

The Importance of Pedagogy at an Early Age with Cognitive Disabilities

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Abstract

This article will address the issue of children with cognitive disabilities in Colombia, their current barriers and the importance of early education in conditions of cognitive disability. Starting from a contextualization of what disability is, characteristics of cognitive disability, pedagogy and the importance of the methodologies used. It is important to understand that it is increasingly difficult for children with disabilities the access to quality education. In this particular case, elaborating on the importance of pedagogy at early ages with cognitive disabilities.

Keywords: *Cognitive disability, pedagogy, early ages, neuroeducation, education barriers.*

Introduction

On many occasions the social context determines the lives of people with disabilities, in this way they can be discriminated against and their rights can be violated, because society does not recognize that it is a percentage of the population that needs to be included, for this reason it is essential to be able to guarantee their rights. Therefore, it is about changing the perspective from what is reflected to what a person with a disability really is or can become.

Over time, people with disabilities have been developing capacities and/or skills, managing to make decisions, be independent, be part of society and be respected from their rights; Disability went from being a pain or a burden for others to becoming a condition that guarantees rights.

CONTEXTUALIZATION OF COGNITIVE DISABILITY

According to the UN Convention on the Rights of Persons with Disabilities (CRPD) in Article 1 it defines: *"Disability is an evolving concept that results from the interaction between people with impairments and attitudinal and environmental barriers, which prevent their full and effective participation in society, on an equal basis with others."* (unidas, 2006)

However, the CPDP recognises disability as a concept that evolves as a result of interaction between persons with disabilities, behavioural or attitudinal barriers, and the environment that prevent their full participation in society, on an equal basis with others.⁶

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However, in the 2006 ratification of the rights of persons with disabilities adopted by the United Nations, the immediate obligation of States parties is to promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by persons with disabilities.

On the other hand, the CPDP states in Article 9 that States Parties shall take appropriate measures to ensure accessibility for persons with disabilities (Article 9). The CPDP and its Optional Protocol were adopted on 13 December 2006 at United Nations Headquarters in New York and opened for signature on 30 March 2007. There were 82 signatures on the Convention and 44 on the Optional Protocol, as well as one ratification of the Convention.

Never before has a United Nations convention gathered such a large number of signatories on the day of its opening for signature. It is the first comprehensive human rights instrument of the twenty-first century and the first human rights convention to be opened for signature by regional integration organizations. It points to a "paradigm shift" in attitudes and approaches towards persons with disabilities.

For this reason, the World Health Organization's 2011 World Report on Disability states that: (OMS, 2011) *"More than one billion people around the world live with some form of disability; Of these, almost 200 million experience significant difficulties in their operation. In the years to come, disability will be an even greater concern, as its prevalence is increasing."*⁷

It is estimated that 15% of the world's population has a disability, (according to estimates of the world population in 2010). This figure is higher than the World Health Organization's previous estimates for the 1970s, which were about 10 per cent.

According to the World Health Survey, 110 million (2.2%) have very significant difficulties functioning, while the Global Burden of Disease, a scientific project to quantify the causes of disability, determines that 190 million (3.8%) have a "severe disability", the equivalent of disability associated with conditions such as quadriplegia, major depression or blindness.

This is associated with the fact that a person's disability can become a barrier to achieving a goal or fulfilling a dream, but it is evident that disability can become a condition that drives a person to overcome and advance until they achieve their goals.

In this way, the environment should be a vital platform for people with disabilities to be included in all scenarios. For example, the adaptation of public roads, the adaptation of commercial establishments with sign language, the training of the population in the treatment of people with disabilities, among others.

It should be noted that the World Health Organization and the World Bank produced this World Report on Disability to provide data for the formulation of innovative policies and programmes that improve the lives of persons with disabilities and facilitate the implementation of the United Nations Convention on the Rights of Persons with Disabilities. which entered into force in May 2008.

A LOOK AT PEOPLE WITH DISABILITIES

The journalist, historian and activist with visual impairment, Richard Mateos, dedicated to vindicating the value of people with disabilities in society; Creator of the Burlando Fronteras project, with the aim of redefining disability as diversity and as an "invisible border". Mateos, in his project, mentions disability as a condition, but beyond that

⁶ UNITED NATIONS - Persons with Disabilities. Department of Economic and Social Affairs. Convention on the Rights of Persons with Disabilities.

⁷ WHO and World Bank Group, World Disability Report.

belonging to a multi-cultural society, where there is gender, biological, ecosystem diversity, cultural, functional, linguistic and genetic diversity.

It is clear that there is diversity in human beings, this makes us equal to a species, but we are considered different in several aspects (whether physical or cognitive) and that makes us think of ourselves as unique. The importance of this diversity in our society is that it allows us to include and accept all the customs, values that human beings have professed throughout evolution, it allows the coexistence of people with different opinions, political ideologies, customs, religions and genders. . (Rodríguez, 2021)

Normality refers to that or what conforms to average values, this has a great load of subjectivity and is linked to social status, age and other issues. If everyone were normalized, it wouldn't be extraordinary to see how different everyone is. However, the context in which a person with a disability lives presents accessibility barriers, in Colombia, for example, pedestrian crossings such as platforms and passages are not conditioned for people who, due to their physical condition, must use a wheelchair, this requires a greater effort and hinders their free development.

On the other hand, the issue of medical treatments for people with disabilities also becomes complex processes, many times to access them is complicated, socioeconomic support from the government, access to study, entry to commercial establishments, communication and care for this population, from this it is inferred that we live in a society in inequality, Indeed, we do not live in equity.

Regarding the barriers that can occur considerably in people with disabilities according to their pathology are: loss of mobility, dependence to eat, go to the bathroom, walk, take things with the hands, greet, give a hug, feel nature, listen, see, speak, among other things that seem common to us for others become a privilege.

Consequently, the most common obstacles faced by people with disabilities within society are: access to education, decent work, participation in cultural events, entering university, directing people, leading a project, forming a family, taking part in research, entering a state school or college, interacting with the other children in the class, etc. among others. Also, it can be seen from another point of view, how one of the barriers is purchasing power, social stratum and discrimination, that is, that a disabled person has greater challenges to self-realization.

However, one way to provide solutions to people with different disabilities would be through technology or mechanisms to make their activities easier, such as the use of prostheses, wheelchairs, help from professionals, implants and other instruments that can improve their quality of life.

That said, in the process the family is fundamental and important, as it is a mechanism of help and solution to counteract any type of illness or disability.

It is important to remember that a person with a disability can develop and work on feelings such as:

- Acceptance: where you are aware of your reality and recognize that you need something for your life to continue.
- Love: he thinks of himself, he loves his condition and reality.
- Security: You know that you depend on certain things to live, but you know your ability and security to get ahead using mechanisms for your daily activities.
- Self-realization: you commit to yourself to overcome your difficulties.
- Skill: Creates, generates skills to learn and grow as a person.

EDUCATIONAL EXCLUSION OF CHILDREN WITH DISABILITIES: AN INTERNATIONAL OVERVIEW

Disability is a major factor in educational exclusion, despite having the same rights, children with disabilities are one of the groups historically most excluded from the education system. According to a new UNICEF report, the number of children with disabilities in the world is nearly 240 million. (UNICEF, 2021)

In this way, children with disabilities have remained relatively invisible in efforts to achieve universal access to primary education as set out in the Education for All (EFA) goals and the Millennium Development Goals (MDGs) Goal 2: Basic education for all.

As a result, the United Nations Millennium Declaration was adopted in September 2000. A new global partnership to reduce extreme poverty and established a set of eight goals, with a deadline of 2015, known as the Millennium Development Goals (MDGs). These include basic education for all.

However, the 17 Sustainable Development Goals contain 11 express mentions of persons with disabilities. The concept of disability is mentioned indirectly on numerous occasions through expressions such as "for all", "people in vulnerable situations" or "universal access". Disability is specifically referenced, in addition to the introduction, in various SDGs such as SDG 4, on education; 8 on employment; 10 on reducing inequalities; 11 on the 'inclusivity' of cities and transport accessibility, and 17 on follow-up to the Agenda.(Naciones Unidas, 2015)⁸

On the contrary, it is seen that educational exclusion also delays the social, economic, technological and political progress of a country, since the international standards proposed by the Convention on the Rights of the Child (CRC) and the Convention on the Rights of Persons with Disabilities (CRPD) are not met.(Naciones Unidas, 2015)

In this way, it can be understood that exclusion is separating, not accepting, not including within the educational field children who have a disability, whether cognitive or of any kind. It is also a way of violating the rights of people with disabilities, one of those rights is to education. In this way, it is necessary to train the teaching team, adapt the curriculum or the way of educating, adaptation of the educational scenario (architecturally) compliance with local, national and international regulations.

It is worth mentioning that the Convention on the Rights of the Child (CRC)⁹ recognizes in its Articles 28 and 29 the right to education in conditions of equality.

The States Parties, in Article 24 of the CRPD, recognize the right of persons with disabilities to education, ensuring:

- ✓ Access to inclusive, quality and free primary and secondary education, on an equal basis with others.
- ✓ Individualization of learning according to individual needs.
- ✓ The necessary support for persons with disabilities, within the framework of the general education system, to facilitate their effective training.
- ✓ Personalized and effective support measures in environments that promote academic and social development to the maximum, in accordance with the objective of FULL INCLUSION.

In this way, inclusion is the tool that supports and complies with the standard of providing quality accompaniment in education for people with disabilities.

⁸ United Nations Development Programme, Sustainable Development Goals, 2015.
<https://www.undp.org/es/sustainable-development-goals>

⁹ Convention on the Rights of the Child (CRC). United Nations, 2015

INCLUSIVE EDUCATION IN COLOMBIA, FIGURES AND REGULATIONS

Within the guidelines used in the 2018 National Population and Housing Census (CNPV), DANE adopts three functional spheres to obtain concrete results within its survey:

- Grasping or moving objects with the hands.
- Relating or interacting with other people.
- Do daily activities without having heart or respiratory problems.

However, in the Overview of Disability in Colombia, determines that: (DANE, Panorama general de la discapacidad en Colombia, 2020)

"In Colombia there are 3,134,037 people with difficulties in performing basic daily activities (7.1% of the country's population), of whom 1,784,372 (4.07% of the country's population) reported having difficulties at severity levels 1 or 2 according to the Washington Group scale."

In this way, we have an approximate number of people who suffer from a disability in our country and who are also struggling to cope with the reality they face.

Consequently, according to the report of the Current Status of Disability Measurement in Colombia (DANE, 2022), With regard to the Educational Inclusion of Persons with Disabilities - Educational Level, it details that:

"The largest gaps in educational attainment between the population with and without disabilities are among those with no level of education and at the basic, primary, and secondary levels: 16.2 per cent of persons with disabilities have no level of education at all, compared to 2.6 per cent of persons without disabilities, indicating a difference of 13.6 p.p.; 37.7 per cent of persons with disabilities have basic primary education. while this percentage is 26.9% for people without disabilities (gap of 10.8 p.p.); and, the percentage of people with disabilities with secondary education (16.5%) is 9.2 p.p. lower than that of people without disabilities (25.7%)."

In Colombia, on August 27, 2017, Decree 1421 of 2017 was issued, which regulates educational care for the population with disabilities within the framework of inclusive education. The challenge set by this decree is to guarantee quality education for all students.(Ministerio de Educación, 2017)

It should be noted that the decree also includes the challenges of each of those responsible, who are:

- Ministry of National Education
- Secretaries of Education
- Educational establishments
- Families
- Students

For this reason, progressive implementation has been proposed, which will allow its full implementation by 2022. In this way, each secretariat of education in the territorial entities certified in education in the country must prepare a *Progressive Implementation Plan* in which it identifies the current situation of the population with disabilities that they have pending to include in the system, must be enrolled, and based on this define their priorities in the first year. that is, the advances that will be proposed for 2022.

From the above, it can be inferred that more experience, training and updating of information are needed so that inclusive quality education can be obtained in Colombia. However, there are entities that have managed to move forward with the project of inclusion in educational institutions.

THE ROLE OF THE TEACHER IN CHILDREN WITH DISABILITIES.

It is a profession that requires vocation, passion and an extra dose of love for the work, it is said that it is willing to go the extra mile to see long-term results, which will be satisfying. Neuroscientist Francisco Mora Teruel states that: *There is a growing awareness of the important role of neuroeducation in the teaching process. There is already talk of the need to bring the knowledge of neuroscience into the classroom to improve the teaching method and understand learning* (Mora T, 2013).

Although it is still taught today through the traditional pedagogical method, its goal is the formation of character and to seek the development of the innate qualities, faculties and character of the individual through discipline; His teaching method is transmissionist, based on the imitation of good example, exercise and repetition.

The imaginary is that we live in an unjust society, which is governed by rules of inequality and at the same time of selfishness. There is no system adapted for disability, in the case of education, it is believed that all students can do things without any difficulty, but it is forgotten that each child is different and requires a process, for this it is necessary to tact and direct the way of teaching.

Today's children are more aware of the world around them than past generations, which is why traditional schools cannot build teaching methodologies on the past, regardless of whether that model worked or not, since it was a different perspective and children of previous generations responded to other cultural and social patterns than those experienced today.

LEARNING AT AN EARLY AGE

Francisco Mora, an expert in Neuroscience, states that:

"For example, a child who is only 42 minutes old is able to somehow match his own gestures with gestures that are made, such as sticking out his tongue or opening his mouth. And this seems incredible knowing the capabilities of a newborn, which clearly indicates that at that age the brain has neural circuits that, activated by "observation", allow us to synchronize our own motor acts with acts produced by another human being, that is, neural circuits that link sensation with action. In fact, today we know the high sensitivity of almost newborn children to those stimuli that are in motion. It is in this matter, referring to the learning process in these early stages of the human being, where the most advanced studies have pointed out, apart from this perception-action neural link, two central processes. One of a computational or automatic nature and a truly social one" (Solo se puede aprender aquello que se ama, 2013)

Babies are able to imitate the people around them by reproducing movements of the tongue and lips, head and hands. The newborn can discriminate the sound of the mother's voice and react to hearing it; He is also able to perceive very early a face that expresses joy. He is sensitive to emotions and expresses joy, anger, or fear from two months of age. It very quickly identifies invariants in interactions with its environment. Several studies have also shown the importance of smell in mother-newborn recognition and its reassuring function for the child.

The first 3 years of a child is the time of life in which the brain is most open to changes when exposed to environmental stimuli, in theory, this means that when we are born we have around 2,500 neuronal connections, but when a child turns 3 years old this number rises to 15,000 connections, at this age begins the process of neuronal pruning in which the connections that are not necessary are lost. This happens because the brain is designed to adapt to the environment, so depending on our needs we learn to be the most efficient to survive.

It is known that children have a very easy time learning because the brain specializes in the most relevant tasks and loses precision in those that are not relevant. An example of this is that babies have the ability to recognize a monkey's face, such a simple example, but it can actually be extraordinary, simply because babies have more neural connections that allow them to process the stimulus of a monkey's face in a better way. This is because from the 6 months of gestation of the baby they open their eyes, this allows them to respond to light and easily recognize the differences of the faces.

Similarly, another thing that can stimulate a baby from the womb is music or something more precise is that at 3 months of gestation it can hear its mother's heart. From gestation, a baby can react to stimuli in the environment, it can feel and its brain is capturing all this information, thus forming its environment and adapting to it. On the other hand, after birth to 3 years old it is undergoing changes, in the process every time something is learned, neural connections change and new connections are created.

That is why learning for children with disabilities has been given greater importance lately, as it is about having an inclusive education as mentioned by the Comprehensive Neurological Institute of Beremia, in its article on Neuro-education: *"At present, and in a general way, the importance of educating all children and adolescents in school, up to compulsory education, is generally assumed. As previously noted, this need is inclusive, which means that all subjects in the established age range are subject to the teaching-learning process. Since there is no single type of learner, education must respond to the particular needs of each learner; While it is true that a majority of young people and children can be included in what is considered "normal", many others require certain specific actions on the part of the teachers, the school or the administration to achieve the objectives set."* (Instituto Neurológico Integral Beremia, 2019).

For Francisco Mora, neuroeducation is a new vision of teaching based on the brain. Although this definition may be very simple, it captures the essence of the concept. Neurodidactics can also be placed as a new area within neuroscience that studies brain development and its functioning, with the ultimate goal of improving and adapting the way in which the teacher teaches and knowing how the student's brain learns to allow this adaptation. As Mora puts it: (Instituto Neurológico Integral Beremia, 2019) *"Neuroeducation means not only a new approach to teaching that helps to enhance and improve skills and talents, but also, and importantly, to detect deficits in children at the classroom that incapacitate or reduce their abilities to read, write, do numbers or learn a certain subject. As well as to prevent, reduce or mitigate all those consequences of living in stressful and negative environments or constant threat, with which they acquire habits that also negatively influence the normal development of their brains."* (Mora T, 2013)

On the other hand, Mora states that The brain needs to be motivated to learn (Mora T, 2013), which is why, the Motivation is vital and can become the engine of a person, since we always need them to believe in us, to push us, to inject emotion into our life, for several reasons for a person with a disability it is even more important, motivating people in difficult situations can be the antidote that would save someone's life.

When Mora talks about the brain being excited, he means that at this point the child can learn more easily, as he mentions in his book: *"Emotions ignite and maintain curiosity and attention and with it the interest in discovering everything that is new, from food or an enemy to any learning in the classroom. Emotions, in short, are the most important basis on which all learning and memory processes are based."* (Mora T, 2013)

Likewise, Anna Fores, who is one of the pioneers of neuroeducation, mentions that: *"Emotions interact with cognitive processes, so a key part of neuroeducation refers to managing emotions so that they not only do not interfere, but benefit the learning process. The aim is to teach children to be aware of their feelings and to take control of them and their behaviour. It is important that they learn to recognize when they are angry, sad and*

be able to manage these emotions. In addition, a high level of stress makes learning difficult, so it is important to create a good, stress-free learning environment and teach them how to manage anxiety." (Fores, 2019)

The ways to motivate children with disabilities in this context are: celebrating small achievements, believing in them, setting goals and providing the tools to achieve them, remembering the goal you want to achieve every day, drying tears even when everything is falling apart, talking to reality, but with a dose of confidence, of credibility that despite the circumstances we can achieve what we sometimes think is impossible.

On the other hand, he comments that the environment is also one of the most important factors when it comes to learning. *A stable, stimulating, and protective environment builds in the child's brain the solid building blocks for effective teaching. On the contrary, an adverse, punishing and stressful environment influences and actually impedes the normal development of the brain circuits that allow for normal learning.* (Mora T, 2013)

PEOPLE WITH INTELLECTUAL DISABILITIES

People with intellectual disabilities have significant limitations in intellectual functioning and adaptive behavior that manifests itself in acquired conceptual, practical, and social skills. This disability originates during the developmental period, which is operationally defined before the age of 22. According to estimates by the World Health Organization (WHO), the number of cases of intellectual disability is around 1.5% of the world's population, reaching up to 4% in non-developed countries.

For children with intellectual disabilities, it is recommended that class groups be small. Academic achievement should focus on contributing to the child's greater independence, for example: in the area of mathematics, emphasis on how to count and recognize money. It is absolutely necessary to make use of visual aids (images and video) during explanations and learning routines in the classroom. (Instituto Neurológico Integral Beremia, 2019)

It is also important to prepare activities and games to train attention and memory; stimulate the development of symbolic play, the learning of abstract concepts. It is essential that the teacher follows the guidelines of the team of educational psychologists who have evaluated the student and the adaptation of the curriculum to the classroom programming.

Similarly, Teach patterns of behavior to acquire autonomy inside and outside the classroom: putting on a coat, tying shoes, eating alone. . It is also important to implement activities related to the education of emotions and social skills so that the child learns to interact in an ideal way with his or her peers. Regarding the activities in class, it will be necessary for the teacher to divide them into simpler processes and guide the student step by step in the execution. An environment is required in the classroom where the student feels safe, valid and loved, for this, it is important to implement routines that help predict the pace of work, encourage interaction with their classmates, making them participate in teamwork and assign them small tasks of responsibility that help them improve their self-esteem and feel as valid as others. On the one hand, it is key to strengthen and reassure parents to inform them of their child's progress. They will also be updated on the work with the child in class and proposed to reinforce this learning at home.(Fores, 2019)

Conclusions

Educational exclusion directly affects people with disabilities as they cannot have the right to education within a basic, middle and higher education entity. On the other hand, it affects parents since they cannot have access to face-to-face education for their children. As has been evidenced, it is important to make room for pedagogy and ways of working at an early age with cognitive disabilities.

It is also important to highlight the following statement, *The brain needs to be motivated to learn* (Mora T, 2013), which is why the Motivation is vital, it can become the engine of a person, because we always need them to believe in us, to push us, to inject emotion into our life, for obvious reasons for a person with difficulty it is twice as important, promoting another person's dreams is not easy, but motivating people in difficulty can be the antidote that would save someone's life.

In the same way, it is important and necessary to create environments designed for everyone, for children, for the elderly, for disabled people. We live in an environment where everything is normalized, it is obvious that everyone can, that everyone knows it, but it is clear that none of that happens; Over time, techniques for inclusion and to include spaces suitable for people with disabilities have been improved, but there is still a long way to go.

Unquestionably, the sense of humor and the attitude towards the situations presented are essential factors to cope with any type of illness or disability. Life is not so simple for people who suffer or suffer from a terminal illness, but something that usually characterizes them is that they learned or continue to learn to "live dancing in the rain", that is, they have fun, laugh at their condition, celebrate everything and look for anything to enjoy life despite the circumstances.

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