


Universal Design of Learning and Inclusion in Basic Education

Diseño Universal del Aprendizaje e inclusión en la Educación Básica

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Abstract

Inclusive education is made concrete in the classroom, taking into account the diversity of pupils, which is the necessary step to ensure equal opportunities in access to the educational process. The objective of this paper is to know the methodologies and didactic strategies used by basic education teachers and whether these are based on the Universal Design for Learning (UDL). The methodology is quantitative and descriptive in scope, using a Likert scale questionnaire with 29 items. As a complement to the study, four qualitative open-ended questions are also carried out. The final sample is 26 teachers, who work with children between 7 and 12 years old, from four educational establishments representing three of the natural regions of Ecuador. The main results reflect a limited knowledge of the UDL and its principles, highlighting that in public schools and in those where there is a higher percentage of students with disabilities, only 29% of teachers know approximately what the UDL means. On the other hand, there are actions that affect the formative process and the equality of opportuni-

ties for students with low hearing and vision. We conclude with the need for teacher training in UDL as a didactic alternative in the framework of inclusive education by providing the same opportunities to all students regardless of their individual characteristics.

Keywords: Universal Design for Learning, inclusion, equal opportunities, accessibility, diversity, teaching strategies.

Resumen

La educación inclusiva se concreta en las aulas atendiendo a la diversidad del alumnado, lo que supone el paso necesario para garantizar la igualdad de oportunidades en el acceso al proceso educativo. El presente trabajo pretende conocer las metodologías y estrategias didácticas que utilizan los docentes de educación básica y si estas se basan en el diseño universal para el aprendizaje (DUA). La metodología es de corte cuantitativo de alcance descriptivo, para el que se utilizó un cuestionario de escala tipo Likert de 29 ítems. Como complemento al estudio se realizan, además, 4 preguntas abiertas de carácter cualitativo.

La muestra final es de 26 docentes, que trabajan con niños entre 7 y 12 años, de cuatro establecimientos educativos representando a tres de las regiones naturales del Ecuador. Los resultados principales reflejan un conocimiento limitado del DUA y sus principios, destacando que en las escuelas públicas y en aquellas que existe un porcentaje más alto de estudiantes con discapacidad, solo el 29% de los docentes conocen de manera aproximada lo que significa el DUA. Por otro lado, se observan actuaciones que afectan al proceso

formativo y a la igualdad de oportunidades de estudiantes que presentan baja audición y visión. Concluimos con la necesidad de capacitación docente en DUA como alternativa didáctica en el marco de la educación inclusiva al proporcionar las mismas oportunidades a todo el estudiantado independientemente de sus características individuales.

Descriptor: Diseño Universal para el Aprendizaje, inclusión educativa, igualdad de oportunidades, accesibilidad, diversidad, estrategias didácticas

1. Introduction and state of the art

Inclusive education is considered an effective means to educate everyone, regardless of their individual or social differences or barriers (UNESCO, 2015). However, this requires strategies to carry out its principles of equal opportunities, attention and respect for diversity, accessibility, among others (Blanco, & Duck, 2011). The universal design for learning (UDL) appears as a response to the viability of the principles of inclusive education (Sánchez, Díez, & Martín, 2016), understanding it as a didactic strategy that applies the universal principles of universal design to the design of the curriculum, in such a way that, learning can reach all students in an equitable manner, where the didactic materials used through technological means, renew the use of rigid traditional materials, lacking creativity, little functional and creative; and, with this, attention is paid to the diversity of the students and the different sensory, motor, cognitive, affective and linguistic abilities (Díez, & Sánchez, 2015).

In the Ecuadorian context, the Organic Law of Education and Interculturality (LOEI) in articles 11 and 12, states that: inclusive education is the process of identifying and responding to the diversity of students' needs through greater participation in the learning of cultures, of communities and of people who are excluded from the educational system, in order to reduce exclusion in education (Ministry of Education,

2011). In inclusive education and in the application of methodological strategies of the UDL, the teacher plays an important role, since the inclusive approach implies the implementation of resources and strategies that allow the educational community and, specifically, the teaching staff, to successfully face the changes implied by this new educational practice (Díez, & Sánchez, 2015).

Therefore, it is important to know what is the teachers' understanding of the universal design for learning and what methodological strategies and didactics, identified with these principles, apply in their educational practices. In the teaching practice, teachers perform a set of activities, methods and techniques, as well as using language, materials and symbols to represent concepts and evaluation. Therefore, it is important to know to what extent, teachers attend to the diversity of students and how they guarantee equal opportunities in access, participation and development of the curriculum (Sánchez, Díez, & Martín, 2016). On the other hand, it is necessary to highlight the relevant role that the emotional aspect will play in the learning process through strategies that use the UDL.

The emotional component is a crucial element in learning. It shows the differences; therefore, it is important to know the ways of addressing diversity from the emotional component, knowing how the teacher motivates students to learn. The declaration of Salamanca, in its commitment to achieve an education for all, states that access to school must be given to all



children. The educational centers must welcome children with disabilities, with high capacities, at risk of social exclusion, regardless of their ethnicity and/or culture (Espada, 2017).

For this reason, our research focuses on regular education at the level of basic general education, since it is at the basic education levels where quality education must be guaranteed, which will influence the practice of an inclusive culture. Ecuador is a pluricultural and multicultural country.

According to Article 1 of the current Constitution, Ecuador is a plurinational and multicultural country, as well as a diverse country, strengthened by the similarities of its people, with inhabitants from diverse ancestral roots such as: mestizos, indigenous people, montubios and Afro-Ecuadorians. (Constituent Assembly, 2008) On the other hand, between the Amazon, Sierra and Costa, the country has 15 indigenous nationalities (Benítez, & Garcés, 2016). Therefore, education in this context is nuanced by the diversity of students from different groups that are part of the nation, with ordinary schools being the meeting point and key space that promotes an inclusive society and that avoids attitudes and situations of discrimination, creating, in addition, host communities that achieve an education for all. (UNESCO, 1994).

It is therefore important to know how education for all is becoming reality, through the practice of universal learning design at the level of Basic Education. Thus, the objective of the research is to identify the type of knowledge on universal design for the learning of teachers of basic education and analyze the level of application they make of it in their classrooms. In this way we can assess educational practices and detect the needs in teacher training to ensure quality education, promoting educational inclusion and universal design for learning.

The ignorance of this practice may be compromising education for all, as stated in the declaration of Inchon, which establishes the objective of sustainable development for 2030

“ensure an inclusive and equitable quality education and promote learning opportunities for all people throughout life” (UNESCO, 2015).

The UDL, which initially emerged related to architecture, and later with the development of products and services, enters the educational field supported by technological tools, becoming defined today as a reference guide for education for all. According to Rose and Mayer creators of the UDL, they used technology to identify three differentiated networks that intervene in learning processes: “Recognition network (the ‘what’ of learning), strategic network (the ‘how’ of learning), and the affective network (the involvement in learning)” (Alba, 2015). This is how the UDL is based on four elements that are: neuroscience, cognitive learning, information technology (ICT) and education.

Regarding neuroscience, it is indicated that the child’s brain learns more when the student explains to his classmates about a particular topic and, he learns more, after performing a physical activity. Thus, brain activity can be characterized in terms of three brain networks that participate in learning, these are: recognition networks, networks of strategies and affective networks (Barrera, 2009). In recognition networks, the child perceives and identifies information from outside; it refers to the “what of learning”. In strategy networks, the child plans, executes tasks and expresses ideas in different ways; refers to “how of learning.” In affective networks, the child is motivated and committed to learning; it is the “why of learning”. (Barrera, 2009).

From these three networks of relationships emerge the three fundamental principles of universal design for learning that are: multiple forms of representation, multiple forms of action and expression, and of multiple forms of involvement; noting that the functioning of each of these subnetworks is different in each person (Alba, Sánchez, & Zubillaga, 2013). The principle of multiple forms of representation focuses on the different ways in which students perceive and



understand the provided information. Hence, the importance of facilitating a variety of options related to auditory, visual or tactile information, which supposes proportional multiple options for language and symbols (Alba, 2015), which facilitate understanding by activating the previous knowledge that is stored in the individual, due to their past experiences (Ausubel, 2002).

The principle of multiple forms of action and expression is based on the different ways that students can develop in a learning environment, since it is possible that some students have a greater ability for written expression than in verbal expression and vice versa. In the same way, there can be differences when executing tasks, hence it is necessary to handle diverse options in the processes of expression and action. Regarding the principle of multiple forms of involvement, he argues that the affective component activates a brain network that intervenes in learning.

In this way, the affective part is established as a key element in the learning process, which means that each student has an important difference in the involvement or motivation to learn or what to learn, as well as showing preference for the type of collaboration in the execution of activities, preferring in some cases individual work and in others collective work. This fact supposes that the fact of facilitating different ways of participation is precise not only to enhance the motivation and involvement, but also to allow an emotional balance.

2. Materials and methods

A type of descriptive research was carried out. Bearing in mind that questionnaires are research instruments that allow us to obtain systematic and orderly information on a wide range of issues at the same time, we have used them to gather as much information as possible about the indicators and questions proposed by the Universal Design for Learning. (UDL). For all these reasons, a 29-item Likert scale questionnaire model was carried out that incorporates

questions related to the three UDL principles: information representation, action and expression, motivation and learning involvement.

The instrument is based on the contributions of the CAST (2011) (Center for Applied Special Technology) research organization that focuses its efforts on promoting, and expanding the universal design for learning, thus promoting learning opportunities for all, and focusing on those people who have some type of disability. The 2013 version translated by Alba, Sánchez, & Zubillaga (2013) has been used.

The information is complemented with four open questions of qualitative character, oriented to the knowledge of the UDL, to the meaning of education and inclusive culture, to the teaching strategies used to favor educational inclusion together with the assessment of the need for teacher training in design of universal strategies for learning. Therefore, we can consider the used methodology as a mixed type, since it not only presents quantitative data when questionnaires are used as a data collection instrument, but also incorporates elements of the qualitative methodology by literally including the information of the participants, whether it is spoken or written (Quecedo, & Castaño, 2003).

The initial sample is of 28 teachers, seven per educational center, being the criterion of inclusion that they are in charge of elementary and middle school children, that is, teachers working with children aged between 7 and 12 years. Finally, 2 teachers from the semi-public school did not respond, leaving the sample in 26 teachers (9 men and 17 women), with an age ranging from 26 to 60 years. To select educational establishments, the following criteria have been met: type of establishment regulated by the Ministry of Education (public, semi-public, private or private and bilingual intercultural) and the natural regions of Ecuador, identifying one of the Costa, two of the Sierra and one in the Amazon region, not having been possible to have a reference of the insular region.



In this way, we have a private center in the city of Quito, province of Pichincha (7 teachers); a public establishment located in the La Concordia Canton 200km from the capital, with proximity to the cities of Santo Domingo and Esmeraldas (7 teachers); a semi-public establishment in the Province of Loja located 860 km from the capital (border line between Ecuador and Peru) (5 teachers); and a bilingual intercultural educational establishment located in the province of Sucumbíos, 300 km from the capital and 30 km from the border with Colombia (7 teachers). The people surveyed are mostly women and the age range ranges from 24 to 35 years, being particularly interesting the teachers of the semi-public institution of Loja that have an age range between 46 and 60 years. Regarding the educational level, 25 teachers have a third level degree and a teacher with a fourth level degree.

3. Analysis and results

In light of the obtained results, we highlight the observations that reveal the greatest contribution to their analysis, either because they are more

frequent or because they are considered more relevant to understanding the UDL practice. As shown in chart 1, it is perceived that the presence of students with disabilities occurs more in the public establishments (Santo Domingo) and semi-public (Loja) than in a private establishment (Pichincha) or intercultural bilingual (Sucumbíos).

However, according to the data shown in Chart 2, despite the fact that the LOEI establishes in its principles the right to education as a right for all, and the Ministry of Education from different areas offers training spaces for educational inclusion, campaigns for awareness and demands that students with SN be welcomed and promoted in the discourse of inclusive education, it seems that in practice it is found that teachers do not know what it means and what the UDL is. In the public school and in those institutions where there is a percentage of students with disabilities, only 29% know what the UDL means, highlighting that in most cases they are approximations to a real definition of it, linking them to the helping, to a methodology or relating it to learning difficulties.

Chart 1. Presence of students with disabilities in the classrooms

Students with disabilities in the classrooms	Yes	No
Pichincha	29%	71%
Sucumbíos	29%	71%
Santo Domingo	100%	
Loja	60%	40%

Chart 2. Knowledge of Universal Design for Learning

Knowledge of UDL	Yes	No
Pichincha	14%	86%
Sucumbíos		100%
Santo Domingo	29%	71%
Loja		100%

In all cases, the faculty is aware of the amount of information they transmit, but it

goes unnoticed by students, with the Sucumbíos institution indicating, at 43%, that unnoticed



information can reach 60% -70% of the total of what they transmit.

4. Representation principle

Regarding item 5 of the questionnaire, does it offer alternatives for auditory information? for example, subtitles in presentations, use of graphic diagrams. The semi-public school of Loja stands out, indicating 40% that it always considers these alternatives. Meanwhile, the teachers of the intercultural bilingual school say they use it

usually in 57%, not finding situations in which the answer is “never”.

This is not the case when we refer to item 6 that responds to whether alternatives for visual information are provided, for example, voice text descriptions in images. As shown in Chart 3, 60% of the teachers in the semi-public school indicate that they always use such alternatives. On the one hand, 29% of the teachers of the intercultural bilingual school indicate that they always use them, and 14% of the teachers of the same institution never use these strategic options to provide the information through alternative visual formats.

Chart 3. Alternatives for visual information

Visual alternatives	Pichincha	Loja	Santo Domingo	Sucumbíos
Always	43%	60%	29%	29%
Usually	43%	40%	43%	43%
Sometimes	14%		29%	14%
Never				14%

The data with greater evidence for item 7, which asks whether the teacher provides written transcriptions of videos or sound documents, for example, lyrics, character interventions..., are in the teachers of Sucumbíos. Chart 4 shows that only 28% of these teachers say that they always or usually use these strategies and, at the same

time, it is striking that a considered percentage of teachers from all educational institutions indicates that they never consider the Written transcriptions of videos and sound documents that are mainly directed to students who have low hearing or vision.

Chart 4. Written transcriptions of videos or sound documents

Written transcriptions	Pichincha	Loja	Santo Domingo	Sucumbíos
Always		40%	14%	14%
Usually	43%		29%	14%
Sometimes	43%	40%	43%	57%
Never	14%	20%	14%	14%

For item 10, Do you present the key concepts in alternative forms to text ?, for example, through images, movement, photography, physical or manipulatable material... and as shown in chart 5, the highest percentage of teachers

who always use these strategies are those linked to the semi-public education of Loja, identified with 60%, then the teachers of the private and intercultural bilingual school (Sucumbíos), and the private school of Pichincha, both with 43%.



Chart 5. Presentation of the key concepts in an alternative to the text

Alternative presentation to the text	Pichincha	Loja	Santo Domingo	Sucumbíos
Always	29%	60%	14%	29%
Usually	43%	20%	14%	43%
Sometimes	29%	20%	71%	29%
Never				

5. Action and expression principle

As can be seen in Chart 6, the results of item 13: Do you use technological assistance tools?, for example, touch screens, accessible software, keyboard commands for the mouse, joysticks..., between 14% and 20% of the teachers say they

always use these strategies, being of greater use in the semi-public institution, while a percentage between 14% and 43% say they never use them. It is the public institution that has the highest percentage in the non-use of these assistance strategies. This data is revealing, given that it is in the public schools where the greatest number of students with some type of disability is found.

Chart 6. Use of assistive technologies tools

Alternative presentation to the text	Pichincha	Loja	Santo Domingo	Sucumbíos
Always	14%	20%	14%	14%
Usually	14%	20%		14%
Sometimes	43%	60%	43%	57%
Never	29%		43%	14%

6. Multiple means of involvement

Regarding item 20, does the development of contents consider the interest of students according to diversity? For example, cultures, ethnic groups, disability status..., the results obtained reflect that the semi-public institution teachers state that 60% always consider it. Then there is the intercultural bilingual institution, in which 57% of teachers indicate the option usually, compared to 14% of the public school that states that they never to do it. So there is a significant percentage of teachers who do not recognize the interest of each student and, therefore, does not personalize the teaching.

In response to item 26 Do you organize communities or learning groups focused on the interests or common activities of the students? as can be seen from the analyzed data, the bilingual intercultural school marks the option always

with 43%, followed by teachers of the semi-public institution represented with 40%. The private and public educational intuitions, mark the option never by 14%.

Finally, item 29 raises the question: Do you favor the recognition of students' own progress? it is observed how the teachers of the semi-public school indicate the option always with 80% of answers, followed by the teachers of the private and intercultural bilingual school with the option usually, represented 57%. It is important to point out that no teacher ever marked the option never, which makes it possible to understand that in all institutions there is a practice of encouraging the recognition of one's own progress, ensuring that the student is aware of his or her own learning process. However, it is worrisome that this is not a 100% standard practice in all centers.

Regarding the open questions, regarding the question: what do you understand by inclusive education? the teachers of the public



school (Santo Domingo) reflect in their definition aspects related to the access to education, the diversity in the capacities, in modifications of the methodology, along with equal opportunities. On the other hand, the bilingual intercultural school (Sucumbíos) emphasizes learning together, continuous training and equal opportunities. Teachers of the semi-public school (Loja), are more inclined towards classes that welcome diversity, inclusion in the environment, methodological changes and help. Finally, in the private school (Quito), they refer to the right to education, the multitude of diversity and methodological changes. With regard to successful activities to favor inclusion, awareness-raising activities using games and stories stand out in practically all cases. And finally, everyone agrees on the need for training in UDL.

7. Discussion and conclusions

In accordance with the objectives set out at the beginning of our research, it has become evident that there is limited knowledge about the UDL, and, therefore, about the application of the methodological strategies related to it. However, the results also provide information on the use of teaching strategies used by teachers from different geographical areas that invite reflection on the process of implementation of inclusive education and the different attitudes or perceptions about the types of diversity. In view of the data obtained for each of the principles of universal design for learning, the absence of alternatives to visual information is worrisome, since this aspect reflects that a high number of students does not have adequate accessibility to the information, mainly affecting students with low vision. As Alba (2015) states, “to overcome this barrier, information must be provided through other alternative, non-visual formats” (Alba, Sánchez, & Zubillaga, 2013).

On the other hand, it makes us think about the high percentage of teachers who do not use written transcriptions of videos or sound docu-

ments in all educational institutions. This fact may suppose that it is affecting both the training process and the equal opportunities of students who have low hearing or vision. According to Alba (2015), transcriptions provide options that help reduce barriers or difficulties related to the decoding of unfamiliar symbols. In this way, it is considered necessary to encourage the use of text alternatives that allow the student to understand complex meanings. However, it is important to emphasize that regarding the presentation of key concepts in an alternative way to the text (as it can be through the use of images, videos, photographs), it is taken into account by the teaching staff. This may be due to the fact that being key concepts, they are presented in specific moments in the classroom and do not require a large investment of time for their preparation. Having a collaborative work with the whole faculty, aimed at planning content based on universal design for learning would reduce the time spent in the design of materials and, therefore, encourage and allow greater understanding of the contents.

On the other hand, this type of teacher coordination would in fact mean developing the creative capacity of the teaching staff since they would jointly develop materials and/or strategies to be able to reach all the students with the information, taking into account the individual differences and the different types of intelligences existing in the classroom. Regarding the principle of action and expression, the scarcity of technological assistance tools such as wheelchairs, prostheses, communicators and telecommunications services stands out (Sánchez, 2018). In this regard, it can be shown that the institution that does not reveal any percentage in the use of these assistance strategies is the public school. It should be remembered that the public school obtained a higher percentage in terms of the presence of students with disabilities. It is worrisome that the centers that count in their classrooms with a greater number of students with disabilities are those that do not use assis-



tive technologies, even though these are considered as a fundamental pillar to generate inclusive learning communities. This may be because assistive technology requires funding that may be too much of the school.

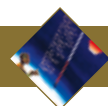
Regarding the means of involvement, we must consider that, although in general, if taken into account the fact that there is a high percentage of teachers that considers the interests of students, it must be an aspect to improve, since most of the time these interests are linked to their cultural and social identity, which helps to make education more personalized by providing meaningful learning to the student. This learning is called “meaningful learning” and occurs when a new information is connected with a relevant concept, preexistent in the cognitive structure (Chrobak, 2017).

On the other hand, the UDL proposes the realization of common activities through the creation of learning communities, which must be made of common interests. In this regard, the intercultural bilingual school, followed by the teachers of the semi-public institution, present the most continuous actions. The fact that the private and public educational intuitions mark the option “never”, can be attributed to the fact that, in the big city, “contradictorily”, there is easy communication and when dealing with children, community learning is not common, as it is more viable in small populations. The interest that teachers of the bilingual intercultural school provide for forming learning communities may be due to the cultural factor, but at the same time it is striking that the result has not been 100% considering that the teachers are native professionals of the area. This principle reflects a historical cultural conception of development, which shows that knowledge is not constructed individually, but is built between people as they interact (Duque, & Packer, 2014). Another of the interests of the UDL is to promote the recognition of the own progresses in the students to improve the educational quality and, in this respect, it is transcendent to point out that no

teacher marked the option “never”, which allows to understand that in all the institutions there is the practice of promoting the recognition of one’s own progress, ensuring that the student is aware of his or her own learning process.

However, it is worrisome that this is not a standard 100% practice in all centers. Through feedback the student has more information, and, therefore, it allows him to approach the ideal situation to which he must arrive. In other words, it aims to eliminate the distance between current performance and the desired one (Ramaprasad, 1983, Roos, 2004). So, it can be affirmed, in relation to our objective, that there is very limited knowledge about the UDL, and, therefore, the application of the methodological strategies related to its principles is even more scarce.

Regarding the objective of knowing if there is a relationship between geographic location and educational inclusion and the knowledge and use of UDL, it is clear that teachers who are farther away from cities have fewer opportunities to generate an education process of equal opportunities guaranteeing a quality education as proclaimed by the UDL. However, it is necessary to point out that, with respect to indicators related to the principle of multiple means of involvement, more linked to motivational and emotional aspects, border institutions with other countries and/or those that enjoy an accentuated and rooted cultural identity, it seems that they have more internalized functioning systems linked to the community and its relationship with it, perceiving similarities with active didactic methodologies such as cooperative learning, which presents unbeatable characteristics for the promotion of educational inclusion. Therefore, we can think that not all traditional methodological strategies slow down the process of educational inclusion. Such is the case of those that come from ancestral thoughts that take into account survival as an ethnic group or linguistic group, such as the practice of narrations used by teachers in the bilingual intercultural school and the formative meetings around the “drinking of guayusa.”



In this way, we agree with Martínez (2014), when referring to the construction of learning from the analysis of the lived experiences and that are, therefore, familiar the concepts and ideas raised, since they will allow them to reach the resolution of future problems. In any case, diversity is diverse in itself and facing this reality, accepting and respecting other situations of diversity, beyond one's own, is essential to achieve real inclusion.

Hence, many students experience difficulties in not taking into account the diversity of teaching and learning processes (Booth, & Ainscow, 2015). In certain situations, cultural or ethnic diversity is addressed, but other situations such as diversity in the functioning of people are not taken into account, and this can only mean their exclusion. The different social groups, ethnic groups and cultures have different norms, values, beliefs and behaviors, which are not generally part of the school culture, which may limit their possibilities of learning and participation, or lead to exclusion and discrimination (Echeita, 2018).

In light of the results analyzed together with the teachers' own demands, we can conclude with the need to continue providing training to teachers related to the quality of education, educational inclusion and equal opportunities, since the actions carried out so far do not seem to be enough. Therefore, teacher training in relation to attention to diversity and educational inclusion and the UDL becomes an urgent need to provide teachers with tools and not only to think of education as a right for all, but to practice such an approach, for there is nothing more dynamic and challenging for the teacher than the integral development of all children. In any case, we consider necessary the participation of the universities in the training in these areas of knowledge, both in the basic training of teachers and in specialized training such as master degrees, along with the review, expansion and creation of plans and/or projects that incentivize the public policies of Ecuador in the training

of teachers in general and of basic education in particular. Attention to diversity is one of the requirements that current legislation applies to educational institutions; therefore, "the need to train teachers in the application of the paradigm of universal design for learning and its advantages in providing the same opportunities for all students, regardless of their individual characteristics, is undoubtedly a way to improve attention to diversity" (Diez & Sánchez, 2015).

Given this, it can be said that whoever has access to communication acquires the information and, therefore, accesses knowledge. If teachers do not have access to information, educational processes with a view to providing education in equal opportunities become slower than in spaces where there is more information and the media favor it.

After the expedition in 2008 of the new Constitution of the Republic, it was established that "education is a right of people throughout their life and an inescapable and inexcusable duty of the State. It constitutes a priority area of public policy and state investment, a guarantee of equality and social inclusion and an indispensable condition for good living" (Article 26). In addition, article 27 of the same regulations establishes that education must be "participatory, mandatory, intercultural, democratic, inclusive and diverse, of quality and warmth"; that is, that all people must be included in the education system (Ministry of Education, 2012).

At the end of the research, it can be said that the UDL is placed as a didactic alternative within the framework of inclusive education. It responds to the need to break with the homogenizing approach of traditional education, which considers that all students learn in the same way and that the teacher role is to organize and prepare the materials with the same format for all, encouraging exclusion rather than inclusion. In any case, this study describes to us and approaches a reality, but in order to have more evidence of the situation it would be necessary to carry out a national study, which will have a larger sample



population, because, although relevant, this fact it is a limitation to generalize or make absolute affirmations.

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