

**EXPLORING THE COGNITIVE UNIVERSES
OF CHILDREN WITH SPECIAL EDUCATIONAL NEEDS:
PERCEPTION, UNDERSTANDING, AND DIDACTIC IMPLICATIONS**

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Abstract. This article examines the unique perspectives of children with special educational needs (SEN) and their potential to positively shape both educational experiences and social interactions. Moving beyond a deficit-focused approach, the study emphasizes the cognitive and emotional strengths of these children, highlighting how they perceive and engage with their environment. The perceptual characteristics of children with autism spectrum disorders, ADHD, and sensory impairments are discussed, along with their influence on the development of empathy, patience, and creativity among their peers. The article also presents practical teaching strategies, such as personalized storytelling, sensory-based activities, and individualized projects, which leverage these differences to transform cognitive diversity into a valuable educational resource. The findings suggest that recognizing and actively incorporating these cognitive differences not only supports children with SEN but also enriches the entire learning community, fostering an inclusive, creative, and empathetic environment.

Keywords: children with SEN, perception, inclusion, cognitive diversity, empathy, teaching strategies, creativity.

**EXPLORAREA UNIVERSURILOR COGNITIVE
ALE COPIILOR CU CERINȚE EDUCAȚIONALĂ SPECIALE:
PERCEPȚIE, ÎNȚELEGERE ȘI IMPLICAȚII DIDACTICE**

Rezumat. Acest articol examinează perspectivele unice ale copiilor cu nevoi educaționale speciale (CES) și potențialul lor de a modela în mod pozitiv atât experiențele educaționale, cât și interacțiunile sociale. Depășind abordarea centrată pe deficite, studiul subliniază punctele forte cognitive și emoționale ale acestor copii, evidențiind modul în care aceștia percep și interacționează cu mediul înconjurător. Sunt discutate caracteristicile perceptive ale copiilor cu tulburări din spectrul autist, ADHD și deficiențe senzoriale, împreună cu influența acestora asupra dezvoltării empatiei, răbdării și creativității în rândul colegilor lor. Articolul prezintă, de asemenea, strategii practice de predare, cum ar fi povestirea personalizată, activități bazate pe simțuri și proiecte individualizate, care valorifică aceste diferențe pentru a transforma diversitatea cognitivă într-o resursă educațională valoroasă. Concluziile sugerează că recunoașterea și incorporarea activă a acestor diferențe cognitive nu numai că sprijină copiii cu CES, ci și îmbogățește întreaga comunitate de învățare, favorizând un mediu incluziv, creativ și empatic.

Cuvinte-cheie: copii cu CES, percepție, incluziune, diversitate cognitivă, empatie, strategii de predare, creativitate.

Introduction

Children with special educational needs (SEN) constitute highly diverse and multifaceted segment of the school population. Traditionally, special education has focused primarily on addressing deficits or aligning students with standardized learning

expectations [2]. While this approach has helped identify individual needs and implement targeted interventions, it often overlooks the richness of each child's subjective experience. Every child with SEN engages with the world in a distinct way, and these unique perspectives can serve as meaningful cognitive and emotional resources for the classroom as a whole [4].

This article adopts a perspective that shifts attention from deficits to strengths and resources. By recognizing that each child processes information and interprets their environment in a unique manner, we explore how these differences can positively impact learning, social interactions, and the development of socio-emotional skills [1]. In inclusive education, understanding the challenges faced by children with SEN is important, but equally crucial is recognizing their cognitive, creative, and social potential. Research shows that these children can act as catalysts for growth within the classroom, fostering empathy, patience, and critical thinking among their peers [3]. Instead of viewing differences as limitations, they can be approached as valuable pedagogical resources that inform curriculum design and personalized interventions.

Additionally, specialized literature highlights that the subjective experiences of children with SEN can provide novel insights into learning processes, peer interactions, and even teachers' instructional strategies [4]. By examining these perspectives, we gain a multidimensional understanding of the classroom environment, one that emphasizes both the cognitive assets of children with SEN, as well as the strategies educators can use to harness these strengths to promote inclusion and improve overall educational outcomes.

The main objective of this article therefore, is to reconceptualize the relationship between difference and learning. Inclusivity is not merely about integration; it also involves valuing the distinctive ways each child perceives and engages with their surroundings. From this vantage point emerges an innovative and empathetic vision of education, one that places the unique experiences of all students at the center of pedagogical practice.

The perceptual universe of children with SEN

The perspectives of children with special educational needs (SEN) often differs from that of neurotypical children and can, in many cases, be considerably more complex. This difference manifests at sensory, cognitive, and emotional levels, offering alternative perspectives on the world.

- *Children with Autism Spectrum Disorder (ASD)*: they may notice details insignificant to others, which enables them to construct highly accurate interpretations of their environment. This heightened attention to detail can lead to exceptional performance in tasks requiring visual or logical analysis [3]. However,

difficulties in interpreting emotions and social contexts can generate challenges in peer interactions.

- *Children with ADHD*: they display fluctuating attention, yet in domains that capture their interest, they may achieve intense focus, developing divergent thinking and the ability to generate creative solutions to complex problems [2]. This selective attention can serve as an advantage in creative projects and interdisciplinary activities.
- *Children with sensory impairments (hearing or visual)*: they often develop compensatory mechanisms that allow them to perceive and understand the world in unusual ways, such as heightened sensitivity to vibrations, smells, or textures [1].

Case Study: In an inclusive classroom, a child with ASD created a detailed visual map of a lesson on ecosystems, illustrating connections between plants and animals that the teacher had not anticipated. This map was later used as a learning resource for the entire class, demonstrating the value of a different perspective [4].

Perceptual differences, when acknowledged and valued by educators, can turn into genuine cognitive resources. Understanding these variations allows teachers to design adaptive strategies in which participation becomes a collective process, and every child has the chance to play an active role in learning.

Children with SEN as teachers for their peers

The inclusion of children with special educational needs (SEN) mutual benefits: it supports the personal growth of these children and enriches the learning experiences of their classmates. When peers interact with children who perceive and interpret the world differently, they gradually develop empathy, patience, and flexibility in thinking qualities that extend beyond the classroom and into daily life [3].

Practical illustrations include:

- Children with ASD often encourage classmates to pay closer attention to small details and to develop skills of sustained concentration.
- Those with ADHD can introduce energy and spontaneity into group work, which sometimes leads to creative or unexpected solutions.
- Students with sensory impairments remind their peers of the importance of clear communication and attentiveness to individual needs.

Case example: In a third-grade class, the presence of a child with a hearing impairment encouraged the group to explore alternative communication methods such as pictograms and gestures. Over time, projects became more collaborative and creative, and cooperation among students intensified [1].

Through such experiences, children with SEN act not only as learners but also as contributors to the social and cognitive development of their peers. Their value extends beyond personal achievements, influencing the classroom culture as a whole.

Teaching Strategies Inspired by the Perspectives of Children with SEN

When teachers are willing to see beyond a deficit-oriented view, the perceptual and cognitive differences of children with SEN can become powerful tools for the entire learning community. Adaptive and multimodal strategies enable these differences to be transformed into opportunities for developing both cognitive skills and socio-emotional competences [4,5].

Personalized storytelling and narrative

Storytelling tailored to the needs of individual children is an effective way to integrate unique perceptual styles into learning. For example, children with ASD or ADHD may prefer to express their experiences visually, through drawings, comics, or digital presentations [4, 7].

Illustrative case: A child with ASD who found verbal communication difficult created a sequence of drawings to represent emotions experienced during a school trip. The teacher used these drawings as a starting point for classroom discussions on identifying and managing emotions [1].

Benefits of this approach include:

- fostering empathy among peers,
- creating opportunities for children with SEN to participate actively,
- stimulating creative and nonverbal expression [1, 2, 5].

Sensory games and multimodal activities

Children with SEN, particularly those with sensory impairments or ASD, learn best through concrete experiences and the involvement of multiple senses. Multimodal activities enable the child to explore the environment in a practical way and to express their unique perspective [3, 6].

Examples of Activities:

- Creating tactile models of objects or concepts from lessons (tactile maps, 3D models).
- Combined auditory and visual games for children with mixed sensory impairments.
- Sensory experiments that combine textures, sounds, and colors to represent abstract concepts [7].

Case Study: In an inclusive classroom, a child with visual impairment created a tactile model of an ecosystem, which was later used to explain plant-animal relationships to the entire class. This initiative stimulated collaboration and empathy among students [3, 4].

Activities engaging multiple senses (visual, auditory, tactile) allow children with sensory impairments to explore the world while contributing to the practical learning of their peers. For example, a child with visual impairment may create a tactile model of an object or phenomenon, which helps the whole class to better understand the concept [1].

Individualized and personalized projects

Individualized projects allow each child to capitalize on their strengths and personal interests. Such projects transform cognitive differences into resources for the entire class [2, 5].

Practical Example: A child with ASD, passionate about astronomy, created a detailed visual presentation of the solar system, including logical connections and complex diagrams. The teacher used this presentation to explain abstract concepts such as gravity and planetary motion to the class [2].

Advantages:

- Creates an inclusive environment in which every child contributes to collective learning.
- Enables neurotypical students to learn through alternative perspectives.
- Fosters critical and creative thinking across the whole class [6, 7].

Adapting tasks to a child's interests and abilities makes it possible to harness their strengths. For example, a child with ASD may create a complex visual presentation on a topic of personal interest, facilitating comprehension for the entire class [2].

The teacher's role: facilitator and adaptive guide

The teacher plays a crucial role in leveraging the differences of children with SEN. Rather than focusing on deficit remediation, the teacher becomes a facilitator, observer, and adaptive guide, creating opportunities in which the child actively contributes to the educational process [4, 2].

Recommended Practices:

- Careful observation of how each child perceives and interacts with instructional material.
- Adapting activities and resources to the child's individual learning style [5].
- Encouraging collaboration among students so that unique perspectives become resources for all [3].

Impact: Transforming differences into educational resources contributes to a more inclusive, empathetic, and creative classroom, preparing students for a diverse and collaborative society [6].

Practical Recommendations

- Regular integration of multimodal activities into the curriculum [4].
- Creation of nonverbal expression spaces (visual, tactile, or auditory corners) [7].

- Individual and collaborative projects that valorize the talents and interests of children with SEN [2].
- Continuous professional development for teachers is essential to deepen their understanding of cognitive diversity and to learn how to effectively utilize it in the classroom [5, 6].

Lessons for general education and society

Viewing the classroom through the perspectives of children with special educational needs SEN provides valuable lessons not only for schools but also for society at large. The integration and appreciation of cognitive differences stimulate creativity, critical thinking, and empathy among all students [3].

- *Critical thinking and creativity:* Cognitive diversity generates innovative solutions and unexpected approaches to problem-solving. For instance, a child with ADHD may propose alternative ideas for a group project, enabling peers to learn how to analyze situations from multiple perspectives [2].
- *Empathy and genuine inclusion:* Children learn to understand the needs of others and to communicate more effectively. Interaction with peers with sensory impairments, ADHD, or ASD develops complex social skills and a deeper sensitivity to diversity [1].
- *Adaptive educational policies:* Research findings show that programs which leverage the unique perspectives. The involvement of children with SEN contributes not only to improved academic outcomes but also to stronger social cohesion within the classroom. Schools that implement these approaches succeed in creating inclusive, stimulating, and collaborative learning environments [4].

Concrete example: In a pilot school in Romania, the introduction of sensory-based learning activities and individualized projects for children with SEN led to increased engagement, participation, and collaboration among all students led to noticeable improvements in participation and engagement, led to higher levels of cooperation among students and improved outcomes in interdisciplinary projects. These activities were appreciated not only by children but also by teachers and parents, demonstrating the value of active inclusion [3].

Therefore, the main lesson for general education and for society is that valuing cognitive differences not only supports children with SEN but also strengthens the entire educational community, fostering more empathetic, creative, and responsible citizens.

Conclusions

The analysis presented in this article indicates that children with special educational needs (SEN) are not merely beneficiaries of educational interventions but also active

agents capable of transforming classroom dynamics and the entire educational process. Their unique perspective on the world brings multiple cognitive, social, and emotional advantages which, if properly valued, can enrich the learning experience of the whole school community [4, 1].

- *Valuing cognitive differences* – Differences in perception, attention, and information processing should not be viewed solely as deficits but as educational resources. Personalized storytelling, individualized projects, and multimodal activities enable these differences to be transformed into learning tools for the entire class [2,5].
- *Impact on socio-emotional development* – Interaction with peers with SEN fosters empathy, patience, and cooperation among neurotypical students, promoting an inclusive and harmonious environment. Inclusive classrooms thus become laboratories of social and emotional competences, beneficial not only in school but also in community life [3,6].
- *The strategic role of the teacher* – The teacher is no longer merely a transmitter of knowledge but a facilitator, guide, and careful observer. By adapting activities to each child's individual learning style, the teacher transforms diversity into a resource and optimizes the educational process for the entire class [4,7].
- *Innovation and creativity in education* – Children with SEN stimulate divergent and creative thinking, both among peers and teachers. Examples of visual, tactile, or multimodal projects demonstrate that inclusion can serve as a generative factor for innovative ideas and adaptive solutions in education [1,2].
- *Relevance for educational policy* – The strategies presented in this article offer applicable models at the level of educational policy by promoting genuine inclusion, continuous teacher training, and curriculum adaptation to the needs of every student. In this way, not only children with SEN benefit, but the entire school community becomes more innovative and empathetic [5,6].

Active inclusion and the valorization of cognitive differences transform the school into a space of holistic development, where diversity becomes a resource and every child, regardless of SEN, contributes to collective success. This approach strengthens not only cognitive and creative competences but also socio-emotional skills, preparing students for a complex and diverse society. Its effective implementation can reshape education into a more empathetic, creative, and inclusive process, thus equipping students for a more open and collaborative society.

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