Pedagogical attention strategies in students with visual impairment

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Abstract

The objective of this research was to understand the importance of pedagogical attention strategies in the classroom, for students with visual disabilities in the context of educational inclusion at the Universidad Popular del Cesar, Sabanas headquarter, Valledupar municipality. It was based on various authors: Aguirre (2016), Arizabaleta and Ochoa (2016), Bromberg et al. (2016), Carrillo et al. (2017), and it was developed under the qualitative approach in the phenomenological method. A documentary review and interviews were carried out with two students with visual disabilities and two teachers of the institution, where the important effort of the latter was evidenced when considering all their students in the pedagogical practice, including those with visual disabilities. It is concluded that there is a need to train teaching staff to work competently to achieve more important achievements in terms of educational inclusion and pedagogy of inclusion related to disability.

Keywords: pedagogical attention strategies; visual disabilities; educational inclusion.

Estrategias de atención pedagógica en estudiantes con discapacidad visual

Resumen

La presente investigación tuvo como objetivo, comprender la importancia de las estrategias de atención pedagógica en el aula, para estudiantes con discapacidad visual en el contexto de la inclusión educativa en la Universidad Popular del Cesar, sede Sabanas, municipio Valledupar. La investigación se fundamentó en diferentes autores: Aguirre (2016), Arizabaleta y Ochoa (2016), Bromberg et al. (2016), Carrillo et al. (2017), entre otros y, se desarrolló bajo el enfoque cualitativo en el método fenomenológico; se realizó una revisión documental, así como entrevistas a dos estudiantes con discapacidad visual y dos docentes de la institución en estudio, donde se evidenció el importante esfuerzo de estos últimos al considerar en la práctica pedagógica a todos sus estudiantes, incluyendo a aquellos con discapacidad visual. Se concluye que, existe la necesidad de formar al personal docente para trabajar con competencia en pro del alcance de logros más importantes en materia de inclusión educativa y pedagogía de la inclusión relacionada con la discapacidad.

Palabras clave: estrategias de atención pedagógica; discapacidad visual; inclusión educativa.

Estratégias pedagógicas de atenção em alunos com deficiência visual

Resumo

O objetivo desta pesquisa foi compreender a importância das estratégias de atenção pedagógica em sala de aula para alunos com deficiência visual no contexto da inclusão educacional na Universidade Popular de Cesar, em Sabanas, município de Valledupar. Baseou-se em diversos autores e foi desenvolvida sob a abordagem qualitativa do método fenomenológico; foi realizada uma revisão documental e entrevistas com dois alunos com deficiência visual e dois professores da instituição, onde ficou evidenciado o importante esforço destes últimos ao contemplar todos os seus alunos na prática pedagógica, inclusive aqueles com deficiência visual. Conclui-se que há necessidade de capacitar o corpo docente para atuar com competência para alcançar conquistas mais importantes em termos de inclusão educacional e pedagogia da inclusão relacionada à deficiência.

Palavras-chave: estratégias pedagógicas de atenção; deficiência visual; inclusão educacional.

1. Introduction

For some people, having one or more disabilities means something severely adverse that partially or totally affects their development and active participation in everyday situations. Disability as a condition is defined by the dictionary of the Real Academia Española (RAE, 2021) as the "situation of the person who, due to their long-lasting physical [...] or mental conditions, encounters difficulties for their participation and social inclusion" (n.p.). Thus, disability in the particular context of this study represents breadth and inclusiveness.

Over the years, in the educational scenario, it has been observed that students with disabilities have gradually assumed greater visibility in their own spaces, both in schools and universities, thanks to global initiatives such as the Strategy for the United Nations for the Inclusion of Disability (United Nations Organization [UN], 2018) in favor of accessibility, which has been penetrating the sensitivity of governments, institutions, organizations, and people. Although for many this situation can be addressed from special education, it should not be so, since it is about building inclusion (Villa, 2017); educational work with people with disabilities is a task and responsibility of all educational levels and instances.

The World Education Monitoring Report 2020 (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2020) expresses very clearly that inclusion cannot be limited to children and young people with disabilities attending ordinary schools, colleges, and universities that lack support and preparation for it and, therefore, cannot take responsibility for achieving inclusion, which would mean that actions such as these, could increase experiences of exclusion, leading to results adverse to the objectives of inclusion proposed by educational systems.

At the university level, the challenge for teachers becomes more evident, since it is a training that expects a higher level of autonomy from the student, both in their mobility of action and in their learning process. In this regard, Bromberg et al. (2016) state:

> No one prepared us for the urgent and necessary opening that universities had to assume in the face of the increasing entry of people with disabilities into university education. Many teachers from these universities have found themselves helpless in the face of ignorance about academic

coexistence and pedagogical strategies to efficiently enhance the abilities of students with disabilities. (p. 18)

These authors reflect, in written form, what many teachers think when they assume or when the challenge of working in the classroom with students with disabilities is imposed on them, as it is in most cases: they find intuitive knowledge, not consciously, without tools previously considered and designed based on the real needs of these students, often having to appeal to an adaptation of classroom practices, in adherence to what could be called 'pedagogy of normality'. The lack of understanding of the potentialities, capacities, and possibilities that a person with disabilities possesses still prevails, which leads them to other ways of learning; consequently, teachers use new ways to facilitate learning, clinging to trying to impose what is already known (Villa, 2017).

In the words of Villa (2017), "it seems that there is an absolute hegemony of normality [...] that prevents rethinking the way [how] the subjects of education are conceived" (p. 119), assuming them as people who are the object of teaching and not as subjects who daily build their being. Hence, it is necessary to constantly reflect on the teaching practice and even more so, when it occurs amid groups of students where there is a presence of disabling conditions, understanding that it is not about treating them differently, but about developing an inclusive practice to cover everyone in a general way, avoiding uncomfortable situations that, on many occasions, generate student desertion.

In the Colombian context, according to the figures provided by the Basic and Secondary Education Student Enrollment System (SIMAT), for the year 2018, there were 180,743 students with disabilities registered in schools throughout the country, "of which only 5.4% [reached] the level of higher education [...] and only 1.7% of people with disabilities finished university education" (Fundación Saldarriaga Concha, 2018, para. 3). Bermúdez et al. (2009) reaffirm the above and express that the initial access to education for people with disabilities is noticeably reduced, decreasing more and more when the transition is made between basic and higher education:

> More than answering to an institutional guideline, inclusion has often arisen from teachers interested in the subject, or it is generated as a response to the case of students who have entered and present particular demands for support and accompaniment to the university. (p. 51)

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Based on all these descriptions, as well as on data obtained through an initial observation carried out at the Universidad Popular del Cesar (UPC), located in the municipality of Valledupar, in Colombia, features of a problem related to teacher attention and interaction are evident in the classrooms of this higher education institution with students with disabilities, specifically those with total visual impairment or reduced vision. Among the possible causes, the lack of preparation on the part of teachers for classroom work was raised, as well as the administrative body in its interaction with them; likewise, the inadequate infrastructure of the classrooms and the available resources that the teacher uses as support in the classroom, and so on. Consequently, each student in these conditions faces physical, structural, and pedagogical barriers, together with those of an emotional and psychological nature, which hinder the development of the educational process at the university level and the relationships that exist there, negatively affecting learning.

Added to this is the non-compliance with laws, decrees, and agreements stipulated in the Colombian national territory, such as the case of Statutory Law 1680 of 2013, which establishes the provisions to guarantee the full exercise of the rights of persons with disabilities, but the reality is very far from what is proposed and stated on paper. Therefore, it is assumed that a fissure in the organizational system does not allow the adequate configuration of an inclusive educational community. From this circumstance, the fact of the investigation is born, which aims to identify causes, consequences, and possible contributions to meet latent needs in this controversial and pressing issue.

When visually impaired students enter the university with the aim of training and growing personally and professionally, they face a series of problems in the classroom. To verify this, the Department of Inclusive Education of the UPC provided this information: the entity has managed some resources, certain tools, and physical space to benefit this student population, but, despite this, most teachers do not have adequate training to deliver appropriate care.

From the above, the following question arose: What is the significance of the pedagogical attention strategies in students with visual disabilities of the UPC, Sabanas headquarter, in the municipality of Valledupar in attention to the principles of equality and equity? And, from it derived the purposes that made it possible to guide the research process around the general objective, related to understanding the importance of these pedagogical attention strategies in the classroom.

For this, in the context of this higher education institution, it was necessary to issue the following specific objectives:

- Recognize the principles of educational inclusion related to people with visual disabilities.

- Identify the conditions, needs, and interests of students with visual disabilities.

- Analyze the pedagogical practices in the teaching and learning processes for the attention of students with visual disabilities.

- Assess the significance of pedagogical attention strategies for students with visual disabilities at the Universidad Popular del Cesar.

Given the need to investigate the area of inclusive education and, especially visual impairment, the importance, utility, and benefit that this type of study brings to the mentioned population becomes evident, to be attended as a notorious party and active link of the configuration or socio-educational structure. In addition to this purpose of inclusion of diversity, the process of dignifying and making visible a population minority is necessarily touched, which constitutes an important task through its contribution to the construction of an awareness of equality and respect for the rights of each human being, regardless of the differences. The use of each strategy and resource is called upon to supply the critical points that make academic life a traumatic and frustrating episode in the training of students with disabilities, especially in specific cases of visual impairment. Thus, it would be contributing to the primary purpose of pedagogical research, which touches the fibers of the social network and emerges as an impetuous need for change in latent models and paradigms today.

The investigative process was supported by several studies. On the international stage, the contributions of Ocampo (2018), Fajardo (2017), Medina (2016), and García et al. (2016) provide valuable data on the subject of educational inclusion from their contexts and point as a whole to the search and achievement of a more integral, supportive, and fair education. In the Colombian national scenario, the works developed by Arizabaleta and Ochoa (2016), Aguirre (2016), Zárate-Rueda et al.

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(2017), Velandia et al. (2018), and Duarte et al. (2019) allow us to notice the need to continue investigating the educational inclusion at the level of higher education of students with visual disabilities, since, most of the time, they are complex life stories, loaded with suffering both at personal, family, and social level.

After having made a tour of the categories of the study, two major themes are highlighted: inclusive education and pedagogical attention for students with visual disabilities. The first represents the transformation and adaptation necessary for education for all, as expressed by UNESCO (2009):

> Inclusive education is a process of strengthening the capacity of the education system to reach out to all learners and thus can be understood as a key strategy to achieve education for all (EFA). As an overall principle, it should guide all educational policies and practices, starting from the fact that education is a basic human right and the foundation for a more just and equal society. (p. 9)

In Colombia, inclusive education is assumed as a determining process that recognizes the differences in human diversity. In the regulations, through Decree 1421 of 2017, article 2.3.3.5.1.4., numeral 7, the Colombian State defines inclusive education as follows:

> A permanent process that recognizes, values, and responds in a pertinent manner to the diversity of characteristics, interests, possibilities, and expectations of girls, boys, adolescents, youth, and adults, whose objective is to promote their development, learning, and participation with same-age peers, in a common learning environment, without any discrimination or exclusion, and that guarantees, within the framework of human rights, the support and reasonable adjustments required in their educational process, through practices, policies, and cultures that eliminate existing barriers in the educational environment. (p. 5)

Considering the above, it becomes evident that the Ministerio de Educación Nacional (MEN), by presenting this document of technical, administrative, and pedagogical indications for inclusion, offers a normative foundation in response to the need to work on the concept of inclusion and to determine theoretical support for academic work. On the other hand, it is convenient to clarify the difference between educational inclusion and inclusive education,

since they are concepts that, at first glance, seem to have the same meaning, but they are not. In this regard, Arizabaleta and Ochoa (2016) state: "Inclusive education is far from educational inclusion, by including all students in diverse and inclusive classrooms [...], with the support of management, administrative, financial, academic, and community of the Colombian HEIs" (p. 42).

The authors clarify that educational inclusion refers to the incorporation of a minority group of students into the classroom and inclusive education opens the range of opportunities for all students, without distinction of any nature, considering all areas and spaces that cover education. Hence the relevance of working with inclusive education and not with educational inclusion, since it is a question, in the case that occupies this research, that students with visual disabilities are attended with the same prerogatives as their other classmates.

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In this way, it is interpreted that higher education institutions in Colombia must offer students with any type of disability, the possibility of access, permanence, and educational quality, following the guidelines of the inclusive higher education policy of the MEN (2013), as a task of social commitment, since:

> By transcending the strictly academic and curricular to focus on the very constitution of the social, inclusive education has as its central objective, to examine the barriers to learning and participation typical of the entire system. In higher education, it is not the students who must change to access, remain, and graduate; it is the system itself that must be transformed to address the richness implicit in student diversity. (p. 18)

Based on this vision, when a student reaches higher education under the framework of inclusive education, positive results could be seen in the training and inclusion processes, not only at an academic level but also at a human and social level. However, given what is stated in the guidelines from the observations in the context of reality, the educational system leads the students with disabilities to adapt to what the institution offers them, without taking into

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account or adapting conveniently and relevantly to their needs.

Considering the normative guidelines, education for disabilities under the framework of educational inclusion must aim at students with these conditions and take into account all aspects that are related to it. In other words, educational policies and the educational process, in general, must be designed for this historically excluded population, with similar educational needs to those of their other peers. However, students with disabilities must overcome barriers that make the pedagogical training processes difficult. Being part of a system that, operationally, does not consider the needs of this population and adjusts to pre-established student models, relegates the practice of including students with visual disabilities to a lesser level.

Regarding the subject of pedagogical attention for students with visual disabilities, pedagogical accompaniment is required, based on the identification of particular situations, so that adequate strategies can be designed that offer significant experiences for their learning, also allowing adequate follow-up to the educational process from the teaching action. Therefore, it can be ensured that the educational practice directed at the attention of visual disabilities involves a constant challenge and, at the same time, proposes the construction of specific parameters to interact adequately in educational settings.

In the particular case of visual impairment, pedagogical practices must respond to the needs for access to information, comprehensiveness in the educational environment, and equal opportunities within reasonable adjustments to diversity, to the point of obtaining good learning and training outcomes. It can be ensured that a large percentage of the information received is derived from sight, which is an insurmountable challenge faced by students with visual disabilities. In this regard, Hernández et al. (2019) state:

> 80% of the information we receive throughout the day is through the visual system. When we look at something, we not only see with our eyes but we inspect, distinguish, identify, and interpret everything as part of the visual system. (p. 2)

Consequently, adequately caring for a visually impaired student demands an ethical, moral, professional, and human commitment, which implies recognizing the value and importance of knowing their needs, just as it is done with other students. By understanding this, the teacher commits him/herself to the student's learning, begins to adapt his/her practice to the particular needs of this through a detailed study, and configures a teaching process adapted to them.

Teachers represent an irreplaceable and transversal role in the adequate management of students with visual disabilities; in their practices, they become the pillar of an adequate direction that points towards academic-formative growth, for which the inclusive resources of an institution are essential in the teaching and learning processes. Educational work should be oriented towards breaking down the barriers faced by this class of students when they venture into the spheres of higher education, where the academic requirement is headed for the training and development of the autonomy of a competent professional, leader in their professional and occupational profile.

Strategies in the classroom and access to information are essential points to manage academic encounters with students who are blind or have low vision, which limits their autonomy in the learning process; this forces the teacher to resignify his/her practices, for their benefit; so, it is pertinent that the management starts from an approach to their particular needs and, based on the observation and analysis of their characteristics, provides specific supports under the use of resources such as typhlological ones and, in turn, a disposition by adapt their pedagogical practices towards the needs of students with visual impairment.

Previous considerations allow us to appreciate the complexity of the academic work that the attention of sight-impaired students represents. In the sense of strategies, understanding them as those actions that the teacher executes in their behavior in the classroom, Andrade and Yepes (2020) provide guidelines for their development, determining them into two typologies: the first, directed at the description of visual images, objects, and situations, bearing in mind that, through it, the most representative features of what is being shown are outlined; for example, tables, charts, maps, drawings, among others; in this way, "the description is, perhaps, one of the most used strategies in the classroom context to facilitate the understanding of the subject that the teacher develops at a certain moment" (p. 9).

The second strategy is oriented to the verbalization of the texts that are written on the board. At this point, the MEN urges teachers to express and read what they are writing on

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the board, whether they are texts, numbers, symbols, and/or formulas. In this sense, verbalization "is a strategy that benefits, not only students with visual disabilities but also students who are located in the last positions in the classroom" (Andrade & Yepes, 2020, p. 10). In the case of numerical exercises, it is extremely important to emphasize reading, in cases such as parentheses, announcing their opening and closing, as well as the use of the signs of mathematical operations.

On the other hand, Bromberg et al. (2016) propose relying on recordings for the design of strategies, since sight-impaired students not only collect and store information but also maintain attention, being able to discriminate later with more time available, the voices and sounds they heard in the classroom, enabling them to be analytical and critical. These speech-focused strategies also allow everyone to participate, regardless of their vision capacity, and complement the use of "tactile, information in Braille, use of large print, high contrast, voice synthesis programs in the computer, among others" (p. 68). Additionally, they suggest:

> Deliver in advance, as far as possible, the program of the subject, the list of bibliographies to consult, and the class material. The most operative thing is to do it in digital format so that they can read it with the help of new technologies. (p. 71)

On another side, the significance of promoting proper treatment among classmates must be addressed, since everyone's support is required to achieve the goals of inclusion in the classroom. On this aspect, Luque and Luque-Rojas (2014) propose the reflection:

> … on some intervention guidelines in teaching action towards a positive classroom climate, in personal and social interaction, particularly with the disabled partner, based on the acceptance of difference, providing collaboration and help in a cooperative, fair, and respectful exchange with people, values that must be shared by the entire community. (p. 5)

Thus, teachers are called to become generators and managers of a favorable space and healthy coexistence, both for the growth and for the educational training of students with visual disabilities; this requires them to operate in a communicative and interactive dimension that transforms their work into something more complex, that goes beyond action since it constitutes an ethical and social commitment, typical of education.

> Pedagogical practices are one of the most important parts of the educational work of the agents who will manage or manage inclusive classrooms […]. Practices located within the educational and social context are those that give a central axis to education, since from there the steps to follow in the classroom will be implemented, how the already established practices will be directed, and a new paradigm of educational inclusion [that seeks to know the current practices under the light of inclusion] will be transformed. (Carrillo, et al. 2017, p. 4)

As a consequence, constantly reflected pedagogical practices are needed, where the projection and development of the classes are based on the needs and particularities of all students in general, especially those with specific requirements, such as those with visual disabilities, strategically outlining the learning from the different ways of approaching knowledge.

The research was framed in the interpretive paradigm, in the phenomenological approach, supported by three stages: descriptive, structural, and information analysis. As data collection techniques, participant observation and in-depth interviews were used. The work unit was made up of two students with visual disabilities and two teachers linked to the UPC, Sabanas headquarter.

2. Methodology

The development of the research was guided by the phenomenological method, as a way to search for knowledge in the reality of pedagogical attention strategies in students with visual disabilities at the UPC, Sabanas headquarter. The investigation was focused on understanding how social actors (teachers and students) conceive these strategies, to know from their own experiences, what their behavior has been in the face of this phenomenon when considering their experiences in the classroom.

In this sense, it was necessary to design the investigative process through a sequence of empirical, theoretical, and methodological actions, typical of the interpretive paradigm and thus, build the structures that allowed the phenomenon to be addressed. Under this vision, the procedure of this study was defined, adapting the investigative work to the stages proposed

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by Martínez (2004) for the phenomenological method, supported by Albert (2007), constituting three stages: descriptive, structural, and analysis of the information (see Figure 1), from which the interpretative hermeneutics of the phenomenon of pedagogical attention strategies in students with visual disabilities of the UPC, Sabanas headquarter, emerged.

Figure 1

Graphic representation of the methodological design
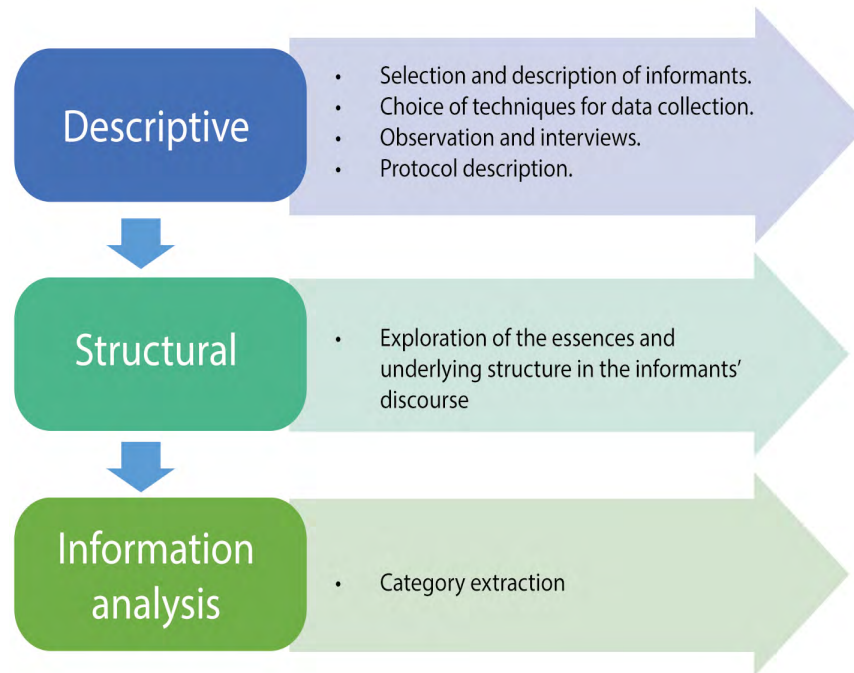
Source: Adapted from Martínez (2004).

The study was developed in the educational context of the UPC, Sabanas headquarter, with the support of the Inclusive Education Center of that institution. The data is true and is supported by the Registry and Control databases, a department that does significant work in terms of information on students entering the UPC. Two students with visual disabilities and two teachers from the same university were taken as a work unit.

To have foundations and veracity, virtual meetings were established with the students, to determine the circumstances and situations that could be representing difficulties and/or barriers to the adequate performance of the teaching and learning processes. At the same time, the dialogue with the teachers allowed us to know and understand the dynamics of the practices inside the classroom, with sight-impaired students. The only criteria for their selection were: the visual disability of the students, whether blind or low vision, their connection to the UPC, and that their participation was spontaneous. On the part of the teachers, their direct relationship with the students, in their academic load.

To observe and demonstrate the situations of these students in the classroom, in-depth interviews were carried out that allowed a detailed study of how they faced educational challenges, guided by the following categories: the conditions and needs of people with visual disabilities. The in-depth interviews with the teachers made it possible to study the practices they used with these students, highlighting the category 'Pedagogical strategies for the attention of visual disabilities'.

Based on this analysis and the findings that gradually emerged, it was possible to reflect, infer, and interpret the meanings in the continuity of the intersubjective dialogue process with the key informants. The information extracted from the interviews with teachers and students with disabilities was analyzed and interpreted from a thematic coding derived from the research question: "the research problem is the social distribution of perspectives on a phenomenon or a process. The

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underlying assumption is that different visions can be found in different social worlds or groups" (Flick, 2007, p. 201). Hence, this type of coding was used, given the characteristics of the key informants, which are explained in the Analysis Unit.

3. Results

In this segment, the results of the application of the information-gathering techniques and instruments presented in the previous section are collected, which allowed an in-depth analysis of what was expressed by the key informants: teachers, and students, concerning the general objective of this research: Understanding the importance of pedagogical attention strategies in the classroom for students with visual disabilities, which promote equality and educational equity at the UPC, Sabanas headquarter, Valledupar municipality.

Phenomenological investigations based on in-depth interviews seek, according to Taylor and Bogdan (1984/1987), to explain "things from their point of view" (p. 153). This means guiding the inquiry in the search for details about the contextual situation, which express the meanings of situations and elements present in them, and which are of relevant interest to those who provide the information (Emerson, as cited in Taylor & Bogdan, 1984/1987).

Under these considerations and, from an interpretive position, the analysis of the data provided by the two students with disabilities and the two UPC teachers was carried out. These contributions led to discovering and understanding, as a researcher, the peculiarities of the context around pedagogical attention strategies from the perception of their social actors, to identify, in the first instance, the conditions, needs, and interests of these students, to analyze the pedagogical practices in the teaching and learning processes for their attention in this institution, considering principles of equality and equity.

For investigative purposes, the interview allowed establishing a dialogical relationship with the visually disabled students; therefore, it was oriented by the following categories: Conditions and Needs of sight-impaired people, from which the subcategories that are highlighted and interpreted in Table 1 were derived.

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Table 1

Interpretive analysis of the narratives of key informants: Students with visual impairment

Objective
Identify the conditions, needs, and interests of sight-impaired students at the Universidad Popular del Cesar

Category
Conditions, needs, and interests of sight-impaired students

Sub-questions

1. In your daily life in the classroom, do you consider that teachers practice principles of student inclusion?

2. What is your experience as a visually impaired student regarding the pedagogical attention strategies used by teachers in class?

Student 1	Student 2	Thematic interpretation
1. Well, teacher, if you refer to whether they take us into account for class activities, some do, not all, because sometimes they plan activities and it seems that they do not remember that one does not see because they show images and not them describe and one is left like this... then, we have to tell them: Professor, please, describe the image to me and sometimes, it is sad to be in that and one is left without knowing, trying to imagine. Other teachers support us and describe what they are doing on the blackboard or if they are showing an image; in addition, they allow recording, but not all do that because many do not like to be recorded.

2. The experience has been good with those teachers who apply the strategies because they consider our needs and ask us; so, this is motivating and we feel that we are taken into account, not only as students but as people. However, I have had negative experiences, where I have felt excluded. | 1. It depends; some teachers..., I don't know if they know the definition of student inclusion, because their teaching is supposed to include all of us, regardless of whether we don't see or see little, or don't listen or, we are from other nationalities. I say this because many come in and give their class; if we understood, fine, and if we did not it's the same for them; they pick up their things and leave, just like that. That is, it seems that they do not care if one does not see and if it is difficult for us to do some activities; I think they only limit themselves to passing the contents, then evaluating and, that's it; who passed and who failed is the same for them; do you understand me? However, there are others, a few, who do understand us and care about our disability; they ask me if the type is total or partial; they do care and describe the contents, and ask the classmates, to get them involved; so, that is inclusion, because they think of everyone, whether or not we have a disability.

2. <u>There has been everything: good and bad experiences; there are teachers who worry too much; so much that sometimes I feel sorry for my classmates, although most of them don't get upset; on the contrary, they help the teacher and me a lot, because the activities are carried out in such a way that I can participate without impediment due to my blindness, which is total, by the way.</u> But, as I said before, <u>there are other teachers who, for example, have asked me to make slides</u> for an exhibition. They forget that I don't see. So, they tell me: "Tell your colleagues to do them and you expose". Since I don't do that, then the note is not good; I don't lose, but the grade is not good because I missed the slides. <u>I think that teachers should look for alternatives.</u> | Some teachers do not know the practice of student inclusion since they resort to strategies and resources that do not suit the needs of sight-impaired students; do not care to know or understand them; much less, for including in their practices, strategies oriented to their requirements, according to their condition of disability, with an inclusive vision in the classroom. However, it cannot be denied that there are teachers concerned with serving these students and including them in their pedagogical practices along with others, since, when considering their needs, they are taking them into account, without any distinction. This makes it possible to generate a classroom climate around inclusion and equity, based on knowledge and understanding of everyone's needs. Although this leads to positive experiences when there is interest and concern on the part of the teachers who help the students, negative experiences are also evident, perhaps due to a lack of adequate strategies, which leads teachers to improvise, without having the suitability or, simply to exclude, leading to uncomfortable, demotivating situations and, to desertion, since these students are asked to develop activities such as designing slides, for example, which they cannot do due to their visual disability, leaving other strategies aside such as verbal ones, for which they would be physically capable. It seems that teachers forget the conditions of students with visual disabilities, by asking them to do these inappropriate activities for their condition or, by doing written tests for everyone. |

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In the interviews with the students, it is evident that there are teachers who are unaware of the practice of student inclusion since they resort to strategies and resources that are not adapted to the needs of those with visual disabilities. They do not care to know or understand them, much less to include in their practices, strategies oriented to their requirements, according to their condition of disability, with an inclusive vision in the classroom. However, there are other teachers, concerned about serving these students and including them in their pedagogical practices along with the others, because, when considering their needs, they are taking them into account as students without any distinction, which generates a climate of inclusion and equity, based on the knowledge and understanding of the needs of all.

The in-depth interview addressed to the two teachers was oriented by the category 'Pedagogical attention strategies for the attention of visual disabilities'. The information collected allowed us to verify that both coincide in their appreciation of educational inclusion, especially about the issue of disability since they are aware of the need to work with inclusive criteria in their classes. This requires the participation of the entire academic community, considering that educational inclusion is not the task of a single teacher, but of all university areas, to transcend the social environment. It is observed that they have worked intuitively, since they have not been provided with information, much less training, on the pedagogy of inclusion and disability.

In the pedagogical practice for students with visual disabilities, the teachers agreed on the use of strategies focused on oral language: dialogues, conversations, exhibitions, and debates, which allow the participation not only of these kinds of students but of all members of the group. On the other hand, teachers, in their intuitive work guided by their inquiries and self-training on disability, resort to descriptions of content and images that work on the board, as well as collaborative teams to achieve significant learning, where everyone learns from each other. They understand that inclusion in the classroom requires the support of classmates, which alludes to a social dimension of disability, entrenched in values of respect, tolerance, and empathy, typical of inclusive educational work.

From the analysis of the teaching experiences, it is understood the clarity that these two teachers have regarding their conceptualization of pedagogical strategies aimed at the attention of students with disabilities, since they assume them from reflection and knowledge of the needs and interests of these students, to plan appropriately and pertinently, without neglecting the needs of others, otherwise, they would affect the classroom climate and would not promote inclusion but antagonism. However, from their discursive, the lack of pedagogical training to face situations of disability in the institution is evident since they have seen the need to improvise and learn, doing their work intuitively, without a planned training that the curriculum should provide, from where the training of the teacher has to be implemented according to the needs of the students.

In this scenario, teachers intuitively built pedagogical knowledge around visual impairment, which allowed them to develop skills for their work, with relevance and adaptation to the specific needs of students. Nevertheless, the lack of pedagogical training continues to be a weakness, since it should not be the teacher who learns to resolve the situation, but the curricular and administrative instances of the university institution, who support, understanding that it is an educational community where situations are worked on and resolved with the participation of all, without distinction.

The teachers coincide in recognizing the type of attention that students with visual disabilities require when developing activities focused on orality; that is, attending to the strengths that these students have, to express themselves verbally. In this sense, they use talks, symposiums, debates, and exhibitions, so that those share their opinions on the contents that are worked on in class, also relying on descriptions of the processes, the work on the board, and those images that they could use. to illustrate the content. Additionally, they allow the recording of classes so that students with visual disabilities can have this resource to review what was discussed in class when they are at home, strategies that also serve all students equally.

On the other hand, through the dialogue with the teachers, a series of positive experiences were verified around the pedagogical work with students with visual disabilities, through the joint construction of collaborative teams based on trust, to dispel fears, which generates benefits for all. This positivity includes the teachers' learning, who from their work have

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managed to create pedagogical attention strategies, considering the needs and conditions of these students. However, there are also negative experiences due to the lack of training and preparation to deal with this type of situation; by resorting to their intuition, they made mistakes due to ignorance and a lack of relevant pedagogy for the care of this population.

In summary, the two teachers affirmed the need to be trained in a visual disability pedagogy that allows them to acquire the necessary skills to serve this population. From their pedagogical experiences, both resorted to the use of strategies focused on oral language, favoring dialogue between students to work on the topics planned in the contents, as well as conversations, symposiums, debates, and exhibitions.

Table 2

Interpretive analysis of the narratives of key informants: Teachers

Objective
Analyze the pedagogical practices in the teaching and learning processes for the attention of students with visual disabilities at the Universidad Popular del Cesar, considering principles of equality and equity.
Category
Strategies of pedagogical attention for the attention of the visual disability
Sub-questions
1. In your teaching practice in the classroom, do you develop strategies that promote the inclusion of all students?
2. What kind of strategies do you use in the classroom with your higher education students in the subject you teach?
3. How would you define the pedagogical strategies aimed at serving students with disabilities?

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Teacher 1	Teacher 2	Thematic interpretation
1. I am aware of the <u>need that we teachers have to generate actions that allow us to build spaces for inclusion inside and outside the classroom. It is required that we all participate in it, not only the teachers but also the administrative teachers, to work together and achieve the goals, through community strategies that promote the inclusion of all...</u> 2. Well, <u>I always try to work with collaborative teams, to encourage everyone to get to know, participate and help each other, generating cooperative learning. I like to hold debates and symposiums because that way everyone can participate,</u> talking to each other, as teammates and with me, to guide them in their academic work. You know that, at the level of higher education, the student's autonomy is sought, in the sense that it is he who finds the best way of learning, according to his needs; but, in cases of visual impairment, they should receive more direct support, since they require more detailed descriptions, for example, of what is written on the board. 3. I could define them as <u>the activities that teachers plan, in response to the needs of people with disabilities, considering their needs, depending on the type,</u> because if it is visual, they would require more strategies where orality is prevalent. <u>You also have to take the rest of the students into account, because if you don't do it that way, and focus on helping only those with disabilities, the others notice and start to get uncomfortable; thus, you are not being inclusive.</u>	1. I could say yes, although it is not something I have thought of <u>because these cases come without warning; that is, we are not notified in advance and, suddenly, at the beginning of the course, the first day a student enters with any condition, be it a disability, race, nationality and... well, we have to move forward and find strategies that help to create a climate of inclusion.</u> 2. <u>Dialogue is essential for understanding between people and... well, I work a lot on that: to get to know each other, especially in the first classes, to promote the construction of team learning; I like to work like this, in teams, but, from the knowledge of each one; this promotes inclusion, camaraderie, and support among all.</u> 3. They are all those <u>pedagogical actions that teachers develop with our students, based on prior planning, to attend to those with disabilities, from an inclusive vision.</u> It is worth noting that we should not treat them differently; that is, make two plans and two types of strategies because if we do so, we would be generating exclusion. <u>It is about creating working strategies aimed at everyone equally; that is, where everyone can participate, considering, of course, their characteristics and needs, according to their type of disability.</u>	It is evident that teachers are aware of the need to be inclusive in their classrooms, but for this, they must have the participation of the entire academic community, since educational inclusion is not limited to the classroom, but must be considered in all academic fields and transcend the social environment. In this regard, UNESCO (2018) states that inclusion is the task of the educational system as a whole, conceiving it as a key strategy to achieve Education for All. Therefore, it must be taken as a guiding principle, both for policies and educational practices in the classroom, to achieve true inclusion. It is observed that teachers have worked intuitively since they have not had prior information to prepare themselves, much less training on inclusion pedagogy. The practice of the two teachers coincides in terms of the use of strategies focused on dialogue and oral language, such as exhibitions, debates, and symposiums, which enable the participation of all students, including those with visual disabilities. On the other hand, teachers resort to descriptions of the contents that work on the board, as well as collaborative teams, to achieve meaningful learning, where everyone learns from everyone. It is interpreted that they understand that inclusion in the classroom requires the support of classmates, which implies a social dimension since it is based on values such as respect, tolerance, and empathy. From the analysis, it can be deduced that teachers are clear in their definition of pedagogical strategies aimed at the attention of students with disabilities, since they assume them from the planning in attention to the needs and interests of these students, without undermining the needs of the rest of the group. Otherwise, they would affect the classroom climate and would not promote inclusion. The foregoing is based on what was stated by Andrade and Yepes (2020), who define the strategies, such as those actions carried out by the teachers in their behavior in the classroom, aimed at people with disabilities, an action carried out by the interviewed teachers, some focused on in the description and others in the verbalization.

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From the discourse of the teachers, it was possible to infer that both agree on what educational inclusion means, especially about the issue of disability, since they are aware of the need to work with inclusive criteria in their classrooms. This requires, according to them, the participation of the entire academic community, taking into account that educational inclusion is not only the task of the teacher in the classroom but must be considered in all university academic areas and transcend the social environment. However, they have had to work intuitively, since they have not been provided with information, much less training on the pedagogy of inclusion and disability.

4.Discussion

This section presents the discussion of the results of the process of collection, systematization, analysis, and investigative reflection on the lived experiences of the key informants around the theme of pedagogical attention strategies in sight-impaired students of the UPC, Sabanas headquarter, a work that began from the investigative motivation from the pedagogical practice of the researcher, who started from an initial observation to recognize the phenomenon of study, from which questions arose and derived the purposes of the study, which serve as guiding guides for the discussion.

From the interviews with sight-impaired students at the UPC, it was possible to show that there are teachers who are unaware of the principles of educational inclusion since they use inadequate strategies and resources in regard to their needs. This student approach differs from what was issued by Decree 1421 of 2017, in its article 2.3.3.5.1.4., numeral 7, where it is specified:

> Inclusive education is a permanent process that recognizes, values, and responds in a pertinent manner to the diversity of characteristics, interests, possibilities, and expectations of girls, boys, adolescents, youth, and adults, whose objective is to promote their development, learning, and participation with peers of the same age, in a common learning environment, without any discrimination or exclusion, and, which guarantees, within the framework of human rights, the support and reasonable adjustments required in their educational process, through practices, policies, and cultures that remove existing barriers in the educational environment. (p. 5)

It is unfortunate that, in many cases today, some teachers do not worry about knowing or understanding students, to develop strategies oriented to their requirements and particular characteristics, so that an inclusive perspective can be built in the classroom that transcends classmates, both inside and outside; that is, towards the educational community and society. This attitude or ignorance of the teachers could be inferred from the words expressed by the key informants (students):

> If you mean, if they take us into account for class activities, some do; not all of them, because sometimes they plan activities and it seems that they don't remember that we can't see them, because they show images and don't describe them and we end up like this... so, I have to say: teacher, please describe the image to me and... sometimes it's embarrassing being in that situation and... I stay without knowing, trying to imagine. (ICE-1, LP 1-7)

This situation is contrary to the approaches of Bromberg et al. (2016):

> It is then a matter of assuming teaching from an inclusive perspective, seeing it as an opportunity and, in turn, as a strategy that enhances functioning, which seeks to facilitate university coexistence with students with disabilities to break with the myths and false difficulties associated to special education, oriented towards an inclusive pedagogy based on logic and empathic communication between teachers and students. (pp. 35-36)

However, the interviews with the students and with the teachers revealed the presence of teachers who were genuinely concerned with meeting the needs of sight-impaired students and with including them in the activities carried out during the pedagogical practices together with the other classmates. When considering their needs, they are considering them as human beings and as students without any distinction due to their disability, which helps to build a classroom climate around inclusion, based on knowledge and understanding of the needs of all. This is in line with what UNESCO (2020) expresses, in that inclusion is a task of the educational system as a whole and must be conceived as a key strategy to achieve Education for All, which must be taken as a guiding principle, both for policies and educational practices in the classroom, to achieve true inclusion; otherwise,

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if there is no support from one of the areas, it will not fully develop.

Despite this, the interviews with the teachers revealed that they work intuitively on the planning and development of pedagogical care strategies for students with visual disabilities since there is no information or prior training to prepare them on inclusion pedagogy, which allows them to face the situations of disability that have arisen. For this reason, they have seen the need to improvise and learn, developing their classes spontaneously, without training from the curriculum, an academic scenario that must regulate and guide aspects related to teacher training, according to the needs of the students. students. In this regard, the ICD-2 stated:

> It is not something that I have thought of, because these cases come without warning; that is, they do not notify us in advance; and, suddenly, at the beginning of the course, the first day a student enters with any condition, a disability, race, nationality, and... well, you have to move forward and find strategies that help create a climate of inclusion. (ICD-2. LP 1-5)

Therefore, in higher education institutions, inclusion must understand the need to recognize disability as part of a naturally diverse world, which must be addressed from education and which requires teachers who are informed and trained in a relevant way, accompanied in the educational process, to support their work. In this regard, Bromberg et al. (2016) state: "Inclusive pedagogy involves understanding that the socialization and inclusion of people with disabilities that make up the university community are a fundamental right" (p. 37).

The four interviewees, both students with visual disabilities and teachers, agreed that some teachers resort to strategies focused on orality; that is, on spoken language, to facilitate learning for these students. To do this, they use descriptions of what is drawn or written on the board or what is shown in a slide presentation, with which sight-impaired students can keep track of the content that is being worked on in the classroom.

Teachers turn to activities such as exhibitions, class debates, conversations, and symposiums, among other strategies, which favor orality, to express ideas, opinions, arguments, and questions, with which not only students with visual disabilities participate, but also the rest of the classmates: "The teachers have conversations and debates, which are quite interesting because there, everyone has an opinion on a subject and you learn a lot from the others and the teacher when he also shares his opinion" (ICE-1, LP 35 -37).

These arguments coincide with those issued by Bromberg et al. (2016):

> The idea is that the student can apprehend the information given in class, access bibliographic and infographic material, and telecommunications, participate in work groups, develop their skills, and demonstrate mastery of the knowledge of the subject to be studied, equalizing and equating opportunities. (p. 37)

The work on spoken language is what was stated by Andrade and Yepes (2020), who determine two types of strategies to address situations of visual disability in students: the first is aimed at the description of visual images, objects, and situations, considering that, through this, the most representative features of what is being shown are outlined: tables, charts, maps, drawings, among others. "The description is perhaps one of the most used strategies in the classroom context to facilitate the understanding of the subject that the teacher develops at a certain moment" (p. 9).

> When I worked with children with total blindness, I resorted, for example, to the description of images that illustrate certain contents, such as the water cycle; and I try to be as detailed as possible; I ask the student if he/she is imagining what I describe; and, not only I do it; I also ask the other classmates who can indeed see, to describe when they use images. (ICD-1, LP 62-66)

This goes hand in hand with the second strategy proposed by Andrade and Yepes (2020), aimed at the verbalization of the texts that are written on the board, using the reading of texts, numbers, symbols, and/or formulas. In this sense, verbalization "is a strategy that benefits, not only students with visual disabilities but also students who are located in the last positions in the classroom" (p. 10). In the case of numerical exercises, it is relevant to emphasize what is being read, in cases such as parentheses, announcing their opening and closing, as well as the use of signs in mathematical operations.

It is worth noting the coincidence of the interviewed teachers when applying strategies mediated by collaborative work teams, whose orientation is the support of all towards all

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for the achievement of the objectives and the development of the activities, also centered on the dialogue between classmates, considering all equally, as a center of teaching and learning, by organizing debates, talks and presentations of topics by teams. In this way, "I intuitively told myself: if he can't see, he can hear, so I decided to work with activities that involved oral language, such as class presentations and conversations" (ICD-2, LP 31-33).

The foregoing is complemented by what is stated by the ICD-1:

Look, you have definitively to work with strategies focused on dialogue, exhibitions, symposiums, debates, and conversations, which allow students with visual disabilities to use spoken language to interact with their peers and with the teacher; this also benefits other classmates because it is easier to express and exchange opinions, and questions; this gives everyone a greater capacity for expression, improves their vocabulary and the way they deal with other people, which, in the professional field, is highly valued. (ICD-1, LP 86-92)

These results coincide with what was issued by Andrade and Yepes (2020):

The strategies that facilitate the teaching-learning processes of blind students and/or with irreversible low vision are the same as those applied to their peers without visual impairment; the difference is that many of these must be adjusted to the requirements and particularities of each person, given their condition of total blindness or irreversible low vision. (p. 7)

Additionally, Bromber et al. (2016) suggest that, at the beginning of the classes, the planning with the subject program, the bibliography to be consulted, and, if possible, the class material should be given to the students so that they can be prepared in advance of the course each class. These and other actions are executed by the ICD1 and, it is evidenced when he expresses:

Now, before the start of classes, I try to find out if I have enrolled a student with a disability, whatever it may be so that I can reflect and plan. I present the plan to everyone and ask them if they agree with the proposed strategies; sometimes they give me suggestions for changes and, if I consider them pertinent, I do them. The idea

is to serve everyone, whether they have a disability or not. (ICD-1, LP 45-49)

The teachers interviewed also stated that they allow voice recordings during their classes, with which both students with visual disabilities and the rest of their classmates have the opportunity to use this resource to review classes and academic conversations around the topics discussed in the classroom. On this, Bromberg et al. (2016) express that students with visual disabilities not only collect and store information in this way, but it also allows them to maintain attention, being able to later discriminate with greater availability of time, the voices and sounds they heard in the classroom. In this sense, the ICD-2 and ICE-2 commented:

I also allow them to record the classes, so that they can listen to them carefully at home later. This has been a great help, both for those who have a visual disability and for their classmates, because they can also record and review. It helps me as a teacher because I don't have to repeat so much, I can progress better and, well, I learn to speak carefully and to be more descriptive. (ICD-2, LP 43-48)

In the latest expressions, this informant described the use of other learning resources, to which he and some teachers turn to support their educational process: Internet and digital applications designed especially for people with visual disabilities, which can be used on devices mobiles; this allows complementing the use of "tactile resources, information in braille, use of macro types, high contrasts, voice synthesis programs on the computer, among others" (Bromberg et al., 2016, p. 68).

ICE-1 stated: "I use Braille, but of course, that is already a resource that I must look for: books in Braille or digital reading and audio formats" (LP 40-45). This allows us to infer the responsibility that these students assume for their learning process, not leaving everything in the hands of the teachers. On this, ICE-2 agrees when he expresses: "I think that it is a matter of attitude; we, people with disabilities, whatever it may be, can help teachers understand each other and work together, but both parties must have the necessary attitude and disposition" (LP, 58-60).

Discursive analysis with visually impaired students allowed us to verify that the experiences focused on orality, such as activities and events inside and outside the classroom, have been

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very satisfying since they feel that they are taken into account and are not excluded by their condition; on the contrary, they have been participants and actors with responsibility within the group activities that they have developed. These actions make it possible to strengthen both cognitive and procedural knowledge as well as attitudinal and coexistence knowledge, raising their self-esteem and motivation. Although their condition of disability may be obligatory to accept for some, they know that they can contribute and offer from their learning and value as human beings, in a social and educational environment.

Based on what is stated by the dictionary of the Real Academia Española (RAE, 2014), these elements are implicit in the field of Typhology, a science that studies the conditions and problems that surround people with visual disabilities, to develop solutions that allow achieving their inclusion and educational, labor, social, and cultural integration.

The interviewed teachers, for their part, manifest positive achievements, but they also recognize that there is still a long way to go on the issue of educational inclusion, and with people with visual disabilities; in this regard, they refer

> Well, they have been satisfactory achievements, because I have tried to adapt to their requirements and work with them; when they are not understood, it is thought that they are the ones who must adapt to the system. It is not about treating them differently, because that way there is no inclusion; it is about understanding them and working for all of them. (ICD-1, LP 75-83)

These results are related to what was argued by Carrillo et al. (2017):

> Pedagogical practices are one of the most important parts of the educational work of the agents who will manage or manage inclusive classrooms […]. Practices located within the educational and social context are those that give a central axis to education, since from there, the steps to follow in the classroom will be implemented, and how the already established practices will be addressed and transformed into a new paradigm of educational inclusion since it seeks to know the current practices in an inclusive light. (pp. 3-4).

Previous expressions show the importance of accompanying pedagogical strategies with a

favorable, motivating, and stimulating climate for learning in the classroom, which generates in students with visual disabilities and their classmates, the desire to share their positive experiences and, therefore, with the teacher who promotes them.

Despite the difficulties that students with visual disabilities have encountered to enter and continue in university education, they have indeed had the support, first, of family members and second, from some teachers and fellow students, which is in line with what was issued by Bromberg et al. (2016), who propose, for the design of strategies, relying on recordings, since students with visual disabilities not only collect and store information in this way, but it allows them to maintain attention, being able to later discriminate with greater availability of time the voices and sounds that occur in the classroom, enabling them to be analytical and critical of what is heard.

5. Conclusions

For the first objective, aimed at recognizing the principles of educational inclusion related to people with disabilities at the UPC, we worked with the data from the documentary review that allowed, on the one hand, to build the state-of-the-art on the subject of pedagogical care in students with visual disabilities with inclusion criteria and, on the other hand, deepen the concepts related to inclusive education and inclusive pedagogy. The latter was assumed as the set of actions managed by the teacher to facilitate significant learning in their students, based on the recognition of the needs of students or people with disabilities.

It is highlighted that inclusion does not imply that traditionally excluded students are the ones who "should enter" an educational system, but that it is this system that must be designed to cover everyone, without any distinction; much less, due to a physical condition. Rather, it is the educational system as a whole, which must carry out constant research and the design of pedagogical attention strategies, which arise from the continuous consultation with all its students; even more so, of those who require more specific attention, as in the case of people with total blindness or diminished vision.

On the other hand, the results of the teachers' discourse led us to think that there is little knowledge about the pedagogical approach to

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attention to visual disabilities, since, in general terms, they stated that they work intuitively, by trial and error, since they have not been trained in an inclusive pedagogy for attention to disabilities. Therefore, the institution studied and some teachers are leaving aside in their academic work, strategies of great value that make it possible to pursue studies of students with visual disabilities within the level of university education.

Regarding the second specific objective, aimed at identifying the conditions, needs, and interests of sight-impaired students at the UPC, the teachers interviewed, through academic work, have given themselves the task of inquiring about the needs and interests of these students, coming to realize that their needs not only have to do with the cognitive and the procedural but a lot with the attitude from the teacher towards them. That is to say, the strategies of pedagogical attention toward students with visual disabilities must start from their design and planning; first, the recognition of the need to work with inclusion criteria and values such as respect for diversity, tolerance, and acceptance of the other, together with the consideration of different learning rhythms and styles. This, if taken to a general plane, is not far from the attention that a teacher should have in the direction of any of his/her students, without making any kind of distinction.

In the case of the teachers interviewed, they give importance to working with orality, finding that, through strategies focused on dialogue among all, they reach all their students in a better way. To do this, they have had to work intuitively, without specific training that allows them to investigate formally and competently, but rather, through their genius and teaching experience, they have been overcoming difficulties, asking their students, keeping constant communication, and promoting it in all the students, to know the needs of all, whether or not they have a disability, because it is not about leaving other students aside.

In this sense, for students with visual disabilities, it is valuable that teachers consult them about their needs and abilities, to plan and execute strategies that include them all. In addition, generating activities that imply not only sharing knowledge but also motivation and raising self-esteem, in a context of diversity, where the construction of spaces for understanding, inclusion, and participation of all is necessary.

Regarding the objective of analyzing pedagogical practices in the teaching and learning processes for the attention of students with visual disabilities at the UPC, the conclusions pointed to the importance that both teachers and students with disabilities attach to pedagogical strategies mediated by orality. Thus, resorting to oral presentations, symposiums, interviews, debates, and conversations to work on the topics and the class contents are highly privileged by all the informants, since, in orality, students with visual disabilities find a competence that they can develop to communicate with the world. For this, they resort to voice recordings, which are allowed by the teachers in the classes, and constitute a resource for the review and understanding of the theme worked on in class.

In this way, it was evidenced that some of the teachers are prone to the topic of inclusion and, with it, to work with strategies that enable students with visual disabilities to live significant learning experiences together with their other classmates, since the teachers gain a foothold in collaborative teamwork, descriptions, and activities centered on spoken language.

For their part, students with visual disabilities recognized the interest and work of some teachers who have certainly made an effort to know and understand their needs and limitations, to turn them into strengths through oral expression, strengths that manifest themselves in participation in face-to-face and digital events, with quite significant and satisfactory achievements, both from the point of view of sharing knowledge and from the emotional perspective of students and teachers, who feel that they are on a positive path.

This allowed us to assess the significance of the pedagogical attention strategies for students with visual disabilities at the UPC, understanding and confirming that pedagogical practices must have their starting point in their needs, strengths, weaknesses, and motivational interests, which together, will facilitate the achievement of educational objectives and the satisfaction of the educational community.

In this way, the significance of the strategies is given by the level of achievement made by students in their academic life; therefore, it can be concluded that the effort of teachers to carry out their pedagogical practice by considering all their students, including those with visual disabilities, has been of great relevance,

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although there is still a long way to go. Training, motivation, and professional competence of all teaching staff are required to achieve greater results in educational inclusion and disability-related pedagogy of inclusion.

6. Conflict of interest

The authors of this article declare not to have any conflict of interest regarding the work presented.

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