

DOI: <https://doi.org/10.63332/joph.v5i6.2379>

## Implementation of Inclusive Education in an Educational Institution in Valledupar through Mathematics and Language

Sheyla Salomé Rodríguez García<sup>1</sup>, Martha Luz Gutiérrez Oliveros<sup>2</sup>, Elimeth Lilly García Maestre<sup>3</sup>, César Alfonso Manjarrez Pontón<sup>4</sup>, Denilson Johao Jiménez Suarez<sup>5</sup>, Jhon Mateo Saurith Ramírez<sup>6</sup>

### Abstract

*This article is part of a larger study which aimed to analyze the process of inclusive education in mathematics and language classes at the José Eugenio Martínez Technical Educational Institution, in the city of Valledupar - Cesar. The methodology used was qualitative and participatory, using tools such as interviews, focus groups, participant observation and documentary review, to collect data since teachers, students, parents and administrative staff and thus understand the experiences related to inclusive education in said Educational Institution, the investigated population was made up of students with some type of disability. mostly, visual and hearing disabilities who participate in math and language classes. The proposal concludes with the commitment to present detailed results supported by concrete examples, and specific recommendations will be offered to improve the implementation of inclusive education, focusing particularly on the teaching-learning process of blind and deaf students; In addition, it was evident that this approach requires a social and cultural conception of pedagogy in the two areas of knowledge.*

**Keywords:** *Systematization of Experiences, Visual Disability, Hearing Impairment, Inclusion in Mathematics, Inclusion in Language.*

### Introduction

Inclusive Education is protected by the political constitution of 1991 and the laws that regulate it, as part of programs directed by the Ministry of National Education (MEN), seeking to achieve the purposes and objectives for which they were created; but, with difficulties and mistakes in its applicability, which makes it necessary to characterize how this implementation is carried out, in the José Eugenio Martínez Technical Educational Institution.

The problem to be solved is to guarantee inclusive teaching, through the systematization of experiences linked to the education process for students with visual and hearing disabilities, at the José Eugenio Martínez Technical Educational Institution.

Disability constitutes a number of different functional limitations in the population; therefore, a large part of this population does not have school attendance; According to DANE, in its record of (2024), 8.5% of people at the educational level have some type of disability; it also reports

---

<sup>1</sup> Universidad del Cesar – Colombia, Email: [salome\\_garcia012@hotmail.com](mailto:salome_garcia012@hotmail.com)

<sup>2</sup> Universidad del Cesar – Colombia, Email: [malugol@hotmail.com](mailto:malugol@hotmail.com)

<sup>3</sup> Universidad del Cesar – Colombia, Email: [elillygarcia@unicesar.edu.co](mailto:elillygarcia@unicesar.edu.co)

<sup>4</sup> Universidad del Cesar – Colombia, Email: [cesarmanjarrez@unicesar.edu.co](mailto:cesarmanjarrez@unicesar.edu.co)

<sup>5</sup> Universidad del Cesar – Colombia, Email: [djohaojimenez@unicesar.edu.co](mailto:djohaojimenez@unicesar.edu.co)

<sup>6</sup> Universidad del Cesar – Colombia, Email: [jmsaurith@unicesar.edu.co](mailto:jmsaurith@unicesar.edu.co)



health affiliation, which is 53.2%." (p. 7).

This research arose with the aim of generating a social impact and contributing to the strengthening of the learning processes of students with hearing and visual disabilities. Since it is evident, the lack of commitment of the territorial entities, in the relevant and quality educational assistance, such as assistance to this type of population with special needs, so that they can develop their skills for life.

However, the State alone, does not have all the responsibility, it is necessary to raise awareness in the community. educational, especially to parents, about the importance of sending their children to the educational institution to provide them with attention for their learning according to their disability, and in this way they have the opportunity to share in the midst of diversity, their different way of learning, playing, and sharing with each of the members of the educational community.

In this same order of ideas, it is pertinent to show that the José Eugenio Martínez Technical Educational Institution tends towards an education based on respect for difference, seeking to promote the formation of a society that advances in its levels of participation, where autonomy is consolidated and decision-making is encouraged.

In educational institutions, when implementing Inclusive Education, they do so immersed in a general principle that establishes that all people should learn together, without taking into account particular differences and limitations.

Likewise, the primary and relevant purpose is to build a society made up of creative and supportive individuals, who generate knowledge according to real social needs, to then apply it in the solution of problems and achievement of goals.

This is how, at present, inclusive Educational Institutions make their best effort to guarantee joint learning, without distinction of differences or limitations. However, despite regulatory efforts and the legalization of Inclusive Education by the Ministry of National Education (MEN) (2022), some institutions face challenges in providing adequate care to students with disabilities.

For the Ministry of National Education (2022), "Inclusion and equity in education is a permanent process that recognizes, values and responds in a pertinent way to the diversity of characteristics, interests, possibilities and expectations of all people in their educational career. (p.8).

In this regard, UNESCO (2023) states: "Currently, educational conditions are required that provide tools to adapt to a reality whose only goal is change. Promoting Inclusive Education implies generating spaces for participation, without discrimination; based on the promotion of human rights and dignity." (p.1).

Inclusive Education for students with hearing and visual disabilities seeks to ensure that all students have the same opportunities to learn and participate in society. In view of the situation raised, it is worth quoting De la Cruz-Pantoja and Guerrero Samudio, (2022): "in the case of students with disabilities, Inclusive Education allows us to contribute to overcoming learning barriers from the deep knowledge of their condition, covering beyond the merely academic". (p.36).

Education faces the challenge of welcoming the needs, inconsistencies, feelings, insecurities, desires and personal projects of students who have disabilities, especially hearing, and visual disabilities; to support them in their training

In the same way, it contributes to closing educational gaps, to reduce inequalities in access to and permanence in the education system and to the construction of a more conscious, equitable and inclusive society.

Inclusive Education, in its essence, must be able to push the boundaries of innovation for innovation and focus on the integral development of each student.

Teachers, therefore, must assume a key role in this process, not only transmitting knowledge but also promoting a pedagogical approach that considers the particularities of each individual.

This is how more serious problems are created, as stated by Vélez and Manjarrez (2020): "In Colombia, the population with disabilities faces exclusion and barriers in integral development and access to rights, where the severity of this reality in education is highlighted." (p.277).

However, at the same time, the 21st century has transformed global education, with the implementation of diversity in the classroom, demanding a reflective pedagogy towards this diversity, including visual and hearing impairment. Despite efforts and strategies, in Colombia there are still gaps in the inclusion of students in the classroom, with visual and hearing disabilities.

Addressing the approach of Camacho and Aravena (2023), "teacher leadership in support strategies for comprehensive student development is highlighted". (p.1).

Now, it is for this reason that the challenge demands didactic and technological adaptations, to guarantee equitable access and according to the curriculum, thus promoting active and quality participation in the teaching-learning process. That is why, in order to achieve an inclusive and conducive educational environment, the role of teachers must transcend the simple transmission of knowledge, evolving towards pedagogical innovation that promotes the integral development of students.

Castro and Guzmán (2021) highlight "the relevance of adopting innovative strategies that facilitate effective and enjoyable learning; that implies a commitment to Inclusive Education, valuing diversity, continuously looking for ways to effectively respond to the changing needs of students and society". (p. 56).

In addition, Inclusive Education promotes a diversified understanding of learning processes, highlighting conscious listening as fundamental, especially for students with visual impairment, whose hearing acuity improves communication and the sense of belonging.

Within the framework of these parameters, Leiva Olivencia and Pareja de Vicente (2021), emphasize "the importance of future teachers developing skills in inclusive strategies, such as effective communication and sensory stimulation, to guarantee the active participation of these students in the classroom, favoring educational inclusion". (p.83).

According to the approach cited by Castillo Caicedo (2020), referring to inclusive teaching processes, he expresses the following: "One of the most effective and efficient ways to move towards an inclusive vision, despite the limitations and singularities that arise". (p. 23).

This is how it must be understood that there are barriers or limitations within the same educational context, making it the main transgressor of the rights towards this group. Among the main barriers are the lack of teacher training in attention to diversity and inclusive methodologies, as well as the scarcity of resources.

In this order of ideas, it can be argued that this article has a great social relevance, since the changing society admits in the classrooms the educational inclusion of children, associated or not associated with disability, among which is visual and hearing impairment.

At this point, it is pertinent to address the role played by the teacher, as an educator of students with visual and hearing disabilities, and what is their commitment to have a permanent task of inclusive teaching.

The teacher must have competencies on skills that are aimed at the development of pedagogical actions that aim at the comprehensive training of this student population. Educational institutions also have the social responsibility to facilitate the incorporation of students with different abilities, since they do not have other training alternatives.

Therefore, the problems that exist in the educational inclusion of students with different abilities, in this case visual and hearing impairment, in Colombia, can be evidenced, putting in context, the difficulties faced by this population, within the educational system, this lack of opportunities becomes a persistent barrier, which limits the participation of these children. In society, it is their immediate environment and therefore in their educational institution.

As a result of the above, Rivera, Morales, & Arango, (2021) is cited, where he argues that "it is a complex decision-making process by educational institutions and their teachers for the application of strategies, with the purpose of working based on the strengths of the student body over difficulties". (p.61).

Another relevant approach, regarding the article under study, is provided by De la Herrán (2022), where he argues: "The adoption of a radical and inclusive approach proposes a Pedagogy that values the essential, seeking to turn needs into training opportunities, and positioning inclusion not as an obstacle, but as a valuable need to improve the educational process". (p.93).

Regarding Visual and Hearing Disability, Franco-Llanos, et-al, (2024), explains: "they are physical conditions, which a person has, either congenital, as a result of some pathology that has been diagnosed in their stage of development, which prevents them from seeing or hearing clearly". (p.88)

Once this precision has been made, it stands out for its focus on the broad spectrum of social and cultural interactions, underlining that the challenges faced transcend mere physical condition in education, as a pillar to build a more inclusive understanding.

This shows that the radical and inclusive approach is necessary to generate a reflection to understand inclusion as an essential element for education, bringing the value to diversity as a priority opportunity to recognize, facilitate and improve access to learning in an inclusive environment.

Geographically, the study was carried out at the José Eugenio Martínez Technical Educational Institution, which is located in the southwest of the city of Valledupar, on Calle 18B, 30A - 54 Barrio Manantial.

Its geographical position is: East: Casimiro Raúl Maestre Urbanization; North: Neighborhood Development Center (CDV), South: Villa Miriam Urbanization, West: Manantial Neighborhood.

## **Materials and Methods**

The materials and methods of an article with a qualitative approach include data collection techniques, such as interviews, focus groups, observation, documents, and visual materials.

Semi-structured interviews are used as materials, with teachers, students and other key actors to explore their experiences and perspectives on Inclusive Education.

In addition, focus groups were organized with different segments of the educational community, to facilitate discussion and share experiences around Inclusive Education. Participant observation was also used, which was carried out with inclusive interaction in the classrooms.

Special attention will be paid to specific aspects, such as interactions in the playground and events organized to promote inclusion. In the same sense, the José Eugenio Martínez Technical Educational Institution promotes an Inclusive and accessible Education for all.

## **Methods**

Methodologically, this article is framed in a qualitative approach, to understand in depth, the experiences related to Inclusive Education in the José Eugenio Martínez Technical Educational Institution.

For Hernández-Sampieri, Fernández, and Baptista (2014), "the qualitative search begins when the researcher begins by examining reality itself and, in the process, a pertinent theory is developed to expose what is observed." (p.7).

It presents a participatory research design, since it presents a social research approach, which seeks the participation of the community in the analysis of its reality.

Key participants, such as teachers, students with disabilities, parents, administrative staff and other relevant actors, selected based on their direct experience in the Inclusive Education process.

An exhaustive documentary review of institutional documents, educational policies and other relevant materials was carried out to contextualize and enrich the understanding of Inclusive Education in the institution.

In this scientific article, the population was made up of students from the José Eugenio Martínez Technical Educational Institution. For Hernández-Sampieri, R. et-al, (2014), "the Population refers to the "universe, set or totality of elements on which research or studies are carried out. It is the set of all cases that agree with a series of specifications." (p.65).

Regarding the sample, it was made up of students with hearing and visual disabilities from that institution. For Hernández-Sampieri et-al, (2014), "The sample is, in essence, a subgroup of the population. It is a subset of elements that belong to that set defined in its characteristics that is called population." (p.141).

In addition, an open coding approach was applied, to identify emerging patterns and themes in the participants' experiences.

## **Results**

A data triangulation was carried out, comparing information from different sources, such as interviews, focus groups, and participant observation, to ensure the validity and reliability of the results.

In this section, the main findings derived from the identified categories are discussed. In the analysis of visual and hearing disabilities, there is a notorious lack of understanding of the concept, which leads to a distorted interpretation of the disability or the different ability in vision and hearing.

The findings indicate a notorious lack of knowledge about visual and hearing impairment, needs in teacher training, and the urgency of implementing inclusive strategies in training.

The results were presented in detail, supported by citations and examples to illustrate shared experiences. In the same sense, they respond to the specific objectives:

1. To identify the learning process in students with hearing and visual impairment at the José Eugenio Martínez technical educational institution
2. Describe how the teaching process of the teachers of the José Eugenio Martínez technical educational institution is carried out
3. Recognize the relevance of the teaching and learning processes for deaf students at the José Eugenio Martínez Technical Educational Institution

From this situation, the relevance of the decisive role of the educator, his teaching competencies and his interpretation of diversity, as the fundamental condition for the success of educational inclusion, is highlighted.

All this through the transformation of approaches, organizational structures and educational methodologies for educators, which guarantee students teaching adjusted to their characteristics and thus achieve full learning and participation.

However, this can cause that the indices in teacher training in attention to the needs and difficulties of the students, can lead to rejection behaviors, which translate into deficient teaching-learning strategies and low expectations of the student body.

At the same time, it prevents quality Inclusive Education, under the premise of a favorable predisposition towards the inclusion of all students, which would lead to the development of more and better educational strategies.

But for this, it is essential to know what it means to educate under the paradigm of inclusion and about the existing barriers and facilitators that condition the implementation of good practices to address the diversity present in the classrooms

All this thus allows us to know the discrepancy between what the educator perceives, the current situation and the ideal situation defined by these good practices.

In any case, Inclusive Education is a permanent process that recognizes, values and responds in a pertinent way to the diversity of characteristics, interests, possibilities and expectations of students.

## **Conclusion**

Conclusively, Inclusive Education is an educational model that seeks to ensure that all students can learn and develop in an environment free of discrimination.

To this end, it is expected that students can promote their development, learning and participation, with peers of the same age, in a common learning environment, without discrimination or exclusion of any kind.

All this, guaranteed within the framework of human rights, the supports and reasonable adjustments required in their educational process, through practices, policies and cultures that eliminate existing barriers in the educational environment.

At the same time, to give assertive responses to students in formal educational environments in order to integrate them into a process of personal and social transformation that allows them to perceive themselves as citizens in cognitive and intellectual construction in order to contribute to laying the foundations of an innovative and transformative education.

### **Recommendations**

It is recommended to adopt a radical, inclusive and edifying method, focused on teacher training, which serves as a reference for coeducation as a means to meet special educational needs by promoting the development of knowledge, skills and strategies for life

It is also pertinent to promote an inclusive educational environment in the training of future teachers, and for students with visual and hearing disabilities. For this reason, there is an urgent need for a continuous commitment, where teacher training is worked on, to achieve inclusive and quality education.

All this leads to the prevailing need in the States to implement policies, principles and strategies that respond to these particularities and contribute to learning from difference. This great social challenge reveals a paradigm shift towards disability that contemplates the opening of schools to children with physical, intellectual, hearing, visual and psychosocial limitations, that is, a school for all.

### **References**

Camacho, G., & Aravena, M. A. (2023).

Educational Inclusion Policy as the Foundation of Human Development in Education, Colombia. *Ciencia Latina Revista Científica Multidisciplinar*, 7(2), 1112-1133.  
<https://ciencialatina.org/index.php/cienciala/article/view/5386>

DANE: Population Projections to

Departmental level. Period 2018-2050, national and departmental total by area, sex and age. Report: January 2024.  
<https://www.dane.gov.co/index.php/estadisticas-por-tema/demografia-y-poblacion/proyecciones-de-poblacion>

De la Cruz-Pantoja, D. M., and Guerrero }

Samudio, J. E. (2022). Educational inclusion for students with hearing and visual impairment in the university context. *UNIMAR Journal*, 40(1), 33-53.  
<https://revistas.umariana.edu.co/index.php/unimar/article/view/2738/3051>

De la Herrán, A. (2022). "What if the

Inclusive Education was being developed within the framework of a wrong education? The perspective of the radical and inclusive paradigm" *Universidad Autónoma de Madrid, Spain*, (86-177).  
<https://radicaleinclusiva.com/wp-content/uploads/2022/11/educacioninclusivaeducacionequivocada.pdf>.

Franco-Llanos, S., et-al, (2024).

Inclusive Education from Visual Impairment: Guiding Strategies for Early Childhood Teachers.  
[https://www.researchgate.net/publication/379490278\\_Educacion\\_inclusiva\\_desde\\_la\\_discapacidad\\_visual\\_Estrategias\\_orientadoras\\_para\\_el\\_profesorado\\_en\\_formacion\\_de\\_la\\_primera\\_infancia](https://www.researchgate.net/publication/379490278_Educacion_inclusiva_desde_la_discapacidad_visual_Estrategias_orientadoras_para_el_profesorado_en_formacion_de_la_primera_infancia)

Hernández - Sampieri, R. et-al. (2014).

Research Methodology

Scientist. Retrieved from: <https://www.uca.ac.cr/wp-content/uploads/2014/10/Investigacion.pdf>  
José Technical Educational Institution  
Eugenio Martínez. (2025). Home.  
<https://iejoseumar.edu.co/https://iejoseumar.edu.co/>  
Leiva, J. & Pareja, D. (2021). Education  
Inclusive Educating for Equality and  
Diversity. ICB Publishers. ISBN 78-84-9021-752-8  
Ministry of National Education of  
Colombia. (2022). Inclusion and Equity: towards the construction of an Inclusive Education Policy for  
Colombia.  
[https://www.mineducacion.gov.co/1780/articles-363488\\_recurso\\_17.pdf](https://www.mineducacion.gov.co/1780/articles-363488_recurso_17.pdf)  
United Nations  
for Education, Science and Culture – UNESCO. (2023). Addressing hate speech through education: A guide  
for policy makers. [https://www.unesco.org/en/articles/addressing-hate-speech-through-education-  
guide-poli-cy-makers](https://www.unesco.org/en/articles/addressing-hate-speech-through-education-guide-poli-cy-makers).  
Rivera, E., Morales, Y., & Arango, N.  
(2021). Students with visual impairment and their  
learning mathematics in higher education distance – traditional modality. *Pedagogical Praxis*, 21(31), 57-  
80. <http://doi.org/10.26620/uniminuto>.  
<http://doi.org/10.26620/uniminuto>.  
praxis.21.31.2021.57-80  
Vélez Latorre, L. and Manjarrez Carrizalez,  
D. (2020). The education of subjects with disabilities in Colombia: historical, theoretical and research  
approaches in the global and Latin American context. *Revista Colombiana de Educación*, (78), 253–  
297. <https://doi.org/10.17227/rce.num78-9902>  
Franco-Llanos, S., et-al. (2024).  
Inclusive Education from the perspective of visual impairment:  
Guiding strategies for teachers in early childhood training.  
[https://www.researchgate.net/publication/379490278\\_Educacion\\_inclusiva\\_desde\\_la\\_discapacidad\\_y  
isual\\_Estrategias\\_orientadoras\\_para\\_el\\_profesorado\\_en\\_formacion\\_de\\_la\\_primera\\_infancia](https://www.researchgate.net/publication/379490278_Educacion_inclusiva_desde_la_discapacidad_y_isual_Estrategias_orientadoras_para_el_profesorado_en_formacion_de_la_primera_infancia)