

REVISIÓN

## Inclusive Education and Language Learning for Children with Autism Spectrum Disorder

### Educación inclusiva y aprendizaje de idiomas para niños con trastorno del espectro autista

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Cite as: Escobar Garcés L, Soto Verdugo V, Aragón Pérez E. Inclusive Education and Language Learning for Children with Autism Spectrum Disorder. Neurodivergences. 2022; 1:48. <https://doi.org/10.56294/neuro202248>

Submitted: 13-03-2022

Revised: 16-07-2022

Accepted: 08-10-2022

Published: 09-10-2022

Editor: Prof. Dr. Javier González Argote 

#### ABSTRACT

The literature review focused on the inclusion of children with Autism Spectrum Disorder (ASD) in educational contexts, particularly within English language instruction. The analysis revealed that international studies highlighted both the barriers and the opportunities linked to inclusive practices. Evidence from Iran demonstrated that structural and cultural limitations often prevented children with ASD from participating in mainstream schools, confining them to specialized institutions. However, parents and headteachers expressed openness to inclusive approaches when adequate teacher training and resources were available. Other investigations emphasized the challenges of second language acquisition among children with ASD. These studies showed that, despite difficulties in communication, organization, and social interaction, ASD learners were capable of acquiring vocabulary and grammar when instruction was systematic, structured, and adapted to their strengths. Research also noted that bilingualism could enhance cognitive and linguistic abilities, placing ASD students at an advantage under appropriate pedagogical strategies. Theoretical contributions from Asperger's early work, diagnostic frameworks such as DSM-IV and DSM-5, and Gardner's theory of Multiple Intelligences provided conceptual tools to understand the heterogeneity of learners. These perspectives reinforced the idea that ASD students could benefit from flexible methodologies that respected their unique learning profiles. In conclusion, the review demonstrated that inclusive education for ASD children was feasible and beneficial when grounded in frameworks like Universal Design for Learning (UDL). Successful implementation depended on teacher preparation, curricular adaptation, and broader social commitment, turning inclusion into both an educational necessity and a collective responsibility.

**Keywords:** Autism Spectrum Disorder; Inclusive Education; Universal Design for Learning; Second Language Acquisition; Teacher Training.

#### RESUMEN

La revisión bibliográfica se centró en la inclusión de niños con trastorno del espectro autista (TEA) en contextos educativos, especialmente en la enseñanza del inglés. El análisis reveló que los estudios internacionales destacaban tanto las barreras como las oportunidades relacionadas con las prácticas inclusivas. Las pruebas procedentes de Irán demostraban que las limitaciones estructurales y culturales a menudo impedían que los niños con TEA participaran en las escuelas ordinarias, confinándolos a instituciones especializadas. Sin embargo, los padres y los directores de escuela se mostraron abiertos a los enfoques inclusivos cuando se disponía de una formación y unos recursos adecuados para los profesores. Otras investigaciones hicieron hincapié en los retos que supone la adquisición de una segunda lengua para los niños con TEA. Estos estudios demostraron que, a pesar de las dificultades en la comunicación, la organización y la interacción social, los alumnos con TEA eran capaces de adquirir vocabulario y gramática cuando la enseñanza era sistemática, estructurada y adaptada a sus puntos fuertes. Las investigaciones también señalaron que el bilingüismo

podía mejorar las capacidades cognitivas y lingüísticas, lo que situaba a los alumnos con TEA en una posición ventajosa con estrategias pedagógicas adecuadas. Las contribuciones teóricas de los primeros trabajos de Asperger, los marcos de diagnóstico como el DSM-IV y el DSM-5, y la teoría de las inteligencias múltiples de Gardner proporcionaron herramientas conceptuales para comprender la heterogeneidad de los alumnos. Estas perspectivas reforzaron la idea de que los alumnos con TEA podían beneficiarse de metodologías flexibles que respetaran sus perfiles de aprendizaje únicos. En conclusión, la revisión demostró que la educación inclusiva para los niños con TEA era factible y beneficiosa cuando se basaba en marcos como el Diseño Universal para el Aprendizaje (UDL). El éxito de su implementación dependía de la preparación de los profesores, la adaptación curricular y un compromiso social más amplio, lo que convertía la inclusión en una necesidad educativa y una responsabilidad colectiva.

**Palabras clave:** Trastorno del Espectro Autista; Educación Inclusiva; Diseño Universal para el Aprendizaje; Adquisición de una Segunda Lengua; Formación del Profesorado.

## INTRODUCTION

Autism Spectrum Disorder (ASD) has emerged as a central subject of inquiry in contemporary educational research, particularly in relation to the challenges and opportunities it poses for inclusive pedagogical practices. The growing prevalence of ASD diagnoses worldwide has compelled educators, policymakers, and researchers to explore new strategies aimed at fostering equitable participation of these learners in mainstream classrooms. Within this context, the integration of children with ASD into English language instruction becomes especially relevant, as language acquisition not only represents a cognitive and communicative challenge but also a crucial pathway to social inclusion. Theoretical frameworks such as the Universal Design for Learning (UDL) have gained prominence for their potential to provide flexible and adaptable methodologies that respond to the heterogeneous needs of students, thereby ensuring access to meaningful and high-quality education.

The literature reviewed in this study comprises diverse perspectives and empirical findings addressing the incorporation of children with ASD in educational settings. Research from countries such as Iran has revealed the structural, cultural, and institutional barriers that hinder the implementation of inclusive practices, while also highlighting the transformative role of teacher training and social awareness in overcoming these obstacles. Other studies emphasize the specific challenges of second language learning in ASD learners, underlining the importance of structured environments, individualized strategies, and the recognition of cognitive strengths such as memory and visual-spatial skills. At the same time, theoretical contributions concerning Asperger's Syndrome, diagnostic frameworks like DSM-IV and DSM-5, and Gardner's theory of Multiple Intelligences provide critical conceptual tools for understanding the diverse learning profiles of children within the spectrum.

Taken together, these contributions offer valuable insights for rethinking educational practices, particularly in contexts where inclusive policies are still in development. While the majority of the reviewed studies originate outside of Chile, they nevertheless provide essential guidance for understanding how inclusion can be meaningfully enacted through methodological innovation, institutional commitment, and the recognition of diversity as a fundamental educational principle.

## DEVELOPMENT

There has been extensive research focusing on topics related to Autism Spectrum Disorder (ASD), providing a range of strategies for teachers that are constantly dealing with Asperger children inside the classroom. The following studies will show the importance of the integration and inclusion of children with ASD in the classroom. The present literature review considers six recent studies on the incorporation of children with Autistic Spectrum Disorder (ASD) in English language classes, taking into account the implementation of the new Universal Design for Learning (UDL) to increase methodological improvements when teaching these students. It must be said that all the four studies only provide information about several countries other than Chile. Nonetheless, these studies will provide light on the effectiveness of the inclusion of children with any Special Need.

Ali et al.<sup>(1)</sup> in the study "Integration of ASD children in Schools" argue that, at least in Iran, it is impossible for children with any Special Need, to study in an educational establishment neurotypical learners and interact with them. These children, especially with ASD, must go to special schools and receive a corresponding aid from the Iranian Special Education Organization (ISEO).

### Perspectives on Inclusive Education of Preschool Children with Autism Spectrum Disorders and Other Developmental Disabilities in Iran

According to the study done by Sayyed Ali et al.<sup>(1)</sup>, in Iran, it is impossible for children with any Special Need,

to study in an educational establishment with neurotypical learners and interact with them. These children, especially with ASD, must go to special school and receive a corresponding aid from Iranian Special Education Organization (ISEO). Moreover, parents in that country, are not in knowledge about what is inclusion.

Researchers chose samples in their investigation; the first one with 89 parents of children with ASD and, with the headteachers of two kindergartens. The result was that half of the parents that had ASD children were in favor of their children in attending schools with neurotypical learners. On the other hand, headteachers stated that inclusion is part of children's rights. However, educators considered inclusion as a challenge, since teachers must have the training to deal with this group of students to help them positively in the classroom. Also, challenging the negative reactions of some parents that have their children in common schools without any disability.

The conclusion of the study states that giving efficient training for teachers would be the key to put into practice inclusion in schools. Additionally, it should change social values and understanding of different disabilities

### **Second Language Learning in Children with Autism; Plans and Strategies**

The aim of this study done by Zohre Esmaeeli<sup>(2)</sup>, was to show the challenges teachers face with ASD children at schools. Additional to that, teachers who deal with ASD children learning dilemmas, as reading and writing, where teachers need to be aware on how to teach adequately to them. As the researcher has an ASD child, and the academic proficiency development of autism is not well known and is not used yet, she decided to find the most suitable way to teach ASD children a second language, the goal of the study was to provide strategies for language teachers who deal with ASD learners. The results of the study show that ASD children can accomplish a Second Language Acquisition. They are capable to learn vocabulary and grammar by making a friendly environment and being organized in each lesson. Also, results have indicated that bilingual children tend to have higher linguistic and cognitive abilities in language, leaning their monolingual peers.

### **Autistic Spectrum Disorders and learning foreign languages**

According to an article written by Vivienne Wire, the amount of people with a diagnosis of Autistic Spectrum Disorders (ASD) increases everyday. She discusses the quality of the strategies used by teachers and she also provides five effective strategies to work with ASD children as, strategies to help the pupil with ASD in social communication which means that "has an important part to play in "regularising" delivery and speech patterns of these pupils". Moreover, this explain the difficulties of structure and organization while learning a foreign language. Teachers must be aware about autism spectrum disorder (ASD), because they need to know how to motivate these pupils, they need some knowledge about the issues that surround ASD learners, it is crucial to have special strategies for ASD students succeed on the acquisition of a second language, even though many teachers are worried about the lack of training because of the unknown strategies.

### **Case study (Spectrum Disorder Autistic, Disability Intellectual and Hearing loss). We learn colors**

This research published by Maria de Los Angeles Cardenas<sup>(3)</sup> in 2018 states that applying a case study to students with Special Educational Needs (SEN), such as learners with Autism Spectrum Disorder, helps to understand and solve problems within the classroom. She refers that, through interviews, observation and doing an intervention by using a didactic unit will enhance great ASD learners skills.

The investigator concludes that teachers should be aware of their clinical report, their way of learning against stimuli (since many teachers assume that the student does not like certain things, but it is the opposite) These will help to create different types of methodologies and to reflect the evolution of the student in the pedagogical area.

It is necessary for the present study to clarify and analyse definitions and theories that will support this research. Therefore, the following sections of chapter II will provide the reader with relevant definitions such as UDL, ASD, DSM-4 etc, and the theories important to understand the implementation and analysis of this study.

### **Asperger**

Hans Asperger, was a pediatric specialist from Austria and, the first person to identify young boys with social communication problems. Asperger describes some attitudes in typical boys, with normal language and intelligence, along with a low level of social interaction between their peers.

According to "A guide for young people" Asperger children are late talkers. People with this disorder, begin to reproduce some words at the age of 5 and, at the same time, they have problems to understand what is being said. This means that jokes, some words or phrases are difficult to interpret and analyzed by Aspergers people.

This disorder is also defined by authors as "A developmental disorder that affects a person's ability to communicate and socialize with others. Symptoms vary but may include repetitive speech, behavioral rituals,

difficulties with recognizing and interpreting nonverbal communication, and some motor difficulties.” It is also defined by specialists as “Is a previously used diagnosis on the autism spectrum. In 2013, it became part of one umbrella diagnosis of autism spectrum disorder (ASD) in the Diagnostic and Statistical Manual of Mental Disorders 5 (DSM-5)”. Other specialists also defined Asperger as “Generalized developmental disorder (GDD) of a chronic and communicative nature and involves the qualitative alteration of social and communicative development and rigid and behavioral interests. No associated mental retardation”.

#### DSM-4

The Diagnostic and Statistical Manual of Mental Disorders (DSM) is a classification system for mental disorders that provides descriptions of the diagnostic categories. Specialists and researchers in the area of health could diagnose, study, exchange information and treat different disorders. The generalized disorders of the development are divided in 5 disorders inside the DSM-4:

1. F84.0 Autistic disorder, early childhood autism, infantile autism or Kanner’s autism.
2. F84.2 Rett disorder.
3. F84.3 the childhood disintegrative disorder, which are related to the loss of motor skills and speech development.
4. F84.5 Asperger’s Disorder.
5. F84.9 Generalized developmental disorder unspecified, focus on delays in the development of multiple basic functions that includes socialization and communication with their peers.

According to the DSM-4, these five disorders are described under the name of disorders of onset in childhood, childhood or adolescence. Asperger’s disorder could be distinguished from autistic disorder by the absence of delayed language development. Asperger’s disorder seems to have a beginning somewhat later than autistic disorder, or at least it is recognized later.

#### Autism spectrum disorder

In 1943, Leo Kanner<sup>(4)</sup> an Austrian psychiatrist known for being the first to identify characteristics of a child with ASD and description of what is currently called in psychiatric clinic Autism Spectrum Disorder. He began to explore children between two and eleven years old who were exhibiting similar repetitive behaviours, low social communication in comparison with typical children and, at the same time, language use problems. Ousley and Cermak mentioned that ASD children have big difficulties concerning with “language consisting mainly of naming objects, literalness, delayed echolalia, excellent rote memory, repeating phrases with personal pronouns in the exact way heard, early concern about hearing impairment, strong reactions to noises and moving objects, monotonous repetition of noises, motions, and verbal utterances, and limitations in the variety of spontaneous activity.

According to DSM-5 Autism Spectrum Disorder is defined as “People with ASD tend to have communication deficits, such as responding inappropriately in conversations, misreading nonverbal interactions, or having difficulty building friendships appropriate to their age.”

Within the DSM 5, ASD is divided according to its severity:

- 3: Requires very substantial support. This is characterized by serious deficits in the behavioral part and social communication. Severe deficits in verbal and non- verbal social communication skills. The child possesses great distress when the routine is changed.
- 2: Requires substantial support. Language initiations are very limited. For example: the child speaks in simple sentences, whose interaction is limited to narrow special interests who has an odd nonverbal communication.
- 1: Requires support. The person is able to say words or complete sentences and get involved in the communication, but fails to maintain it. Attempts to make friendships are peculiar and ineffective.

#### DSM-5

The number of disorders was not increased in the new DSM, but they were ordered differently. According to the Diagnostic and Statistical Manual of Mental Disorders Five (DSM-5) published in 2015, the Autistic Spectrum Disorder encompasses all generalized developmental disorders under a single diagnosis. This means that Asperger no longer exists as an individual concept, but is integrated into the characteristics of ASD. Therefore, disorders are be divided according to levels, where number three is the most critical and requires substantial support, two medium assistance, and one needs support, but is mild.

#### Multiple intelligences

According to Gardner’s theory of Multiple Intelligences (MI) where he tries to explain a large amount of people’s learning differences. Multiple Intelligences set a number of intellectual potentials. There are eight

different intelligences associated to learning and, with regular interaction they will develop certain intelligences far more than others.<sup>(5,6,7)</sup>

These eight MI could be less or more developed by ASD learners. Their weakness according to Coleman is emotional intelligence, this term can be described as self-awareness, impulse control, persistence, and self-motivation, empathy and social deftness. On the other hand, one of the most developed is spatial visual intelligence which is defined by Gardner as “Good at visualizing things. These individuals are often good with directions as well as maps, charts, videos, and pictures”.

#### **Inclusion Law 20.845- 83 Decree**

The aim of the 83 decree is to be a resource and support for teachers on the implementation of a diversified education in the school system. According to Ainscow and Booth, educational inclusion can be understood as the process of systematic improvement of the system and educational institutions to try to eliminate the barriers of different types that limit the presence, learning and participation of students in the life of the centers where they are schooled, with particular attention to the most vulnerable.

With this definition we can conclude the following key elements:

- Inclusion is a process, which means that it is a constant searching of research to find the most suitable ways to be aware of diversity.
- Inclusion is a presence, participation and learning from all the students, this means that a school is inclusive when it is able to welcome them taking into consideration their characteristics and context.

According to these definitions, the Ministry of Education in Chile, states that the 83 decree help to meet the needs special education that may present some students temporarily or permanently throughout of their schooling, as a result of a deficit or a specific learning difficulty, trying to give response to specific learning requirements personal or contextual, with the purpose of guaranteeing equality in the right to education”. It also describes that regular education establishments must incorporate innovations and curricular adjustments, of infrastructure and support materials needed to allow and facilitate access to courses or levels for people with disabilities existing, providing them with the additional resources they require to ensure their permanence and progress in the educational system.<sup>(8,9)</sup>

#### **Inclusion Law- 67 Decree**

67 Decree published in 2018 by the Ministry of Education in Chile, which indicates the design of quality assessment strategies aligned with a motivating and continuous learning process, promotes five criteria focused on the quality of evaluations to help students in the learning process:

1. Alignment with learning.
2. Sufficient and varied evaluative evidence.
3. Evaluation of processes, progress and achievements.
4. Evaluative situations that show the meaning and relevance of learning.
5. Diversified evaluation strategies.

As stated in the last criteria, 67 Decree seeks a “notion of differentiation of teaching and evaluation, generally referred exclusively to students with special educational needs, and diversification, which considers the diversity present in society and therefore inherent in all classrooms”.<sup>(8,9)</sup>

#### **Universal Design for Learning (U.D.L)**

Inclusive Education, stands out for providing each student, independent of their special needs, with an equal education and same opportunities as the rest of their classmates especially during the lesson. In order to address this issue, the Universal Design for learning (UDL), has been implemented. This aims to provide specific educational design guidelines to ensure accessibility of all learner types to the learning environment.

To implement this planning within the classroom, teachers should have in mind what the desired results are. UDL calls for the goal to be separate from the means for achieving it in order to allow flexibility in how the goal can be achieved. This allows the learner to employ preferred methods for accessing the curriculum.

Kimberly M. and A. Mudschenk stated the importance of knowing the process of evaluation, and how will it be evaluated. The aim of summative and formative tests, should be directed and focused on the strength and weaknesses of children inside the classroom. UDL calls for learning activities that incorporate flexibility and support. When students can choose from a variety of learning activities, they can maximize their strengths and minimize their weaknesses, and when support is available to all students the stigma associated with specific support to some students.

Additionally, is a teaching model that seeks to eliminate barriers to “learning to learn”, considering a



flexible and modifiable model that considers all students without any difference between them, enhancing the development of the skills of each of the students with the use of different strategies that points to the comprehension and learning of all and all.

In the early 90's the Center for Applied Special Technology (CAST), a North American organization that gives financial support for organizations, government agencies and individuals, especially teachers, began to investigate and develop the principles and practice of a new Universal Design for Learning (UDL). The aim of CAST is "to explore ways of using new technologies to provide better educational experiences to students with disabilities".<sup>(10)</sup> This means that it would help educators to implement new strategies, including curriculum planning, and useful materials for students with special needs. "CAST helps educators and learning organizations improve their understanding and implementation of UDL through workshops, institutes, and collaborations".<sup>(10)</sup>

CAST divided UDL in guidelines, in which they are a tool used in the implementation of Universal Design for Learning. "These guidelines offer a set of concrete suggestions that can be applied to any discipline or domain to ensure that all learners can access and participate in meaningful, challenging learning opportunities".<sup>(10)</sup>

1) Engagement: collect students interests through providing relevance to learning, emphasizing the objectives and goals according to their daily life and, at the same time, to highlight the different preferences that students have. These will help learners to be motivated and self-reflective about what they have learned, with the help of suitable feedback.

2) Representation: the information submitted must be through a format which everyone can understand. Moreover, to clarify the content and to connect them with previous knowledge.

3) Action and Expression: different technological tools or media should be applied to facilitate learning and physical interaction between students. Also, promoting a strategic plan and know how to use it in the classroom.

### **Difference between Inclusion and integration**

According to Dr. Joan Jordi Muntaner, inclusion and integration are often used as equal concepts that share the same meaning, especially in the educational field.<sup>(11,12,13)</sup> However, integration was replaced since it only took into consideration people with Special Educational Needs (SEN). In contrast to Inclusion, in which the focus is not only children with SEN, but all those who are studying in the same educational establishment who should have the same opportunities.

Referring to Inclusive Education, the Ministry of Education in Chile, defined it as, "Each educational establishment in Chile promotes inclusion through educational practices that ensure access, permanence, learning and participation of all students, recognizing their diversity and favoring a pedagogical work more relevant to their identities, aptitudes, needs and real motivations".<sup>(8,9)</sup>

### **Autistic Disturbances of Affective Contact**

Since 1938, Kanner<sup>(4)</sup> the man who discovered ASD and followed 11 cases of children above eleven years old that presented "fascinating peculiarities", according to him. Even though the children had different grades of disturbance and backgrounds, they shared common characteristics that he called "Syndrome", and he realised that there could be many misdiagnosed children as feeble minded or schizophrenic. The first observable symptom was the initial infants' lack of ability to show any reaction to physical contact with their closest family, including the anticipatory reaction when they were picking up. Eight of them learned to speak at the normal age by repeating their parents words, meanwhile three of them stayed mute till they were discovered articulating or uttering words when they were alone. However, those children who learned to speak later, began to put words together after a long time. They were excellent at memorizing names, numbers, and poems.<sup>(13,14)</sup> All of them were unable to form sentences spontaneously. Other features those children shared were: food struggles, fear of loud noises and object movements (because they disturb their aloneness), monotonous repetitions of verbal utterances, obsession for all types of patterns (routines, furniture, etc.), lack of spontaneous changes in their activity. They had a better relation with objects, including pictures of people rather than people themselves, they neither reacted to a conversation nor looked at the other's face, they reacted angrily to a physical contact or to an interference of their loneliness, and they focused only on what was producing the interference rather than in who was disturbing them. In terms of physical appearance, according to Kanner they were "essentially normal", the only difference to other children was their face gesture as a "serious mindedness", and their "anxious tenseness" because of the lack of interference anticipation.<sup>(15,16,17)</sup> The most highlighting findings were their obsessive desire for loneliness, and their "unquestionable cognitive potential".<sup>(4)</sup>

### **CONCLUSIONS**

The theoretical analysis presented demonstrates that the inclusion of children with Autism Spectrum Disorder in educational systems is both a pedagogical imperative and a social responsibility. Across the literature, there is consistent evidence that children with ASD are capable of achieving significant academic and linguistic progress

when placed in environments that are structured, flexible, and responsive to their needs. Such findings challenge reductionist views that confine these learners to segregated educational spaces and reinforce the notion that inclusive education is not only feasible but also beneficial for all students. However, inclusion requires more than policy declarations; it demands sustained investment in teacher training, curricular adaptation, and the creation of supportive networks that engage families, educators, and institutions.

Furthermore, the adoption of frameworks such as the Universal Design for Learning (UDL) underscores the importance of designing curricula that anticipate diversity rather than merely reacting to it. By separating educational goals from the methods used to achieve them, UDL promotes accessibility and equity, enabling students with ASD to leverage their cognitive strengths while mitigating potential challenges. Studies on second language acquisition reinforce this perspective, showing that ASD learners can thrive linguistically when instructional strategies are adapted to their specific modes of learning and when educators possess the knowledge and tools to implement them effectively.

At the societal level, meaningful inclusion also requires a transformation of cultural values, particularly in relation to how disabilities are perceived and addressed. Parents, teachers, and educational leaders must collaborate to dismantle stereotypes and to foster environments that recognize diversity as a source of enrichment rather than as an obstacle. In this sense, inclusion extends beyond the classroom and becomes a collective project aimed at achieving social justice, equality of opportunity, and the full participation of all learners.

In conclusion, the reviewed theoretical foundations highlight that advancing toward inclusive education for children with ASD is not a linear or isolated process but rather a multifaceted endeavor that combines theory, practice, and policy. By aligning conceptual frameworks, empirical evidence, and institutional commitment, it is possible to construct educational systems that not only accommodate difference but actively celebrate it, thus paving the way for a more equitable and humanizing form of education.

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#### FUNDING

None.

#### CONFLICT OF INTEREST

None.

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*Research:* Lorena Escobar Garcés, Valentina Soto Verdugo, Edgardo Aragón Pérez.  
*Methodology:* Lorena Escobar Garcés, Valentina Soto Verdugo, Edgardo Aragón Pérez.  
*Project management:* Lorena Escobar Garcés, Valentina Soto Verdugo, Edgardo Aragón Pérez.  
*Resources:* Lorena Escobar Garcés, Valentina Soto Verdugo, Edgardo Aragón Pérez.  
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