

BILINGUALISM IN CHILDREN WITH AUTISM SPECTRUM DISORDERS: ITALIAN SIGN LANGUAGE AS A TOOL FOR INCLUSION

BILINGUISMO NEI BAMBINI CON SINDROME DELLO SPETTRO AUTISTICO: LA LINGUA DEI SEGNI ITALIANA COME STRUMENTO DI INCLUSIONE

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ABSTRACT

This study underscores the significance of inclusive education, grounded in principles of integration and cooperation, within the realm of education. Teachers play pivotal roles in this approach, requiring a welcoming environment, valuing diverse learning styles, and promoting student collaboration. Eliminating cultural paradigms that perpetuate stereotypes is essential to achieving inclusion. The present contribution highlights the crucial role of the Pedagogy of Difference in inclusive education, and how the use of Italian Sign Language (LIS) proves effective in breaking down communication barriers and fostering integration, providing an inclusive approach that celebrates diversity.

Questo studio enfatizza l'importanza dell'educazione inclusiva, basata su principi di integrazione e cooperazione, nel contesto dell'istruzione. Gli insegnanti sono attori chiave in questo approccio, che richiede un ambiente accogliente, valorizza stili di apprendimento diversi e promuove la collaborazione tra gli studenti. L'eliminazione di paradigmi culturali favorevoli a stereotipi è cruciale per realizzare l'inclusione. Il presente contributo evidenzia il ruolo cruciale della Pedagogia della Differenza nell'educazione inclusiva e come l'uso della Lingua dei Segni Italiana (LIS) si rivela efficace nell'abbattere le barriere comunicative e promuovere l'integrazione, offrendo un approccio inclusivo che celebra la diversità.

KEYWORDS

Learning; Special pedagogy; academic achievement.
Apprendimento; Pedagogia speciale; successo scolastico.

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Introduction¹

Inclusive education is a cornerstone in the field of education, based on the fundamental principles of inclusion and integration. This pedagogical approach is intrinsically linked to the use of teaching strategies that promote cooperative and metacognitive learning, as well as the democratic management of the learning environment within the classroom. The organization of inclusive teaching is fundamental, which requires structural flexibility and the consequent adaptation of teaching strategies according to the specific needs of each context and group of students (Majoko, 2016).

Teachers, protagonists of this educational approach, must have a clear understanding of the educational objectives and the recipients involved in the choice to adopt inclusive teaching. Creating a welcoming school environment, where every pupil feels accepted, understood, and valued, is an essential prerequisite for the success of this methodology (Dean, & Chang, 2021). Inclusive teaching is not only for the benefit of students with disabilities, but extends to all students. One of the key aspects of this educational methodology is the enhancement of different learning styles, capitalizing on the specific skills and competencies of each student. In addition, it promotes the active participation of the whole class, going beyond the model of traditional lectures. By enhancing self-esteem and self-confidence, inclusive teaching fosters students' overall development by making learning engaging, interactive, and inherently motivating, thus keeping students' attention and interest high (Anglim, Prendeville, & Kinsella, 2018).

Another crucial aspect of this approach is creating opportunities for dialogue and collaboration among students. Communication, in this context, plays a fundamental role: it is not limited to a mere exchange of information, but also involves the ability to listen carefully and interpret both verbal and non-verbal language. This process of effective, empathetic, and inclusive communication allows students to develop meaningful social skills, improving the overall quality of education and contributing to the formation of individuals who are more aware and open to the world around them (Gunning, Breathnach, Holloway, McTiernan, & Malone, 2019).

Inclusive teaching represents an advanced educational perspective that requires significant commitment from teachers and education professionals. However, the potential of this approach to foster learning for all students, regardless of their differences, underscores the importance of actively pursuing inclusion in the educational context.

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The concept of inclusion is based on a vision that highlights the diversity and specialness of each individual, their needs and resources. It requires focusing not only on individual deficiencies, but also on functioning, skills, and the context in which a person is involved. To ensure that inclusion may be achievable, social, educational and school systems must embrace a process of profound change within their thought and action organizations. This change must allow access and participation for all people, regardless of their diversity (Russell, Scriney, & Smyth, 2023).

Special Pedagogy is called upon to identify and design individualized, personalized and differentiated training responses to meet the needs of all those involved. In order to achieve a complete and widespread degree of acceptance, it is imperative to overcome the paradigmatic events of which Morin (1977) spoke, which exert a considerable influence on thinking and behavior. These paradigmatic events refer to what Morin called the "great paradigm of disjunction," which represents a deeply ingrained cultural pattern that fosters and motivates superficial beliefs, cognitive stereotypes, and intellectual conformity. These elements contribute to shaping existence according to disjunctive patterns that limit understanding of the concept of difference and often lead to the marginalization of those who are considered different (Jury, Perrin, Desombre, & Rohmer, 2021). The elimination of such paradigms is essential to develop a real understanding of the concept of difference and to promote an inclusive perspective, in which the different is not excluded, but is valued. This involves acknowledging the autonomy and creativity of human thought, as well as creating a context in which everyone can reach their full potential.

1. Pedagogical Approach, Neurocognitive Development and Mental Disabilities

To fully understand students' skills, aptitudes, and functional development, it is essential to explore their cognitive, emotional, and social aspects. This allows to develop an increasingly inclusive pedagogical approach. Cognitive development encompasses the growth of higher functions such as memory, language, reasoning skills, planning, problem-solving, perception, and action. It is crucial as it allows students to process and adapt information from the external environment to meet their needs. Cognitive development is commonly divided into three main components: intelligence, memory, and language. Intelligence refers to the ability to solve problems, make decisions, and think logically. It involves the ability to connect events in a way that understands cause and effect, thus forming concepts that guide thinking and behavior (van der Heijden, Gill, & Sillitoe, 2021).

Memory is the basis of pupils' learning, but it should not be forgotten how selective it is and influenced by factors such as motivation, emotion and context. Language is the medium through which we express thoughts, emotions, and communicate with others. Linguistic theories include the idea that language ability

is innate, but also influenced by environment and learning. The process of cognitive development evolution is often described in terms of child growth stages, such as the sensorimotor period, preschool, school age, and adolescence (Tiede, & Walton, 2019). Each stage is characterized by new acquisitions and cognitive developments that influence the child's thinking and behavior. An important aspect of learning is the construction of meaning through interaction with the social and cultural environment. Students learn through experience, dialogue, and reflection, while social and cultural context plays a crucial role in shaping the learning process. This concept is supported by the theories of interactionism and constructivism. Understanding students' cognitive, emotional, and social development is crucial, therefore, to improve educational practices and promote inclusive learning (Guerrera et al., 2019).

However, the process of evolution of cognitive development in children can be delayed and difficult. Pathologies recognized by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) that fall into the category of disabilities defined as neurodevelopmental disorders, include intellectual disabilities, communication disorders, autism spectrum disorders, attention deficit hyperactivity disorder (ADHD), specific learning disorder, movement disorder, tic disorder and other conditions related to neurodevelopment.

These disorders, known as intellectual disabilities, are characterized by a delay in intellectual development and often manifest themselves in childhood, thus affecting the child's ability to solve problems, plan, make judgments and learn. It is important to note that learning goes beyond the school context and involves the practical application of knowledge in everyday life (Al Banna, Ghosh, Taher, Kaiser, & Mahmud, 2020). To be classified as an intellectual disability, the condition must emerge during the developmental period before the individual reaches cognitive maturity. If a reduction in cognitive abilities occurs in adulthood, due to traumatic events, it cannot be considered a neurodevelopmental disability, as the period of cognitive development has already passed. Each level of severity of neurodevelopmental disorders has specific characteristics, which include a tendency to rigidity of thought, difficulty in abstraction, slowness in processing information, and perseverance in behavior. Therefore, there is a need for educators to adopt targeted pedagogical strategies to help students with special needs develop their potential. These strategies should include accurately assessing their level of cognitive development, encouraging metacognition, focusing on positive reinforcement, and promoting self-control in task execution (Thurm, Farmer, Salzman, Lord, & Bishop, 2019). Among the neurodevelopmental disorders, communication disorders have a major influence on the child's life as these include language disorder, phonetic-phonological disorder, social communication disorder. These disorders affect the acquisition and use of different language modalities, including spoken, written, and gestural language. Therefore, they do not only affect verbal communication but also influence the child's social participation. For

example, phonetic-phonological disorder involves difficulty in producing speech sounds, fluency disorder involves language fluency, and social communication disorder focuses on the inability to interact socially and communicatively with others (Falck-Ytter, Kleberg, Portugal, & Thorup, 2023).

In the context of neurodevelopmental disorders, it is essential to remember the Autism Spectrum Disorder. It represents a broad category that encompasses a wide range of specific features that lead to a diagnosis in this spectrum. The facets of this disorder can affect several aspects, including the deficit in social-emotional reciprocity, nonverbal communicative behaviors, and relationship management. Autism spectrum disorder is a condition characterized by considerable heterogeneity in symptoms and clinical manifestations. This heterogeneity is due to the singularity of the pathology, which very frequently leads to serious and complex problems in social relationships, communication, behavior and, above all, in the understanding of the surrounding reality. Individuals with this condition face the challenge of learning what others usually acquire spontaneously and naturally, such as language and other forms of communication, ways to establish interpersonal relationships, the use of objects, and understanding situations (Uddin, 2021). This challenge places them in a condition of strong or total inadequacy to live in their own contexts without adequate support. As a result, people with autism spectrum syndrome require constant and personalized support throughout their lives, which includes therapeutic interventions, individualized educational support, social and work integration programs, as well as, in adulthood, forms of monitored integration.

The variability of manifestations of the disorder has led to the term "autism spectrum" being considered more appropriate rather than "autism" as it recognizes the wide range of symptoms and nuances that may be present within this condition (Demetriou, DeMayo, & Guastella, 2019). In fact, it is a very complex disorder, which manifests itself in different ways from individual to individual. This difficulty of definition and classification underlines its inhomogeneity and the extreme individual variability through which it manifests itself. Contrary to an obsolete view that limited itself to identifying this disorder as a simple emotional closure due to an inadequate affective environment, today it is clear that it falls within the neurodevelopmental disorders as it alters the relational skills of subjects already in the very first months and years of life (Hyman et al., 2020). This condition involves severe impairment of language communication and relational intentions, but often leaves visual abilities intact or even enhances. Although the link between these visual abilities and autism requires further investigation, many educational initiatives successfully leverage this particular resource to foster learning and improvement of the social-cognitive skills of people with autism spectrum disorder.

2. A new look at language and communication in Autism Spectrum Disorders

Communication within the context of autism spectrum syndrome is a crucial aspect, and our understanding of it has changed dramatically in recent years. Children with autism spectrum syndrome, like any other person, feel the urge to express themselves and interact with the world around them. The difference lies in each individual's preferred modes of communication and abilities (Baird, & Norbury, 2016). Often, children with autism spectrum disorder may experience stress and discomfort when trying to communicate through verbal language or direct eye gaze, precisely because these modalities may be overly intense or perceived as invasive. Hence the importance of teaching alternative communication techniques, such as Sign Language (LS), to allow them to express themselves in more comfortable and appropriate ways (Skalny et al., 2017).

A key aspect to consider in the context of autism spectrum syndrome is the distinction between verbal and nonverbal autism. In the first case, although there are considerable difficulties, children are still able to express emotions, feelings, desires and needs through language. In the second case, children cannot communicate verbally at all but may use other forms of expression, such as gestures, eye contact, body movement, or general behavior. There are extreme cases in which children demonstrate total apathy towards their surroundings and people. The distinction between verbal and nonverbal autism, however, is not always so easy. To address these challenges, a gradual, highly personalized intervention that considers the specific individual difficulties and needs of each child is essential (Brignell et al., 2018). The main goal of this initial stage is to establish the child's level of understanding, considering their skills and abilities. Creating a safe and comfortable environment is critical, as children with autism spectrum disorders respond better when they feel safe. In the context of autism spectrum disorders, where verbal communication can be a significant challenge for many children, the use of Sign Language (LS) emerges as a valuable and promising resource. In recent years, data provided by autism associations reveal a steady increase in the number of children with verbal communication disorders, adding an additional layer of difficulties in managing the lives of these children. Lack of verbal communication skills prevents these children from establishing meaningful relationships with the outside world, including teachers, educators, and schoolmates (Chesnut, Wei, Barnard-Brak, & Richman, 2017). This leads to a sort of chain reaction that generates frustration, anguish, loneliness in children, and a sense of helplessness and uselessness for those who care for them. Scientific research has begun to consider visual thinking as the main method of information processing in people with autism spectrum disorders. This explains the success of educational approaches that take advantage of this aspect. In particular, the use of LS has proven to be particularly effective as it does not replace verbal language but complements it, helping to complete, expand and enhance verbal communication. The use of LS is distinguished by three different advantages (Tager-Flusberg, 2016): (i) Immediacy and speed of use, as it allows children to express themselves clearly

and immediately through simple signs, saving time compared to the use of boards with images or other more complex shapes; (ii) Generalizability, since once learned, it can be used in any situation and context, providing effective communication continuously; (iii) Involvement of brain areas, as the use of LS involves the same brain areas used for verbal language, thus suggesting how its learning can improve language ability over time. The teaching of LS to children with autism spectrum disorders follows a gradual process that involves initially associating images and signs, then matching the vocal production of the word to associate an image with a sign while pronouncing the corresponding word aloud. Finally, the child physically receives the associated object, reinforcing through sensory perception, the link between sound, sign and reality.

In cases where the autistic syndrome is less severe and the child is able to read and write, a more direct approach can be taken, teaching the alphabet and the signs associated with words. This bimodal approach, combining verbal language with LS, has been shown to be highly effective in helping autistic children develop language and communication skills, while also promoting greater social interaction (Friedman, & Sterling, 2019). The use of LS, therefore, emerges as a valuable tool in the education of autistic children, helping to overcome communication and social barriers and improving their quality of life. Its application can facilitate the achievement of linguistic and communicative goals, promoting greater mutual understanding between autistic children and the world around them.

3. Interventions to improve and facilitate communication in Autism Spectrum Disorders

The application of the bimodal method on the three symptomatological categories of neurodevelopmental disorders (social isolation with qualitative abnormalities in social interaction; communication and language difficulties; limitation of the repertoire of activities and interests with the presence of stereotyped behaviors), has shown a significant reduction in the distance between what a child thinks and express, as well as improving understanding of instructions and information (Kalandadze, Norbury, Nærland, & Næss, 2018). LS has been crucial in the construction of an increasingly meaningful world for children suffering from neurodevelopmental disorders and, moreover, it promises to be a valid tool for other pathologies that involve impairments in the communicative faculty, both at an expressive and receptive level. However, we cannot overlook the fact that, despite progress, there are risks associated with the specialist approach. Specialized schools, while playing an important role in the process of inclusion, are in danger of reviving the problem of ghettoization, a situation from which they have made a commitment to move away. Therefore, it is essential to adopt a pedagogical approach based on the Pedagogy of Difference. This approach highlights the importance of valuing individual diversity in education, recognizing that everyone is unique and deserves respect and acceptance for their differences. The main

purpose is to promote an inclusive, intercultural, and personalized learning environment, where diversity is considered an opportunity for growth and enrichment (Boucher, & Anns, 2018). The numerous trials of teaching LS to children, both deaf and hearing, have demonstrated the potential of this approach, highlighting the benefits of LS learning, not only in terms of school inclusion of deaf children but also in raising awareness of a different culture. Thus, it is important to follow these successful models and provide children with special needs with a targeted and attentive education, but without ever taking them away from the shared learning environment. This approach avoids both welfarism and forced normalization, recognizing that every individual, regardless of their specificities, deserves to feel part of an inclusive community (Bellucci, 2022). The school must offer a shared and welcoming context, in which everyone can express themselves freely and find their own identity, without feeling like a minority. Ultimately, promoting inclusion and valuing diversity requires a cultural and pedagogical change. LS is one of the ways which allows to achieve these goals by providing meaningful learning opportunities for all students, regardless of their hearing ability. Diversity is a resource to be celebrated, a springboard for personal growth and integration within the educational community.

4. Inclusive Teaching and Deaf Children: An Integrated Approach

In the context of inclusive teaching in presence of deaf children, the concepts of inclusion and integration are at the heart of an educational approach that emphasizes cooperative, metacognitive learning and democratic classroom management. This teaching methodology requires a flexible organization, which allows the adaptation of teaching strategies according to the specific needs of deaf children. Teachers need to have a clear understanding of their goals and target audience in order to create a school environment where every pupil feels accepted, understood, and valued. Only in this way can inclusive teaching truly benefit all students (Sorbo et al., 2022). One of the distinguishing features of this methodology is its focus on identifying and enhancing the unique learning styles of deaf children, leveraging their abilities and strengths. In addition, it promotes the interaction and active participation of the whole class, going beyond the traditional approach of lectures. Inclusive teaching also helps to develop pupils' self-esteem, confidence in their own abilities and keeps their motivation high, making learning engaging and interactive. It also creates opportunities for dialogue and collaboration among students (Perrone, & Gigante, 2019).

In the context of teaching deaf children, it is crucial to recognize the importance of communication. Communicating with a deaf child requires a knowledge of sign language and the use of communication tools that take into account the specific needs of each pupil. The exclusive use of lip-reading can involve

considerable effort on the part of the deaf child, due to the challenges related to coarticulation and visual confounding factors.

To ensure effective communication, it is essential to consider the use of sign languages. Bilingual education for deaf children is widely recognized as an appropriate method to promote their social integration. Sign languages allow deaf children to develop language and thinking spontaneously, while the use of spoken languages helps them interact with hearing people (Parsons, Cordier, Munro, Joosten, & Speyer, 2017).

It is important to note that sign languages are complete and complex languages, with their own grammar and syntax. They should not be confused with the gestures used by hearing people during everyday conversations. Each sign language is a unique communication system, developed by the deaf community to meet their needs. The use of sign languages becomes fundamental in the education of deaf children, since these languages allow them to express a wide range of concepts, both concrete and abstract. However, despite the recognition of sign languages as real languages, they are still little used in the education of deaf and hearing children. This may be due to the poor language skills of parents of deaf children, the lack of awareness of their importance and the lack of language skills of support teachers. To foster the use of sign languages and ensure the integration and interaction of deaf children in the hearing community, it is necessary to promote greater awareness among teachers, parents, and specialists (Bedford, Pickles, & Lord, 2016).

In the presence of deaf children, recognizing the hearing impairment as an educational resource and not as an obstacle is the first step. Teachers should consider each pupil's personal history, including early stages of diagnosis, prosthetics, speech therapy and parental cooperation. A stimulating and diverse school environment, in which various communication tools are used, can contribute significantly to the integration of deaf children.

Ultimately, to ensure effective inclusive teaching for deaf children, it is essential to recognize the importance of sign languages, foster an inclusive school environment, and develop a deeper understanding of each pupil's specific needs. Only through an integrated and conscious approach it is possible to guarantee quality learning and a positive educational experience for all students. Therefore, if teaching is to respond to the needs of the deaf pupil, it must start from recognizing the "hearing impairment [...] an authentic 'educational resource', a generator of culture" (Gaspari, 2005). The deaf person must be put in a position to understand what is happening around him, it is necessary to offer him the opportunity to participate in the dynamics of the entire social and cultural community, recognizing the full value of his identity, because inclusion is not a process that concerns only students with disabilities, but it is a global process that involves everyone. In the school career of a deaf child, teachers should always consider that the personal history of the pupil is of great importance. The difficulties will be less if there has

been a diagnosis of early deafness, timely prosthetics, valid and continuous speech therapy and the constant and intelligent collaboration of the parents (St. Amant, Schrager, Peña-Ricardo, Williams, & Vanderbilt, 2018). It is important to create a classroom environment in which communication is stimulating and animated, alternating various communicative tools that the teacher has at his disposal, from verbal to written language, from sign language to exact marked Italian, typing or lip-reading. The use of various tools within the classroom context can also lead to excellent results in integrating the child with the support of the autonomy and communication assistant.

5. Bilingual Education: The Italian Sign Language Laboratory

In the context of inclusive teaching, it is essential to ensure a school environment in which every pupil, regardless of their hearing abilities, can feel an integral part of a learning community. Promoting the integration of deaf pupils plays a crucial role in this perspective (Shield, Pyers, Martin, & Tager-Flusberg, 2016). An educational activity designed to promote the integration of deaf children into the classroom is presented, using the Italian Sign Language Laboratory (LIS) as a learning tool. The LIS Laboratory is a key element in promoting the integration of deaf children within the school environment. This activity is based on a collaborative learning approach, where hearing children and the deaf child can work together to develop language and social skills. The didactic units within the laboratory focus on exclusive communication through signs, promoting several fundamental aspects (Pezzuoli, Tafaro, Pane, Corona, & Corradini, 2020):

1. Learning LIS. In the laboratory, children learn to sign or improve their sign skills. This process not only allows non-deaf children to communicate more effectively with the deaf child, but also strengthens their understanding of sign language as a full-fledged language.
2. Improved non-verbal communication. Students gain greater confidence in communicative expression through the body, developing the ability to use body language effectively to communicate clear and understandable messages.
3. Development of interpersonal skills. The laboratory promotes the ability to relate and interact with others. Students learn the importance of communication and collaboration, encouraging the building of meaningful relationships within the classroom.
4. Visibility of deafness. The laboratory helps to make deafness more visible within the classroom. This not only sensitizes classmates to the reality of the deaf child, but also helps to eliminate stereotypes and prejudices.
5. Improvement of the LIS of the deaf pupil. The deaf child benefits from the laboratory through interaction with hearing peers and contributing to the overall improvement of competence in LIS.

The LIS laboratory is a training experience based on the playful dimension of theatre, designed to develop a competence in non-verbal language in participants. Through the theatrical experience, participants will have the opportunity to explore the communicative code that arises from body language, learning to conceive of the body as a privileged tool of communication. This laboratory is aimed at enhancing the spontaneous expressiveness of participants, especially children, and at parallel introducing LIS as a structured language that can serve as a bridge to communicate with those who have difficulties in verbal communication (Girli, & Dogmaz, 2018). The specific goal is to develop in children a visual approach to communication, in which communication is seen as a relational game. This approach intends to stimulate the relationship by encouraging interaction between students, including those with different communication skills. Thereby, it is possible to promote the playful approach by transforming the problematic nature of communicative discomfort into a different skill, creating play and learning situations that emphasize communication in new and creative ways. In addition, the laboratory offers an opportunity to cultivate a sense of group by promoting a sense of belonging and solidarity within the class group. Therefore, the educational objectives of such a form of inclusive teaching include the development of physical self-perception by teaching participants to perceive their body as a primary tool for relationship and communication. The creation of a shared communicative alphabet, working with the class group to develop a shared non-verbal language that facilitates communication with children who have language disorders, allows to overcome social isolation (Denmark, Atkinson, Campbell, & Swettenham, 2019). In addition, metaphorization through theatre, using theatre as a tool to explore and share emotional conditions and moods, offers participants the opportunity to express these concepts in the protected dimension of the laboratory. Finally, the transformation into creative material allows participants to turn their workshop experiences into creative materials and communicate them to the rest of the school or parents. This sharing process expands the communicative experience outside of the classroom group. The laboratory is adapted to the specific needs of the class group and participants. The methodology of educational theatre involves a participatory approach in which the objectives and contents of the training experiences are agreed with the participants themselves, following the methodology of the research (Shield, Knapke, Henry, Srinivasan, & Bhat, 2017).

The laboratory is developed in two main phases. Phase 1 involves the exploration of bodily expressiveness: participants are encouraged to explore their instinctive expressiveness, proposing stories through body language. During this phase, no verbal communication is allowed, promoting the use of common tools for all participants. Phase 2, on the other hand, is the learning phase of LIS: participants learn the signs of LIS and insert them into a reference story based on themes chosen by the class itself. This phase translates written parts into marked actions (Bressan, 2022).

For teachers, educators and assistants who work with children and young people who are hearing impaired or with verbal expression and neurodevelopmental disorders, the laboratory offers an intensive training tool. It provides the opportunity to experiment and learn the forms of non-verbal communication, the strategies to promote them and the ways of observing body language. It aims to equip those who work in the school with the necessary tools to manage communication with children and youth with communication difficulties, offering an inclusive and creative approach to facilitate sign-gestural communication. The LIS laboratory represents a crucial educational activity to promote the integration of deaf children or those with communication difficulties within the school environment (Cardinaletti, & Mantovan 2022). Through collaborative work and sign language learning, both hearing and deaf children can enrich their language and social skills. In this way, the classroom becomes an inclusive community where all students can learn together. The main objective of this approach is to enable each child to feel the world with their eyes, thus contributing to special education adapted to the needs of deaf learners.

Conclusions

The use of LS can improve children's language and cognitive skills. It supports memorization and activates brain areas not involved in verbal language, thus increasing children's brain activity. This multimodal approach, combining the visual and gestural input of LS with oral language, offers a broader spectrum of sensory stimuli, which is essential for learning. In the context of special education and didactics, LS is highly inclusive and adapted to meet the individual needs of students. Learning styles vary from individual to individual, and LS offers a flexible mode of communication that takes these differences into account.

In conclusion, LS not only provides an alternative channel of communication to those with language impairments, but it also promotes inclusion, respect for diversity, and building a community that welcomes and celebrates differences. The education and rehabilitation of deaf children and those with communication disabilities requires early intervention, the collaboration of families, and a vision that recognizes the importance of diversity in building an inclusive society that is open to all. Only through the acceptance of diversity and respect for differences it is possible to build a universal culture based on encounter, dialogue and coexistence.

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