century, education for the blind began in different parts of the world: in Latin America and Barcelona in 1893; Chile in 1900; Colombia in 1925; Peru in 1935; Venezuela in 1936; and Uruguay in 1950. In Mexico, in 1870, the National School for the Visually Impaired was opened,

becoming the first of its kind in Latin America. After World War II, there was a qualitative and quantitative leap in medical, professional, and social attention (Macias and Antúnez, 2021).

The Search for Employment Solutions

In the 20th century, education for the blind began in different parts of the world, focusing on ensuring their quality of life and a better future with equal rights, possibilities, and opportunities, based on their developmental characteristics and needs. The attention to these groups has been translated into educational models that started with special education schools, then moved to integration schools, and finally to inclusive ones (Espinal, 2022).

The latter is considered a social model for people who face barriers to learning and participation, with foundations based on the international educational policy of Education for All, established by UNESCO. This policy is based on the human right every person has to receive an education without discrimination based on race, gender, or social status, as well as the rights of people with disabilities, including visual disabilities (Del Álamo and Polo, 2021).

The inclusive education model has been the subject of discussion and debate around four main themes: the first focuses on approaches, scopes, and content, aiming to better understand the theory and practice of inclusive education. In this regard, (Duk and Murillo, 2020) mention that inclusive education has gained ground as a movement that challenges and rejects policies, cultures, and educational practices that promote any type of exclusion.

The second theme revolves around public policies, investigating the role of governments in the development and implementation of inclusive education policies (Mathews et al., 2022). The third theme centers on systems, interfaces, and transitions, aiming to create educational systems that offer lifelong learning opportunities. Finally, the last theme focuses on students and teachers, promoting a learning environment where teachers are prepared to meet the diverse needs and expectations of students (Vargas and Lojano, 2023).

The review of the literature shows that research has mainly been focused on primary and secondary education, emphasizing the need for teacher training in the use of educational materials and the importance of technology for addressing educational inclusion (Conce et al., 2020), and analyzing the theoretical and political foundations of inclusive education and its challenges (Jurado, 2020).

Reyez et al. (2020) argue that the study of inclusive education has been more theoretical than practical, considering four perspectives: works addressing the reflection and discussion of inclusion versus exclusion; educational policies for inclusion; inclusive centers and classrooms; and research and support networks in the field of inclusion. On the latter, themes related to evaluating the quality and effectiveness of inclusive schools, biographical-narrative research, and qualitative studies stand out.

It is important to conceptually clarify certain terms, such as integration education versus inclusive education. According to Villares et al. (2023), integration in the field of education originated in the 1960s due to movements to prevent discrimination against minorities based on their differences and avoid impoverishment of their social and personal development due to the marginalization they experienced. Thus, children with disabilities were integrated into regular schools, leading to significant organizational, methodological, and curricular changes, as well as demands for material and personnel resources and training.

Inclusive education is not merely about facilitating access to regular schools for students who were previously excluded, especially in the digital context (De Souza et al., 2021). It is about ending an unacceptable system of segregation and pushing all students into a regular system that has not changed. The school system we know in terms of physical factors, curriculum aspects, expectations, and teacher styles will have to change, and that is why inclusive education involves the participation of all children and young people and the removal of all exclusionary practices.

From this perspective, an inclusive school offers all its students educational opportunities and the necessary supports, whether curricular, personal, or material, for their academic and personal progress. For this, the processes of change must be promoted to make progress toward an inclusive school, which revolves around the curriculum. In a broad sense, the curriculum must be understood as the framework from which different activities and, if necessary, adaptations are

programmed (Ayala, 2020).

Visual Disability in the Context of Educational Inclusion

Different definitions of disability exist, varying in complexity. (Jaramillo et al., 2022) defines it as "the functional manifestation of deficiencies, physical or mental limitations that, when related to the social context, cause disadvantages against the demands of the social and cultural environment. Its causes are diverse and related to both biological and sociocultural factors."

The General Population and Housing Census carried out in Ecuador defines a person with a disability as one who presents a permanent physical or mental limitation, or a limitation lasting more than six months, that prevents them from carrying out their activities in a way that is considered normal for a human being. Disability may be motor, which refers to the loss or limitation of a person's ability to move, walk, maintain certain body postures, or parts of their body (Cedeño et al., 2024); visual, which includes total loss of vision, as well as difficulty seeing with one or both eyes; mental, which encompasses limitations in learning new skills, altered consciousness, or the person's ability to conduct themselves or behave in daily life activities, as well as in their relationships with others; and auditory, which refers to the loss or limitation of the ability to hear and to language, causing limitations and problems in speaking or conveying an understandable meaning (Santa et al., 2020).

However, in the International Classification of Functioning, Disability is a term that encompasses deficiencies, activity limitations, and participation restrictions. It refers to the negative aspects of the interaction between an individual (with a health condition) and the contextual factors of that individual (personal and environmental factors). Among the disabilities mentioned, emphasis will be placed on visual disability, as a person with visual disability negatively influences their educational performance (Ramon et al., 2023).

Characterization of Visual Disability

According to the World Health Organization (WHO), there are approximately 314 million people worldwide with visual disabilities, of which 45 million are visually impaired. 87% of people with visual disabilities live in developing countries, and 85% of the global cases of visual disabilities are avoidable. The same organization reports four levels of visual acuity: normal vision, moderate visual disability, severe visual disability, and blindness (Marques et al., 2021).

The visual organ is highly relevant because of its central role in the autonomy and development of any person, as 80% of the information necessary to live in society is obtained through this organ (Emerson, 2021). There is an important distinction between blindness and low vision that must be considered in individuals with visual impairments, which is necessary when identifying the special educational needs that require curricular adaptations.

Low vision occurs when a person experiences reduced or insufficient visual perception, which, despite optical aids, remains below the average of normal vision. In other words, people with low vision still have remaining vision that allows them to use this sense functionally (Tong et al., 2021); many of them may even write and read printed texts, typically magnified with the optical aids necessary for each case, such as glasses, telescopic lenses, or screen readers.

MATERIALS AND METHODS

The approach underlying this study is qualitative; this methodological orientation typically does not start with a specific problem, but rather with a broader problematic situation in which many intertwined issues may exist. Since it concerns an unaddressed problematic situation, the research objectives are exploratory and descriptive. The first helps the researcher satisfy the curiosity for a greater understanding of a new phenomenon, aids in testing the feasibility of a more extensive study, and assists in developing the methods to be applied in a subsequent study.

The second type of research involves the description of educational phenomena, positioned at the first level of knowledge, with the primary method of information collection being observation. Its intention is to develop a holistic study, divided into different stages, the first of which is reported in this document. Given the nature of the phenomenon under study, the case study method was chosen. This method is characterized by conducting in-depth analyses of a series of sample units, which can be an individual or a social group, through their personal manifestations and experiences,

with the immediate goal being the resolution of the case within its social context of life.

Selection of the Study Population

One of these institutions is the University of Guayaquil, whose two guiding principles are relevance and equity, and comprehensive attention to students. The Institutional Development Plan 2016-2021, although it does not explicitly address the attention to people with disabilities, emphasizes the anticipatory vision of public universities, enabling them to seek timely responses to properly attend to integral development, considering both the social collective and the individual needs of the population.

In line with the above, the University of Guayaquil enrolls students with various types of disabilities, including motor, auditory, and visual impairments. These students were supported for their admission and are served through various educational programs. The population of students with disabilities has surpassed the basic and upper secondary education levels at special schools, and they wish to continue their higher education, which is a reality but also a concern in terms of providing the appropriate environments for their proper development.

The University of Guayaquil currently has a total of sixty-six students with disabilities, of which thirteen are visually impaired or blind (at least the identified ones, as visual impairment is a condition that is not always perceived, even by the affected individuals). These students are spread across different academic divisions.

Inclusion Criteria

The population of students with disabilities is growing, making it imperative to conduct research aimed at identifying the needs of students with disabilities, particularly the subgroup of those with visual impairments, at the University of Guayaquil. The decision to begin with this vulnerable subgroup was based on the following reasons:

- It is complex, both conceptually and methodologically, to address all types of disabilities in a first approach and try to offer educational alternatives based on the particular needs of each disability type.
- Visual impairment is the second most common disability in Ecuador and is increasing due to degenerative diseases, such as diabetes (CONADIS, 2016).
- The apparent disadvantage visually impaired students face compared to other subgroups.
- Institutionally, due to the significant number of these students at the University of Guayaquil.

Characterization of Students with Disabilities

Blindness can range from total blindness to partial blindness, which may be mild or severe. The origin of blindness can be congenital or acquired. The first is due to genetic defects (such as albinism, Leber congenital amaurosis, aniridia, and Bardet-Biedl syndrome), and the second occurs when any ocular structure (lens, retina, cornea, optic nerve, brain) suffers damage or impact, caused by age, disease (glaucoma, trachoma, onchocerciasis, diabetic retinopathy, cataracts), or genetic inheritance. There is also blindness caused by methanol poisoning.

In the subjects interviewed, the visual impairment was entirely due to congenital diseases. Of the seven participants, three are completely visually impaired, two from birth and one who lost vision in adolescence. The other four have severe low vision, acquired during childhood and developed during adolescence and adulthood. Those born with visual impairment and those who lost their sight during childhood (five of them) attended special schools where they learned Braille; the participant who lost vision after childhood and a girl with low vision attended regular schools and do not know Braille.

Data Collection Instruments

The need to use multiple sources of evidence to seek converging lines of results and conclusions is one of the principles of case study research, as it increases the validity of the results. For this purpose, a variety of sources of evidence for the case study were used, as well as different methods for data collection: documents, interviews, direct non-participant observation, physical artifacts, which are typical of the qualitative methodology. Additionally, quantitative procedures such as surveys or experiments were used. Our study fits the definition of a study that aids in a more developed understanding of a general problem or the design of a theory, more as a means than as the object of study. In this initial

stage of the study, two sources of evidence were used:

- Interviews with seven participants, using a semi-structured guide of questions whose purpose was to explore the main aspects of the subjects and their experiences in entering higher education, while also gaining insight into their basic educational needs at this educational level.
- A review of literature and documents to gather elements that would facilitate understanding of the world of the blind and visually impaired and allow the development of a reference framework.

Data Analysis Process

Since in qualitative research, data collection and analysis are not differentiated phases but alternate processes from beginning to end, intensifying progressively throughout the study, data gathering began almost simultaneously with the documentary research, so no categories were established in advance. Instead, once the transcripts of the interviews were made, they were contrasted with the theoretical-conceptual review, and emerging categories were formed.

In the school context, all activities that increase a school's capacity to respond to the diversity of students are considered as support. The categories of support most required by people with disabilities in school, which we applied to the subgroup of visually impaired students, were:

- Architectural accessibility: ramps, elevators, furniture.
- Technological support: computers, specialized software and hardware, special materials, etc.
- Support from staff: professionals who address specific needs.

The results were presented in the form of a cross-sectional or contrasted analysis of cases, which involves making a transversal contrast of the findings from each case. The horizontal axes coincide with the categories used, which give form and structure to each study. We present the cross-analysis of their experiences in entering higher education, based on the described categories.

Results

Most of these students received their basic education surrounded by special education teachers and family care, who taught them the essentials to survive in a certain geographic and social space, until they faced the dilemma of staying at home or "going out" to continue their studies in regular schools, dealing with different classmates, and expanding their spaces and fears:

A blind communication student commented that on the first day of university, he was locked in the classroom because none of his classmates or teachers realized that he was unable to move without initial help, until someone peered in and asked what he was doing alone, and then noticed that he was a blind student and helped him out.

A blind student of Languages opines that many people do not give her way when they see her and she stumbles or hits them with her cane. Another visually impaired psychology student referred to many incidents where regular students had no consideration and let the doors fall in front of her, as she was behind, or had to wait hours in a line for school procedures, trapped by vertigo and stress, common ailments for people who cannot see. There is a mistaken belief that a person with a disability will reject any support that makes them feel incapable; the interviewed students—except for one case—agree that not only is any kind of help acceptable but necessary, not to solve their lives, but to avoid situations that could even cause injuries.

How they try to overcome limitations. Educational support

Most of the interviewed students were educated in schools that had the necessary resources and staff for their education, and they coexisted with other students who understood their needs. Once they transitioned to a regular school, they no longer had these resources and had to rely on other adaptation mechanisms (mainly sensory, and also social) to overcome the barriers, as the environment is not always suitable, nor do the people around them understand their capabilities or limitations. Even young people with low vision, who attended regular schools as children, faced many situations that hindered a normal academic trajectory.

One of the interviewees states that she was always mocked during her time in Basic General Education, but when she

entered high school, things changed and she began to realize that she needed strategies to adapt, among which the following stand out:

Architectural accessibility: ramps are not everything. Universities are not entirely adapted to the needs of the study participants. While they have ramps, other neglected elements destabilize the environment: "The university floor is very bad, there are many broken parts, and when it rains, there is a lot of water, and people who walk through there have to be careful because they might slip. For someone to move alone, it's almost impossible."

Also, signage is needed to help locate the different buildings, because in higher education, students do not stay in one classroom but have to move continuously: "Another issue is reference points, because the university is so large, there are ramps, but there are no reference points. I still have low vision, but some classmates have fallen and even gotten lost inside, and if not, the ramps have people selling candy, oranges, or there is a car, which causes problems when vision is lacking, making it much more difficult to gather, process, store, and retrieve figurative or spatial environmental information."

However, contrary to what is believed, blind people do not have higher sensory thresholds than sighted people; they do not hear better or have greater tactile or olfactory sensitivity. They simply learn to use their senses better: "For us, reference points are not the poster board, but things that could have relief so we can touch them. They are trash cans at each classroom entrance with a black bag. I counted the black marks until I reached my classroom, which was at the last level, and the second to last classroom, but they moved the trash cans, so I got lost when they moved them," said one interviewed student.

Technological support: A few years ago, technological support for visually impaired students was limited to canes or the Braille system. Today, fortunately, there is a wider range of tools that facilitate the entry and retention of visually impaired students in regular schools, starting with the Perkins typewriters and extending to talking computers. Despite these advancements, these tools are generally very expensive and are not within reach of students unless they are accessed through social or government support programs, although this is not the only issue with technology.

For students with visual impairments, technology is a great ally both inside and outside the classroom. However, we do not refer to the reductionist concept of technology as a set of devices or machines with a variety of functions, but a broader conception that involves social-technical devices, including screen readers and text-to-speech software, or the so-called "talking braille" laptops.

Most of our students claim to need an application that allows them to listen to what they are doing in it. Academic or literary texts they need to review are not available in a digital format that allows them to do so; texts are not available or digitized, and there is no Braille library or audio books, and there is little didactic material to consult. Complications arise because they do not have the bibliography to consult.

The above highlights the need to design social and technical devices that optimize the use of technological tools so that students can take better advantage of their cognitive abilities autonomously. These tools are not limited to computing; there are more conventional technologies (Braille slate or stylus, pencils with higher contrast, markers, easels for classroom desks, magnifiers, handheld telescopes, guides, and enlarged works, talking calculators), which are necessary in classrooms where students with little or no vision are present, but not without prior sensitization of the teaching staff and classmates.

Support from staff: Another important support identified from the students' perspective is the teaching and administrative staff. The inclusion of students with these particularities surprises professors and administrators, who must expand their tolerance threshold for diversity. "How do I apply the exam? Should I treat them the same or differently than students without disabilities? Will I seem cruel if I fail them?" These are some of the questions that teachers likely ask themselves. In certain subjects, especially those related to symbols and visual aspects, the situation becomes more complicated.

Blind students, for example, know and read Braille, but this system is limited to certain combinations that only allow

reading and writing the alphabet. It lacks the ability to recognize mathematical or musical symbols. It is important to note that students use Braille to communicate with each other, but if a teacher asks them to complete an assignment, they cannot do it in Braille because teachers are unaware of this language.

In special cases, raised or three-dimensional works can be an excellent support to solve some difficulties, as they have the cooperation of their peers and family. As teachers, it is possible to observe in others—and even in ourselves—the sensations of colleagues who face this atypical situation, which can range from rejection to perplexity, avoidance, indifference, compassion, and total acceptance. This can be extended to all the staff in an institution. Several students report that some professors did not want them to study because they had neither the strategies nor the knowledge to teach them.

The argument that a special teacher is needed is an excuse. They often use the argument that the university's regulations state that one must enter on their own and leave on their own. This is very striking. The key to overcoming these fears and establishing an inclusive culture that enables a school to move toward social justice is leadership. (Vélez Pachón, 2016), affirm that research has clearly determined that one of "the practices of school leaders that make a clear difference is the concern to implement and promote activities that benefit the development of members of the school community, especially teachers."

Support Activities for Students with Visual Disabilities

In addition to understanding the students' perceptions, the impact of support activities for students with visual disabilities was quantified. In this section, it was found that 60% of respondents consider murals to be one of the most convenient activities to address educational inclusion needs. 28% believe that exhibitions are the most optimal activity for educational inclusion, 6% chose roundtable discussions as optimal activities, 4% selected workshops, and 2% believe that debates are essential activities for such adaptations. (Figure 1).

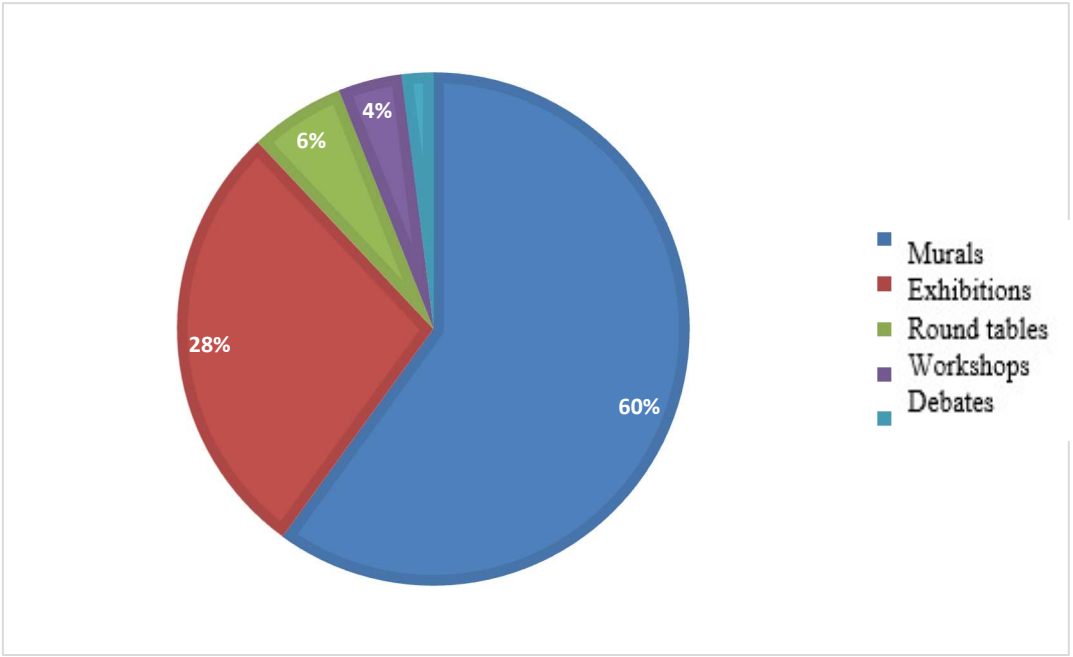

Figure 1. Activity that seems most appropriate to apply as a teacher, taking into account that this activity is intended to address the needs of educational inclusion.

Regarding the teaching-learning processes that are considered optimal for educational inclusion (Figure 2), this item reflects that 32% of the respondents believe that using various resources and group strategies to deepen the topic will significantly contribute to the teaching-learning processes in educational inclusion. 30% ensure that conducting motivational exercises (brain activation and others) can also contribute to this process. 18% believe this occurs when

presenting the topic using real-life contextualized experiences, 8% think it happens when making students aware of the objectives of a reinforcement class, and 2% affirm that this process occurs throughout the entire didactic process.

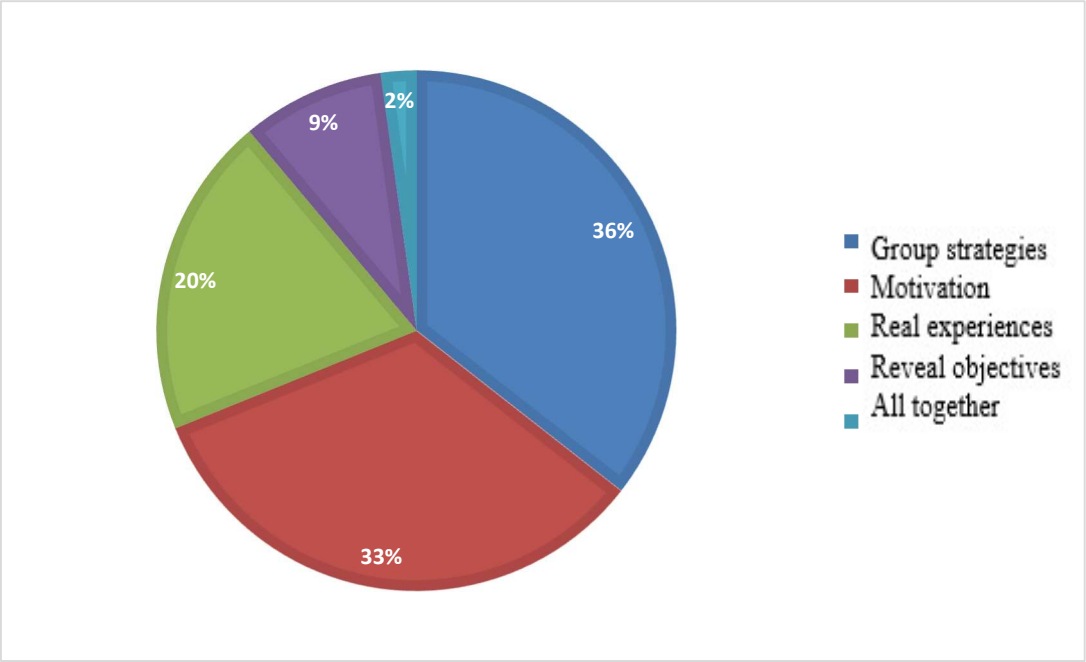

Figure 2. Teaching-learning processes that are optimal for educational inclusion.

Regarding the educational climates appropriate for the development of educational inclusion (Figure 3), this item reflected that 52% of the respondents believe that the educational climate considered appropriate for the development of educational inclusion is created by promoting and respecting students' opinions and initiatives. 28% believe it is achieved by creating a pleasant and equitable atmosphere with warmth for the students. 12% state that it occurs by encouraging the active and creative participation of students in the learning process. 4% say it is generated by maintaining respect and discipline in the classroom, and another 4% consider the needs of students to reinforce their essential knowledge for this process.

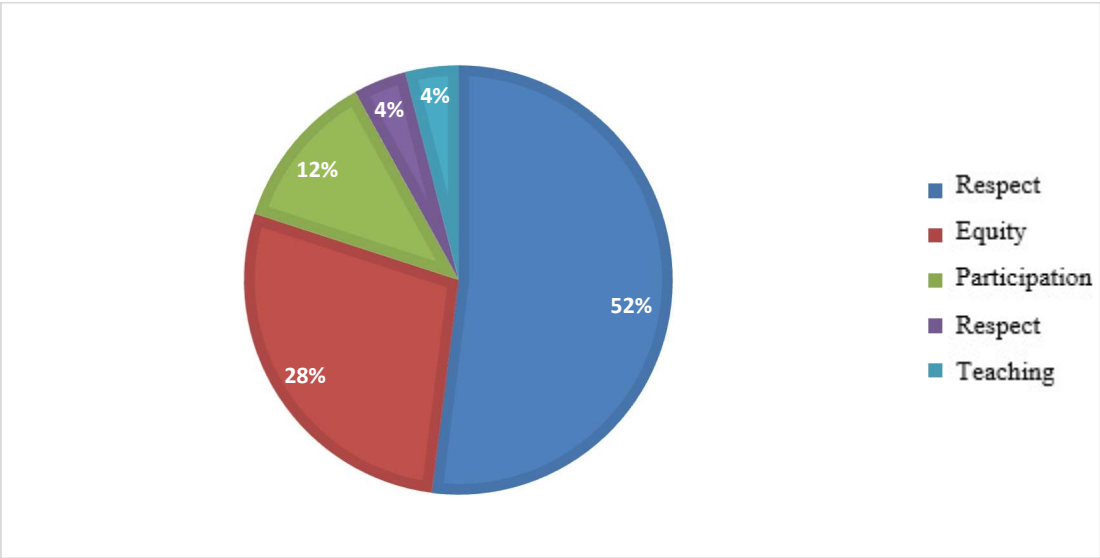

Figure 3. Educational climates appropriate for the development of educational inclusion

On the other hand, when evaluating the training for effective pedagogical reinforcement (Figure 4), it was reflected in this item that 42% of the respondents believe that training is necessary to provide good pedagogical reinforcement in

improving teacher performance, 44% in the adjustments of the Curriculum Instruments, and 14% in Innovation and flexibility.

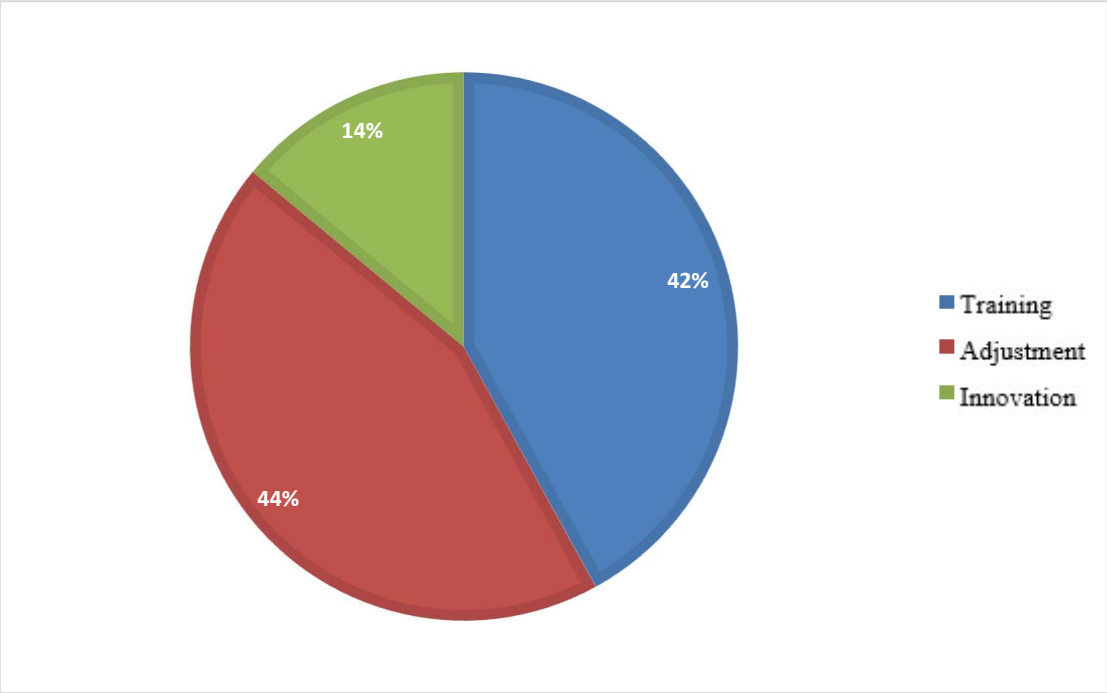

Figure 4. Training to provide effective pedagogical reinforcement.

Finally, regarding the pedagogical strategies in the classroom that are essential for educational inclusion (Figure 5). In this item, it was reflected that 42% of respondents believe that maintaining the same order of their belongings to prevent disruption of pedagogical strategies in the classroom is important for educational inclusion, 28% state that it occurs by using graphic materials that allow mental associations, 12% believe it occurs through dramatization that enables facial expression, 10% suggest promoting relaxation activities, such as classical music, and 8% believe it occurs by making significant curricular adaptations.

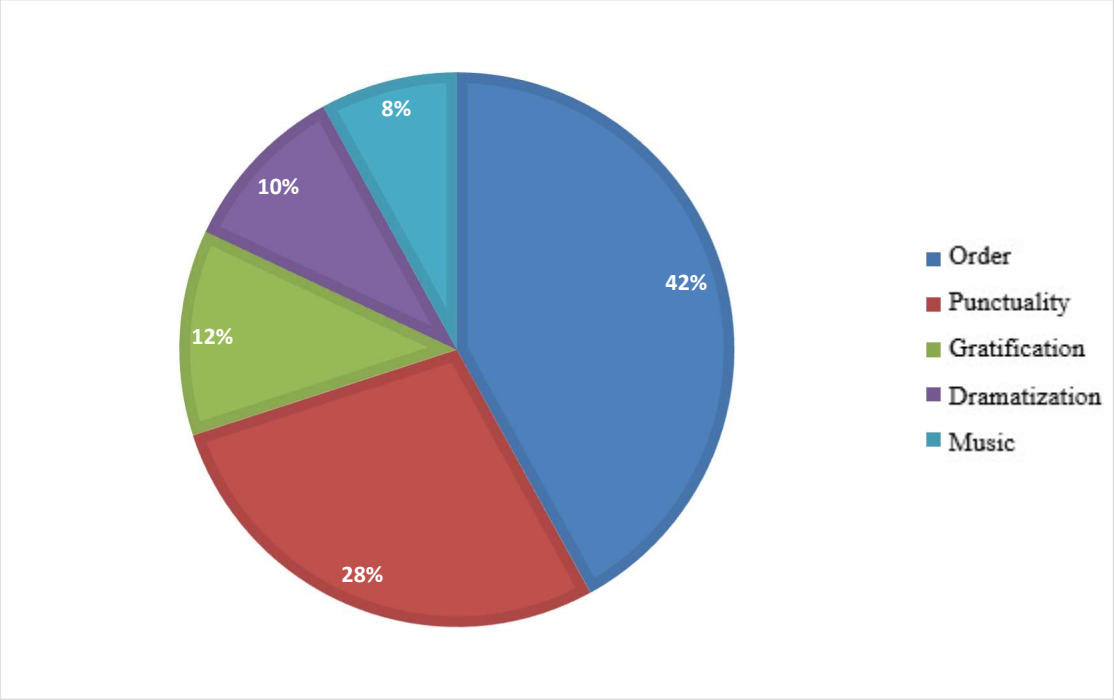

Figure 5. Pedagogical strategies in the classroom are punctual for educational inclusion.

DISCUSSION

The results show a positive perception among students with visual impairments regarding the support received, which was expressed in architectural accessibility through the design of ramps, elevators, and furniture (Escudero et al., 2021) for students with these conditions, as well as technological support in the educational field through the provision of computers, specialized software and hardware, and special materials for students with visual impairments, along with personal support from professionals who address specific needs (Diaz et al., 2021).

Regarding the activities that seem most appropriate for teachers to apply in order to meet the educational inclusion needs of students with visual impairments, the most notable ones were murals and exhibitions. However, it is concerning that workshops, round tables, and debates had low participation, which may indicate a lack of interest from students in activities that promote critical thinking, which is essential in the new educational model aimed at fostering more participative students (Villadiego et al., 2020).

Concerning the teaching-learning processes that are considered optimal for educational inclusion, the majority pointed out that group activities were the preferred actions, highlighting the importance of teamwork. Motivation, which can be achieved through playful didactic strategies, is another ideal condition for achieving objectives (Andrés, 2023), as well as learning based on real experiences, which can lead to the design of didactic tools based on project-based learning (Cedeño and Saltos, 2020).

Regarding the appropriate educational climate for the development of educational inclusion, considering the sensitivity of students with disabilities, who have often experienced exclusion and discrimination, the success of their inclusion is based on respect, equity, and participation, allowing the integration of such students into a normal environment where they are treated on equal terms with their peers (Espinoza et al., 2021).

To implement strategies that contribute to the educational inclusion of students with visual impairments, the first step is to promote training for proper pedagogical reinforcement, not only by teachers but also by students, who often must adapt to educational innovations that have been successfully tested in the educational field, such as games, virtual reality (VR), and augmented reality (AR), which may have some complexity in their use (Alencastro and Cobeña, 2021).

The need for training mentioned in the previous paragraph is essential to develop specific pedagogical strategies for educational inclusion, many of which are related to students' different learning styles. In the case of students with visual impairments, other senses may develop, so it is necessary to address the concept of multiple intelligences (Ramírez et al., 2023) in order to apply strategies that incorporate dramatization, music, and other tools that foster the development of skills and abilities in students with visual impairments.

CONCLUSIONS

The educational inclusion of students with disabilities is a priority for both national and international organizations. Consequently, various laws and regulations have been proposed. However, the leadership required to move towards an inclusive school does not rest solely on laws and the authorities of educational institutions. It is not necessarily built on good intentions either. The success of educational inclusion depends on the various agents and actors in society. It has been indicated that, to a large extent, inclusion is negatively affected by insufficient training, the lack of theoretical knowledge about the issue, and inadequate intervention strategies.

Although progress has been made in Ecuador regarding inclusion in basic education, more effort is still needed to achieve this in higher education institutions. Academic success at this educational level is what can increase, as it happens with any member of society, the opportunities for students with disabilities to integrate into productive life and realize themselves both professionally and personally.

Based on these premises, the aim of the case study was, through an initial approach, to diagnose the situation and needs of young people with visual impairments enrolled in different faculties within a public higher education institution in the country. Although case studies show some limitations in understanding the complexity of educational inclusion and the generalization of results, this study demonstrates that, in higher education, educational inclusion faces two main groups of limitations; this, despite institutional policies that favor inclusion in higher education.

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