



## UNIVERSAL DESIGN FOR LEARNING AND EDUCATIONAL INCLUSION. ACHIEVEMENTS AND PROJECTIONS

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*Teacher training*

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### ABSTRACT

*In Latin America, the universal learning design and educational inclusion for people with disabilities have experienced important advances in recent years.*  
*Although significant achievements have been made in the development of UDL and educational inclusion in Latin America, there are still important challenges that must be addressed to respond to truly inclusive and accessible educational processes based on special people. In addition, coordinated and collaborative efforts of the education system of each country are needed to achieve a truly inclusive and accessible education for all people with disabilities.*

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## 1. Introduction

Inclusive education is considered as an effective means to educate everyone, regardless of their individual or social differences or barriers (Diaz et al., 2022); however, it requires strategies to carry out its principles of equal opportunities, attention and respect for diversity, accessibility, among others (Cortés et al., 2021). When talking about Universal Design for Learning (UDL), it is shown as a strategy designed for the success of inclusive educational processes for students in this condition, without excluding their potential and needs.

This basis from education has a programmatic platform based on principles, procedures and modes of action to achieve success in these ways to achieve profitable results. It is expressed in principles which allow supplying a diversity of representative richness from creatively providing knowledge in different modalities which allows paying back the insufficiencies of the learners (Díez & Sanchez, 2015). In this sense, it also provides, in addition, the action and a diversity of manifestations in its procedure, which denotes the necessary variability of options for students to manifest learning and attitudes accordingly, as well as the forms of involvement provided by this strategy denotes the multiple options that allow responsibility and motivation, which allows to engage students with their teaching (Zamora-Musa et al., 2017). This design is channeled towards a true educational inclusion from mitigating obstacles for the school educational process itself, in addition, this process is achieved starting from a high awareness, facilitating a diversity of representations, with novel activities, where teachers are involved and thus can meet the particular needs of their students ensuring that they obtain an educational process at the level they deserve (Chiquimarca et al., 2018).

In the Latin American context, this proposal, when designed, implemented and evaluated with quality, has become timely ways that have led to an assertive educational inclusion; likewise, students in our region who are in these educational conditions face obstacles to learning due to various factors in the socioeconomic, family and cultural order, as well as their own disabilities (Nuñez-Sotelo & Cruz, 2022). This approach helps teachers and educators in general, to adapt the ways of the educational teaching process to meet the individual needs of each student and ensure access to quality education. The SAD contributes to the improvement of our geographic area in terms of achieving educational equity as proposed in goal 4 of the 17 decade goals in the 2030 agenda, referring to education under these conditions. Increasingly in Latin America, SAD is being implemented, and there are multiple actions and projects in the area that promote this form of learning.

By conducting an in-depth study based on the theoretical-methodological systematization of the subject, we found background information in foundations, projects, research, good educational practices, publications and congresses in the international context that socialize the reality in our continent. Based on the need to promote new ways of learning in children, adolescents and young people in conditions of educational inclusion, this study is carried out for the scientific community of the educational sector, where several novelties and curricular adaptations are promoted from the SAD, obtaining satisfactory results.

## 2. Development of the research

It arises related as a matter of architecture this design, and subsequently with the production of possessions and services that are provided, being a fact that enters the education sector from its use in technology, which has been expressed today as a goal and reference of education.

The SAD allows, from the benefits provided by technology, to know the specific networks that mediate with the school educational process from points of recognition which express the what of a learning in question, and also the strategic networks where the how and the necessary networks in the affective are addressed, where it is expressed as this design is implied. They affirm that the educational systems have gone towards a transit that allows a wider understanding of diversity, not only targeting students with specific educational needs who have benefited from the benefits of this educational modality, but also the use of this design to other groups that perceive situations of exclusion or are discriminated against, in criteria of race, ethnicity, sex or religion.

Therefore, there is a call from goal 4 of the 17 proposed by the UN to achieve sustainable development, where inclusive, equitable and quality education is guaranteed for all people, and these perceptions imply that the governments of each nation dedicate their efforts in that sense. Therefore, the SAD can be an assertive contribution, depending on its accurate application. The SAD is based on the following theses: neuroscience, cognitive learning, the school educational process and Information and Communication Technologies (ICT). From neuroscience it is indicated that this conception where the child, having his brain in optimal conditions, allows him to appropriate knowledge, learning with greater intensity when the student explains to other classmates about a task which they must solve and then achieves greater learning, at the conclusion of a physical activity. This allows his brain activity to manifest itself from three brain networks which are vital to obtain a concrete learning, such as various networks of recognition, strategies drawn, and those developed in the affective order.

From developing recognition networks, the student can analyze the existing information in the environment that surrounds him; which denotes that of learning. As for the strategies, the student carries out the planning, develops the proposed tasks and enunciates ideas in various ways; where it must be proposed how to make learning attractive. As for the affective situations, the student manages to motivate him/herself and can also get involved in this process; and it is where the reason for this learning really appears. Derived from the same is that they start the proposals of principles of this design from: principle of multiple forms of representation, the principle of multiple forms of action and expression, and also the principle of multiple forms of involvement; noting that the operation of each of these subnetworks is different in each person (Garcés & Hidalgo, 2018).

The principle where multiple forms of representation are covered is based on the different ways in which students perceive and understand the information provided; hence, the importance of facilitating a variety of options related to auditory, visual or tactile information, which involves providing multiple options for language and symbols that facilitate understanding through the activation of prior knowledge that is stored in the individual, due to their past experiences (Fernández-Portero, 2020). From the existence of various forms in this work and formulas for expression, it lays its foundations in the diversity of ways in which the disciples have opportunities to develop in a positive learning environment, since it is possible that some of them possess superior skills for writing in relation to orality and inversely.

When performing tasks, it becomes necessary to handle a diversity of diverse options from expression and action. In relation to the principle of the multiplicity of ways of involvement, affectivity speeds up in the brain the area in charge of receiving knowledge. Thus, it is considered that affectivity is a decisive element in this cognitive process, where each one has his own characteristics in terms of involvement or motivation, showing predilection from the type of collaboration when carrying out teaching activities, where he prioritizes in some moments his own work and in others the group work.

The development of emotions is a crucial element in learning. It highlights the differences, so it is important to know the ways to deal with diversity from the emotional component, to know how the teacher motivates students to learn. The Salamanca Declaration, in its commitment to achieve education for all, states that access to school should be given to all children. Educational centers should welcome children with disabilities, with high abilities, at risk of social exclusion, regardless of their ethnicity and culture (Gutiérrez-Saldivia, 2020). These inquiries have aimed to analyze the typologies of understanding about the SAD of education professionals at all educational levels and to assess the level of applicability that the SAD can be implemented in classrooms.

The SAD appears as a response to the viability of the principles of inclusive education (Nuñez-Sotelo & Cruz, 2022), thus developing didactic strategies based on the global foundations of universal design to a curricular design, focused in such a way that this learning is focused on equity, where the didactic materials used through technology are redesigned in terms of remodeling the ways of using traditional materials, where creative thinking is lacking, and therefore demotivate students. All this can be reverted from the

educational attention to diversity in students and the skills that can be achieved in the sensory, motor, cognitive, affective and language areas.

It is important to recognize that each nation and education system expresses different theoretical approaches based on its specific needs and priorities. This shows that both the theory and practice of SAD continue to develop, and it is worth noting the possibility that new theoretical conceptions may emerge in the future. In Latin America, some of the most widely used theoretical conceptions of SAD include the theory of David Rose and Anne Meyer. It proposes that the design of educational environments should be flexible and adaptable to meet students' needs and develop their potential. Emphasis is placed on attenuating or eradicating obstacles and on the inclusion of multiple means of representation, expression and participation. There is a focus on barriers to learning and participation: This approach is based on the idea of identifying and removing barriers to student learning and participation. It seeks to understand the individual needs of students and adapt the educational environment to address those barriers and promote inclusion. Then, from a socio-constructivist perspective this theoretical orientation highlights that general learning and the cementing of knowledge through interaction with others. In this context, cooperation, learning interaction in authentic contexts that facilitate the collaboration of all students is enacted. In addition, from the differentiated learning approach: This perspective focuses on adapting instruction and resources to address the individual needs of students. It recognizes that students have different learning styles, paces, preferences, seeks to provide differentiated options and supports to maximize their participation and learning.

Some advanced theoretical conceptions that have been developed to date in relation to Universal Design for Learning (UDL) include cognitive neuroscience: UDL is based on understanding how students learn and how the brain processes information. Research in cognitive neuroscience has provided evidence that students learn in a diversity of styles and have diverse needs (Meneses-Navarro, 2020). Advanced theoretical conceptions in this field have broadened our understanding of how to design learning experiences that are accessible and effective for all students. Also, the theory of variability: This theory holds that diversity is the norm in students' cognitive, affective, and neurological abilities. According to this theoretical conception, SAD recognizes variability as a strength and seeks to design learning environments that accommodate students' potentials and deficits. Rather than focusing on students' disabilities or difficulties, the focus shifts to the design of flexible environments that promote effective access and active participation of inclusive students and the rest of the group. Also, learning based on achieving motivation and interest: An advanced theoretical conception of SAD stresses the importance of engaging students through motivating and relevant learning experiences. Motivation and interest are recognized as key factors for effective learning. Teachers applying SAD seek to incorporate multiple forms of motivation, such as choice, personal relevance, and connection to their students' interests, to encourage active engagement and commitment to learning. Finally, technology and inclusive design: Educational and digital technologies have opened up new possibilities for implementing SAD. Advanced theoretical thinking in this area focuses on the inclusive design of technology and educational materials. This involves ensuring that digital resources and tools are accessible to all learners, providing options for representation, action and expression that are adapted to individual needs. In addition, the development of platforms and applications that incorporate universal design principles from their conception is encouraged.

In Latin America, legislation on the subject varies from country to country. However, many countries in the region have ratified the Convention proposed and approved by the UN regarding persons with disabilities, which recognizes rights in favor of this type of education, including those with disabilities. In addition, some Latin American countries have developed specific laws, policies and regulations that have allowed the promotion of inclusive education and the use of strategies such as UDL. For example, in countries such as Chile, laws such as the School Inclusion Law explicitly state that all schools must offer inclusive and non-discriminatory education, and that they must take measures to ensure that students have the diversity of forms, supports and resources they need to learn. In Mexico, the General Law established for these people indicates that all institutions in the sector must offer quality services, and must take actions to ensure the accessibility of educational spaces, materials and technologies.

It is important to highlight that the implementation of SAD in the region goes beyond legislation, and depends almost entirely on political will, teacher training, availability of resources and synergy among the actors that manage educational processes. Of course, in Latin America there are several countries that have developed laws and policies to promote the implementation of SAD in their educational systems. For example, in different areas of Argentina as a country, the National Education Law indicates the need to ensure the necessary equality in terms of educational opportunities for students in general, promoting the use of innovative and flexible teaching methodologies and resources. In Brazil, the Inclusion Law establishes the need to achieve the path towards quality educational systems for students in general, including those with disabilities, promoting the use of technologies and innovative pedagogical strategies. In Colombia, the Education Law establishes the need to guarantee equity and educational inclusion, and promotes the use of methodologies and pedagogical resources to address diversity. Peru declares the Intercultural Bilingual Education Law establishes the need to guarantee access to quality education for all its students, including those from indigenous and Afro-descendant communities, and promotes the use of pedagogical methodologies that respect the cultural and linguistic diversity of its school-age population.

It is important to note that, although there are laws and policies that promote the implementation of SAD in Latin America, its effective implementation depends on several factors, including the training of education professionals, the availability of resources for these purposes and the relationship between socio-educational agents in the sector. Of course, with regard to specific laws on SAD in Latin America, it is important to mention the following: Chile, defends among its laws the School Inclusion Law, which establishes the obligation of schools to offer inclusive and non-discriminatory education, and promotes the use of flexible and adaptive pedagogical strategies, such as SAD, to address the variety of students. Uruguay has laws such as the Education Law that guarantees inclusive and quality education for all students and promotes the use of innovative and flexible pedagogical methodologies and resources, such as the SAD. In addition to these specific laws, many Latin American countries have ratified the aforementioned Convention on the Rights of Persons with Certain Disabilities before the UN, which explains all the rights they have to inclusive and quality education, which promotes the use of exploration, use of methods and innovative techniques to detect new needs and potential of SAD work, as well as innovative and flexible pedagogical strategies for the achievement of active participation and the achievement of knowledge and skills of all students.

### 3. Results

The methods and techniques most used in this design in Latin America show that in the light of the 21st century, a diversity of methods and techniques have been used in this continent to promote inclusive and equitable education. Some of the most used in the classroom are:

i) Flexible materials and resources: The aim is to provide didactic materials in different formats (printed text, audio, video, multimedia, etc.) to adapt to the diverse needs of the students, where they can access the information contents and develop demonstrations in their learning with diverse alternatives, according to their preferences and styles.

ii) Multimodal teaching strategies: Different teaching modalities are used to address students' different channels of perception and communication. For example, verbal explanations, visual images, practical examples and interactive activities can be combined to provide multiple opportunities for comprehension and expression.

iii) Diversified assessment: Assessment methods are applied that allow students to demonstrate their learning in a variety of ways, beyond traditional written exams. Oral presentations, creative projects, debates, digital portfolios, among others, are valued to assess mastery of content and skills.

iv) Collaboration and teamwork: Collaborative learning is encouraged, where students work in heterogeneous groups to support each other and share knowledge. This strategy promotes social interaction, respect for diversity and the development of communication skills through team work.

v) Accessible technology and the optimization of its use: Technological tools are employed that allow effective access for students as a whole. This includes the use of read aloud software, closed captioning on videos, predictive writing software, accessible applications for mobile devices, among others.

vi) Adaptation of the physical environment: Modifications are made to the physical space of the classroom to ensure accessibility and comfort for students. This may involve the provision of flexible furniture, adjustment of lighting, clear signage, and use of tactile or manipulative resources.

vii) Offering multiple representation options: this way allows knowledge to be provided in different ways so that students can access it according to their needs and preferences where, for example, images, graphics, audiovisuals, literature and other resources can be used to present the information.

viii) Provide multiple options for action and expression: This involves offering different ways in which students can demonstrate what they have learned. For example, written essays, oral presentations, multimedia projects, debates, among others, can be used.

ix) Provide diverse initiatives based on engagement: It allows providing different ways for students to engage with the content and the learning process. For example, collaborative activities, educational games, online discussions, among others, can be used.

x) Use accessible technology: this medium, if well managed by teachers, becomes an effective tool for the proposed design, as long as it is used in an accessible manner. Technological tools and resources that are accessible to all students should be used, such as screen reading software, subtitles in videos, adapted keyboards and mice, among others.

xi) Design accessible educational materials: It is important that educational materials are accessible to all students, including those with disabilities. For example, large, clear fonts, contrasting colors, captions on videos, descriptions of images, and other means can be used to make materials more accessible.

It is important to keep in mind that these methods and techniques are not an exhaustive list, and that each teacher can adapt and customize them based on the strengths, weaknesses and peculiarities of the students. In addition, it is important to remember that universal design for learning is not a strategy that is exclusive to people with specific disabilities, as it benefits everyone, since it promotes plurality in contexts of inclusion. These methods and techniques of UDL in the present century have been used in educational institutions in the area to promote inclusive processes, providing equality, new learning opportunities for all, where plurality in diversity is recognized and valued as a strength in the classroom. Based on these experiences in terms of exploration, detection and determination of potentialities and needs in terms of SAD in the Latin American continent, a diversity of practices have been developed in this geographic space. These experiences have sought to implement pedagogical practices that respond to students and encourage their active collaboration in all processes.

Educational organizations and committed teachers have worked on adapting teaching materials and resources to make them accessible to all students, taking into account the physical, cognitive and emotional barriers they may face. In addition, training and education for educators have been carried out, with the aim of fostering an inclusive culture and providing them with the necessary tools to implement the SAD in the classroom. These experiences in Latin America have highlighted the importance of considering the cultural and contextual particularities of the region when implementing the SAD, adapting strategies and approaches to the specific needs of each educational community. Through these experiences, the aim has been not only to guarantee full access to education, promoting their participation and success in their endeavor, but also recognizing and valuing the complexity of each need as a richness that ennobles the process, with various results in the implementation of this novel curricular design in the 21st century. Thus, a range of programs and projects are being implemented in Latin America to promote educational inclusion through the SAD approach.

### **3.1. Policies adopted on the use of the SAD in the classroom**

One of the most important developments is that more and more countries are adopting policies and strategies that promote educational inclusion and the use of SAD in the classroom. For example, Mexico, Chile, Colombia and Argentina, among others, have implemented actions that promote inclusion and the use of SAD.

a. The Mexican Ministry of Public Education has implemented the Inclusive School with Universal Design for Learning program that seeks to promote the inclusion of students with certain disabilities. The result provides teacher training in UDL, as well as accessible educational resources and materials.

b. The Ministry of National Education in Colombia, which seeks to improve the quality of education in hard-to-reach areas and in the most vulnerable populations, has implemented the Todos a Aprender (Everyone to Learn) program. The program uses the SAD approach to provide educational materials to address the different needs of students.

c. The Chilean Ministry of Education has implemented the National Strategy for Inclusive Education, whose purpose is to promote the achievement of knowledge, habits and skills of students with disabilities. Teachers are trained in SAD, and educational media are being adapted to allow access and participation of students.

d. In Argentina, the National Comprehensive Sexuality Education Program has been implemented, which uses an approach based on SAD to ensure that all students reach an inclusive sexuality education, where they adapt according to their needs.

e. The EDUCAR Project of the ONCE Foundation was implemented in countries such as Colombia, Mexico, Costa Rica, Ecuador, Peru, Brazil, Argentina and Paraguay with the purpose of promoting the educational inclusion of students with certain disabilities by training teachers in SAD, developing teaching aids to which all students could have access.

f. Inclusion in Action of the Arcor Foundation was carried out in Brazil and Argentina, promoting this process in socially disadvantaged schoolchildren. The strategies of this design were implemented in educational institutions in order to adapt curricula and teaching procedures with a focus on the diversity of needs of students.

g. Learning for All of the Saldarriaga Concha Foundation, Colombia focuses on promoting the educational inclusion of students with disabilities through the design and implementation of SAD strategies in schools. Various accessible educational materials have been developed and teachers and administrators have been trained in the use of these strategies.

For the implementation of the SAD in the classroom, materials are being developed to support this process. It should be noted that some countries have created a range of free educational software with greater accessibility adapted to the SAD, which allow teachers and specialists to adapt them to the possibilities and needs of children. From training and courses in postgraduate education, teachers have been strengthened in SAD, in order to apply it in their educational practice, which allows improving the standards where SAD knowledge is evaluated and, therefore, new forms of methodologies are developed to check the learning results of students in inclusive contexts which are adapted to their possibilities and needs. These are just some of the notable experiences of universal design for learning in Latin America in regular educational institutions.

### **3.2. DUA insertion programs**



There are more and more initiatives that seek to promote educational inclusion through this strategy, and it is important to continue disseminating and sharing these successful practices in order to achieve a more equitable education for all. This design has also been extended to university contexts where, through various projects and programs, the insertion of the SAD has been achieved at the intra- and extra-mural level in universities of the American continent.

I) The Inclusive Education Program (PIE) is a program that was voluntarily implemented in different establishments in regular institutions designed by the University of Chile and is oriented towards a manual that allows support to teachers in this area.

II) The National University of Colombia develops a project of Inclusive Education focusing on the training of teachers in SAD which allows to provide various opportunities in optimizing the learning of students who are effective members of the educational system, developing curricula which are used and accessible to all.

III) The Inclusive Education Program developed by the National University of Costa Rica is designed to train teachers in SAD and in the promotion of this modality of attention, especially in cases where there are various risks of exclusion. The state of the art was elaborated in the search of bibliography focused on the subject to achieve an organizational culture in that sense and adapting the support services by specialists in the matter.

IV) The Inclusive School Project of Fundación MAPFRE: was carried out in Peru, Chile, Colombia and Mexico. The objective was to favor educational care pathways by promoting this condition in students with disabilities. SAD strategies were implemented in schools in social areas, to achieve a culture of promotion and education for health, prevention and road safety.

V) At the National University of La Plata, Argentina, the Program: Todos Podemos Aprender (We Can All Learn) was applied: This program focuses on the training of teachers in SAD and the care of students with disabilities, proposing a didactic and organizational strategy based on more significant learning, where there is no room for frustration and the school itinerary of these included children is not interrupted.

VI) The Inclusion for Diversity Project, a project implemented at the University of Santiago de Chile, focuses on training teachers in SAD and also provides modalities of attention to students with various disabilities. Various accessible educational materials have been developed and SAD strategies have been implemented in schools.

VII) Program as it is called: Inclusive Education for All of the Central University of Venezuela: This program trains teachers in SAD both in the order of knowledge, attitudinal and behavioral in their teaching staff and promote educational inclusion.

VIII) In Cordoba, Argentina, Educational Inclusion is a project that materializes in giving treatment in a general sense to disability within the university itself, where concepts have been redefined, the subject has been approached in a more integrated and integral way, addressing this project in 5 dimensions of work in relation to the legal, architectural aspects, the use of technology, the academic aspect and its curricular flexibility, as well as the cultural and attitudinal aspects.

IX) The Inclusive Education Program of the National University of Asuncion, Paraguay: This program works to acquire an inclusive vocabulary, with reasonable adjustments from the curricular point of view with common and significant adaptations, with its own legal basis.

X) The Inclusive Education for All Project of Fundación Telefónica, Peru: This project focuses on the promotion of rewarding teachers who created digital resources in order to develop resources and supports for students with disabilities.

XI) Educational Inclusion of the University of Guadalajara, Mexico is a program that focuses on equity and non-discrimination, which pursues an inclusive policy from its legal framework based on economic incentives for people with disabilities, various supports from infrastructure, solidarity economy and intercultural education.

In summary, several developments are being observed in Latin America in relation to curricular adaptations within the framework of the SAD, which seek to promote inclusion and achieve adequate direction to education for all, including students with disabilities.

### **3.3. Main barriers**

Regarding the main barriers encountered in Latin America for the implementation of the SAD, we can mention some of them: In Latin America, the lack of training and ongoing teacher training on the subject are barriers to its implementation for several reasons.

Many teachers in the region are not familiar with the concept of SAD and have not received the necessary training to apply it in their pedagogical practices. This may hinder their ability to design and adapt learning materials and activities with better accessibility, with significant results for students with disabilities. Secondly, there is insufficient preparation of teachers in terms of SAD, which may limit their capacity to serve students in their schools. In many cases, teachers may not be prepared to identify and address different needs and develop innovative ways of teaching, which can lead to exclusion and low academic performance. Third, it may be related to the lack of resources and institutional support for the implementation of the approach. In many cases, teachers may feel demotivated or discouraged to implement SAD if they do not receive the necessary support and resources from their educational institutions, such as adapted materials, assistive technologies and planning time.

In summary, these aforementioned situations create a myriad of barriers to the implementation of this approach in our continent. To overcome this, it is necessary to invest in ongoing teacher training in SAD, provide the necessary resources and institutional support, and foster an inclusive and collaborative school culture that values and supports student diversity.

Lack of access to accessible educational materials is another major barrier to SAD implementation in this area of the world and there are several reasons why this occurs firstly, many educational materials in the region are not designed with accessibility and inclusion of all students in mind. This may include printed materials with small print or low contrast, videos without captions or audio description, or learning activities that do not take into account the diversity of students and their educational needs. Second, the need for institutional resources and support for the production and adaptation of accessible educational materials may limit their availability and accessibility. In many cases, educational institutions may not have the resources or capacity to produce or adapt materials that are accessible to all students, which can lead to the exclusion and underachievement of those with special educational needs. Third, lack of awareness and high awareness of the importance of accessibility and inclusion in education can limit the demand for and use of accessible educational materials. In many cases, teachers, students and parents may not be familiar with the concept of accessibility and the need to adapt educational materials to ensure ownership and participation in learning by all students.

To overcome these barriers, it is necessary to invest in the production and adaptation of accessible educational materials, where resources materialize with the institutional support to do so, and to foster an inclusive and collaborative school culture that values and supports student diversity. In addition, it is important to promote awareness and sensitization on the importance of accessibility and inclusion in education, and to foster a wider demand and use of accessible educational materials throughout the region. The lack of resources and institutional support for implementing the SAD in Latin America may be due to several reasons. First, many countries in the region face economic challenges and budgetary constraints that may make it difficult to provide sufficient means for the implementation of inclusive education policies and

programs. In addition, the lack of clear and coherent policies and strategies for inclusive and accessible education may limit the capacity of educational institutions to develop and implement SED strategies effectively. This may be due to a lack of coordination and cooperation between different levels of government and educational institutions, as well as a lack of leadership and commitment on the part of educational authorities. Another important factor is the lack of adaptation of accessible educational materials as many teachers are not familiar with the principles of SAD, do not master certain necessary knowledge and skills to apply them in their teaching practices. Lack of training and education can also limit the capacity of teachers to identify and respond to the special educational needs of their students and to design and adapt accessible educational materials.

In summary, the lack of resources and institutional support to implement the SAD in Latin America may be due to a combination of economic, political, social and educational factors. To overcome these challenges, it is necessary to strengthen investment in inclusive education, based on cooperation between the different levels of governments, ministries of education and educational institutions, which will provide adequate training and education for teachers in the use of the SAD and in the adaptation of accessible educational materials.

In our continent there are cultural barriers and negative attitudes towards disability and educational inclusion due to a series of historical, cultural and social factors. In many cases, people with disabilities have been marginalized and socially segregated, which has led to stigmatization and social exclusion. The creation of social stigmas and prejudices about people with disabilities has contributed to the fact that acceptance and inclusion of people with disabilities in society and in the educational system can be difficult. In addition, disability has historically been considered an illness or an abnormality, which has led to exclusion and denial towards people with disabilities. These negative attitudes toward disability may also be linked to cultural and religious beliefs that may view disability as a curse or divine punishment. Another factor that may contribute to cultural barriers and negative attitudes toward disability and educational inclusion is a lack of sensitivity about the importance of inclusion and opportunities for all people. In some cases, lack of information and education about the needs and rights of people with disabilities can lead to ignorance and insensitivity towards people with disabilities, which can hinder the acceptance and inclusion of people with disabilities in society and in the educational system.

Cultural barriers and negative attitudes towards disability and educational inclusion in Latin America may be the result of a mix of historical, cultural and social situations, as well as a lack of awareness and sensitivity to the needs and rights of people with these conditions. It is important to work on raising awareness and educating society to promote a cultural movement towards inclusion and acceptance of diversity, and to ensure equal opportunities for all people, including those who are considered to have special living conditions.

In Latin America, despite the progress achieved, there are shortcomings in terms of achieving systematization and coordination among the different actors in the education system to promote inclusion through multiple factors.

First, education in many countries in the region is decentralized, which means that responsibility for education is divided among different levels of government and among different educational institutions. This can make coordination and collaboration between these entities difficult, which can lead to a lack of coherence in educational policies and strategies for inclusion. In addition, the absence in some cases and a leadership that has not accompanied this noble work and commitment on the part of educational authorities may limit the capacity of schools to develop and implement inclusive education policies and actions effectively. This may be due to a lack of resources, training and institutional support for the implementation of inclusion and SED strategies. Another important factor is the lack of participation and empowerment of educational communities, including students, families and teachers, in decision-making and in the implementation of inclusive education policies and programs. The lack of participation and empowerment of

these communities can limit the capacity of educational institutions to develop and implement inclusive education policies and actions effectively.

To overcome these challenges, it is necessary to strengthen coordination and collaboration between governmental levels and educational institutions, where improvements are made in order to achieve leadership and commitment from educational authorities, foster participation and empowerment of educational communities in decision making and in the implementation of inclusive education and SAD policies and programs. Therefore, it is important to continue working on overcoming these barriers in order to achieve a more inclusive and equitable educational process.

#### 4. Conclusions

In Latin America, several SAD projections are being drawn up, with the objective of continuing to promote educational inclusion and access to education for all, including those with disabilities. Some of these projections are:

**Increased investment in inclusive education:** Many Latin American countries are investing more resources in promoting inclusive education and the use of SED in the classroom. It is expected that this style will continue to grow in the coming years, with the aim of improving the effectiveness of education and ensuring access and participation of all students.

**Increased teacher training in SAD:** It is expected that more and more teachers in Latin America will receive training in SAD so that they can use this strategy in their educational practice and adapt educational materials to the needs of their students.

**Increased use of accessible technology:** It is expected that the use of accessible technology in the classroom will continue to be promoted in order to improve access and participation of students with disabilities. It is expected that new technological tools and resources will be developed to adapt educational materials to the SAD in a more efficient manner.

**4. Further research in SAD:** It is expected that research in the area of SAD and inclusive education will continue to be promoted in Latin America, with the aim of optimizing educational practices and developing new strategies and tools to promote educational inclusion.

In order to consider, it is hoped that in the future Latin America will continue to advance in the promotion of SAD and inclusive education, through investment in resources, teacher training, the use of accessible technology and research in the field of inclusive education.

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