

Psychopedagogical strategies for the educational inclusion of students with attention deficit hyperactivity disorder

Estrategias psicopedagógicas para la inclusión educativa de estudiantes con trastorno por déficit de atención e hiperactividad

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Cite as: Velez Aguirre JA, Vigoa Escobedo Y. Psychopedagogical strategies for the educational inclusion of students with attention deficit hyperactivity disorder. *Neurodivergences*. 2026; 5:297. <https://doi.org/10.56294/neuro2026297>

Submitted: 28-07-2025

Revised: 17-09-2025

Accepted: 07-11-2025

Published: 01-01-2026

ABSTRACT

Introduction: the inclusive education paradigm postulates that all students, regardless of their personal or social circumstances, have the right to access quality education under equal conditions.

Objective: to characterize psychopedagogical strategies for the educational inclusion of students with attention-deficit/hyperactivity disorder.

Method: a literature review was conducted in the PubMed, Scopus, Web of Science, and Google Scholar databases between January 2018 and December 2023. Qualitative and quantitative studies and systematic reviews addressing psychopedagogical interventions for ADHD in inclusive school settings were included. A total of 15 references were selected that addressed different characteristics related to the topic in question.

Results: multicomponent strategies, which integrate curricular adaptations, positive reinforcement, multisensory teaching, family-school collaboration, and the use of assistive technologies, are the most effective, as they act simultaneously on the environment, instruction, and the student. The design of effective psychopedagogical strategies for ADHD is based on solid theoretical frameworks that explain the core difficulties of the disorder and propose support mechanisms. The main obstacle is not a lack of knowledge but rather the widespread and systemic implementation of these practices.

Conclusion: evidence-based psychopedagogical strategies are crucial for the effective inclusion of students with ADHD. Their success depends on a systemic approach that involves teachers, families, and specialists, as well as educational policies that prioritize teacher training and the provision of adaptive resources.

Keywords: Inclusive Education; Psychopedagogical Strategies; ADHD; Curriculum Adaptation; Educational Intervention.

RESUMEN

Introducción: el paradigma de la educación inclusiva postula que todos los estudiantes, independientemente de sus condiciones personales o sociales, tienen derecho a acceder a una educación de calidad en igualdad de condiciones.

Objetivo: caracterizar estrategias psicopedagógicas para la inclusión educativa de estudiantes con trastorno por déficit de atención e hiperactividad.

Método: se realizó una revisión de la literatura en las bases de datos PubMed, Scopus, Web of Science y Google Scholar, entre enero de 2018 y diciembre de 2023. Se incluyeron estudios cualitativos, cuantitativos y revisiones sistemáticas que abordaran intervenciones psicopedagógicas para TDAH en entornos escolares inclusivos. Se seleccionaron un total de 15 referencias que abordaban diferentes características relacionadas con el tema en cuestión.

Resultados: las estrategias multicomponente, que integran adaptaciones curriculares, refuerzo positivo, enseñanza multisensorial, colaboración familia-escuela y uso de tecnologías de apoyo, son las más efectivas, ya que actúan simultáneamente sobre el entorno, la instrucción y el estudiante. El diseño de estrategias psicopedagógicas efectivas para el TDAH se sustenta en marcos teóricos sólidos que explican las dificultades centrales del trastorno y proponen mecanismos de apoyo. El principal obstáculo no es la falta de conocimiento sino la implementación generalizada y sistémica de estas prácticas.

Conclusión: las estrategias psicopedagógicas basadas en evidencia son cruciales para la inclusión efectiva de estudiantes con TDAH. Su éxito depende de un enfoque sistémico que involucre a docentes, familias y especialistas, así como de políticas educativas que prioricen la capacitación docente y la dotación de recursos adaptativos.

Palabras clave: Educación Inclusiva; Estrategias Psicopedagógicas; TDAH; Adaptación Curricular; Intervención Educativa.

INTRODUCTION

Educational inclusion is defined as the process of identifying and removing barriers that prevent all students, regardless of their abilities or disabilities, from fully participating in and achieving academic performance. Educational inclusion is crucial to ensure that all students have equal access to quality education. The Theory of Inclusive Education proposes that all students should be educated in inclusive environments where their individual differences are respected and valued.⁽¹⁾

Basic education in Ecuador plays a crucial role in the comprehensive development of society, laying the foundations for individual and collective progress. In this context, teacher training emerges as a fundamental pillar for ensuring the quality and effectiveness of the education system.⁽²⁾

Attention-deficit hyperactivity disorder (ADHD) is one of the most prevalent neurodevelopmental disorders in children worldwide. According to estimates by the World Health Organization (WHO), it affects approximately 5,3 % of children and adolescents globally, which translates to more than 76 million school-aged individuals.⁽³⁾

This condition, characterized by a persistent pattern of inattention, hyperactivity, and impulsivity, significantly impacts multiple domains of child functioning, with particularly critical consequences in the academic and psychosocial spheres. It is estimated that between 30 % and 50 % of children with ADHD experience severe academic difficulties, including high rates of grade repetition and early school leaving, compared to their neurotypical peers.⁽⁴⁾

The inclusive education paradigm, promoted by international organizations such as UNESCO, posits that all students, regardless of their personal or social circumstances, have the right to access quality education on equal terms. However, the transition from a model of integration to one of genuine inclusion for students with ADHD faces substantial obstacles. These challenges are exacerbated in resource-limited contexts, where a lack of teacher training, a shortage of adapted materials, and insufficient coordination between health and education systems conspire against the realization of this right.⁽⁵⁾

Personalized psycho-pedagogical strategies are effective in improving the academic performance and behavior of students with ADHD. These strategies include the use of curricular adaptations, behavioral management techniques, and the implementation of psycho-pedagogical interventions. In addition, recent literature highlights the importance of a collaborative approach involving teachers, parents, and health professionals to ensure continuous and cohesive support.⁽⁶⁾

In the specific context of Ecuador, the prevalence of ADHD in the school population is estimated at between 5 % and 6 %, figures in line with the global average. Despite regulatory advances, the practical application of effective psycho-pedagogical strategies for ADHD remains insufficient. School dropout rates linked to attention and behavior problems can reach up to 15 % in some provinces, highlighting a critical gap between policy and practice. It is emphasized that one of the most significant barriers is the limited preparation of teachers to implement curricular adaptations and differentiated instruction strategies.⁽²⁾

Learning processes are inherently social and cultural, and students with ADHD benefit from the mediation of adults and peers who can help guide their learning. In this sense, psycho-pedagogical strategies that promote collaboration and social interaction in the classroom can be particularly effective.⁽⁷⁾

Psycho-pedagogical strategies emerge as an essential component in closing this gap. They are defined as a set of methods and techniques based on psychological and pedagogical principles, designed to optimize the teaching-learning process and promote the comprehensive development of students with specific educational needs.⁽⁸⁾

Despite the recognition of ADHD and the difficulties these students face, there is a lack of specific, evidence-based psycho-pedagogical strategies that are consistently applied in schools. There is evidence of the effectiveness of existing school interventions for ADHD, which are complex and require many resources, contradicting teachers' preferences for short, flexible strategies that adapt to a variety of ADHD-related problems in the classroom.⁽⁹⁾

Given the above, the objective of this article is to characterize psycho-pedagogical strategies for the educational inclusion of students with attention deficit hyperactivity disorder.

METHOD

An integrative literature review was conducted, combining a synthesis of theoretical and normative literature. For the theoretical and normative basis, academic databases such as Scopus, Google Scholar, and Dialnet were consulted. Priority was given to articles published in indexed journals, specialized books, and official documents from regulatory bodies. The synthesis was carried out in a narrative form, critically contrasting the findings of the case study with the theoretical-normative framework established in the literature, identifying consensuses, discrepancies, and gaps in application. The terms "Inclusive Education," "Psycho-pedagogical Strategies," "ADHD," "Curricular Adaptation," and "Educational Intervention" were used as keywords in the article. A total of 15 references addressing different characteristics related to the topic in question were selected.

RESULTS

Psycho-pedagogical strategies refer to a set of methods and techniques used by educators to improve the learning and development process of students. These strategies include curricular adaptations, differentiated teaching techniques, and emotional and behavioral support. Psycho-pedagogical strategies are crucial for ensuring inclusive and equitable education, particularly for students with special educational needs. The application of psycho-pedagogical strategy underscores the importance of the teacher's role in promoting spaces that enable students to generate new ideas and learn to instill values, fostering healthy coexistence. To do this, it is also necessary to raise awareness among other members of the educational

community of the advantages of using psycho-pedagogical strategies within the academic process.⁽⁸⁾

When we talk about psycho-pedagogical strategies, we understand that this is the path chosen by teachers to promote conditions conducive to different learning situations, such as identifying and intervening in learning difficulties and increasing motivational processes to achieve the goals established in the teaching and learning process.⁽⁶⁾

The design of effective psycho-pedagogical strategies for ADHD is based on solid theoretical frameworks that explain the core difficulties of the disorder and propose support mechanisms. Vygotsky's Sociocultural Development Theory emphasizes the fundamental role of social interaction and mediation in learning. For students with ADHD, the concept of the Zone of Proximal Development (ZPD) is crucial, as it highlights the need for teachers and peers to provide "scaffolding" to help them internalize skills that they cannot develop independently.⁽¹⁰⁾

Strategies such as cooperative learning and peer tutoring are based on this principle, creating a social environment that facilitates the regulation of attention and behavior. Teacher scaffolding during cooperative activities significantly improved the participation and performance of students with attention difficulties.⁽¹¹⁾

On the other hand, Information Processing Theory helps to understand deficits in executive functions, which are at the core of ADHD. Students with this disorder often have difficulties with working memory, planning, response inhibition, and cognitive flexibility. Interventions based on this theory focus on compensating for or strengthening these functions.⁽⁵⁾

For example, the use of graphic organizers, checklists, structured routines, and explicit teaching of metacognitive strategies (such as "stop, think, act") can be effective in helping students organize their thinking and regulate their behavior. Teaching students to monitor their own work and use self-instruction reduces careless mistakes and improves task completion.⁽¹⁰⁾

Many educators lack the training and resources necessary to address the needs of students with ADHD adequately. It is essential to train teaching staff and school personnel in general to serve better students who require assistance in the Specialized Educational Attention (AEE) classroom, both in and out of school, and to involve their families members.⁽¹²⁾

Deci E.t al.'s Self-Determination Theory⁽¹¹⁾ posits that intrinsic motivation and well-being flourish when three basic psychological needs are met: competence, autonomy, and relatedness. Students with ADHD, who often experience repeated failures and criticism, have their sense of competence undermined. Strategies that offer meaningful choices (autonomy), provide positive, effort-based feedback (competence), and foster positive connections with peers and teachers (relatedness) can counteract demotivation. A classroom climate that supports autonomy, far from being permissive, provides the structure and support necessary for students to feel confident and capable, increasing their engagement and persistence in tasks.

The most successful interventions are multicomponent, acting simultaneously on the environment, instruction, and the student. Multisensory teaching is a cornerstone, as it allows students with ADHD to access information through multiple channels (visual, auditory, kinesthetic), compensating for their attention difficulties and improving retention. The implementation of sensory boxes, memory games, and the use of educational applications such as Kahoot were key resources for maintaining student engagement.⁽¹³⁾

Curricular adaptations do not mean lowering learning expectations; instead, they modify the way the curriculum is accessed and knowledge is demonstrated. This includes breaking down long tasks into smaller, more manageable steps, using clear, written instructions, providing extra time for exams, and offering alternative assessment formats (e.g., oral or project-based). While there is a willingness to adapt the curriculum, the lack of systematization and monitoring limits its effectiveness.⁽¹⁾

Positive reinforcement and immediate reward systems are powerful behavioral tools for shaping behavior and encouraging self-regulation. Rather than focusing on punishing disruptive behaviors, these strategies focus on recognizing and rewarding desired behaviors (e.g., remaining seated, completing a task). In the intervention carried out at the Ciudad del Norte Educational Unit, the use of an "achievement notebook" and a "motivational mural" proved essential in increasing students' self-esteem and intrinsic motivation.⁽¹³⁾

Family-school collaboration is a consistent predictor of success in ADHD interventions. When families are informed and trained, they can reinforce the strategies used at school at home, creating the consistency that students need. Regular communication through shared agendas, periodic meetings, and awareness workshops for parents is highly recommended.⁽¹⁴⁾ The intervention plan may specifically include workshops for families on creating structured routines at home and promoting autonomy, which has been validated as an essential component of overall effectiveness.⁽¹³⁾

Despite compelling evidence of their effectiveness, the widespread implementation of these strategies faces significant barriers. The most frequently cited barrier, both in the international literature and in the local diagnosis of the Ecuadorian case, is the lack of specific and ongoing teacher training. Many educators do not receive the tools necessary during their initial training to understand ADHD beyond its most visible behavioral manifestations and to design and implement practical pedagogical adaptations. This generates feelings of frustration, helplessness, and work overload among teachers.⁽¹⁴⁾

Another critical barrier is the scarcity of material resources and specialized support. Classrooms with high student-teacher ratios and without access to adapted teaching materials or the advice of professionals such as educational psychologists or psychologists make it difficult to personalize the teaching required by students with ADHD.⁽¹²⁾ The case of the Ciudad del Norte Educational Unit reflects this reality, where, despite the identification of students with ADHD, there was no clear institutional strategy or resources allocated for their care before the intervention.⁽¹³⁾

Attitudinal barriers persist, including misconceptions about ADHD (such as attributing it to a lack of discipline or poor parenting) and resistance to changing traditional teaching practices. Promoting a truly inclusive school culture that celebrates

neurodiversity and values the strengths of students with ADHD (such as creativity, energy, and resilience) is a slow but necessary process.⁽¹⁵⁾

Consolidated evidence indicates that there is no “magic solution” for the inclusion of students with ADHD. On the contrary, an ecological and systemic approach is required that articulates different levels of intervention. At the classroom level, the consistent use of the psycho-pedagogical strategies described above is imperative. At the institutional level, educational projects are needed that prioritize inclusion, establish protocols for action, and foster professional learning communities among teachers. At the political level, regulations (such as the LOEI in Ecuador) must be accompanied by budgets allocated for resources, mandatory and systematic teacher training programs, and evaluation mechanisms that report on progress in inclusion.

Models such as Response to Intervention (RTI) offer an ideal framework for this integration, as they allow for early identification of needs and immediate provision of tiered support (of increasing intensity), preventing difficulties from worsening.⁽¹⁰⁾ Combining this model with the principles of Universal Design for Learning (UDL), which proposes creating learning environments that are accessible to all from the outset, represents the most promising way to build genuinely inclusive education systems that not only welcome but also empower students with ADHD.⁽¹⁵⁾

Multimodal psycho-educational strategies are highly effective in promoting the educational inclusion of students with ADHD. Structured, student-centered interventions with strong family involvement produce tangible improvements in academic, behavioral, and socio-emotional dimensions.⁽¹³⁾ The unanimous validation by professional evaluators in the case of “Ciudad del Norte” underscores not only the effectiveness of the proposed strategy but also its feasibility and contextual relevance.

The central discussion revolves around the gap between existing knowledge and its application in the classroom. The persistent lack of teacher training emerges as the main bottleneck. Teachers express the need for “short and flexible” strategies that can be integrated into their daily practice, highlighting the importance of training that is practical, situated, and ongoing, rather than solely theoretical.⁽¹²⁾ Investment in teacher professional development must be a public policy priority.

The neurodiversity paradigm invites us to reconceptualize ADHD not as a defect, but as a natural variation of the human brain, with specific challenges but also unique strengths (such as creativity, energy, and the ability to think “outside the box”).⁽¹²⁾ Psycho-pedagogical strategies should therefore aim not only to “compensate” for difficulties, but also to identify and enhance these talents, fostering a positive self-image in the student.

The sustainability of interventions is a challenge. The challenge for the system is to internalize these practices. The creation of permanent psycho-pedagogical support teams within educational institutions and the promotion of interdisciplinary collaboration (between teachers, DECE, and families) are essential conditions to ensure that the progress made is not short-lived.

The main obstacle is not a lack of knowledge about “what works,” but rather the widespread and systemic implementation of these practices. With determination, planning, and a collaborative approach, it is possible to transform a student’s school experience with ADHD. The path to inclusion requires a commitment on three fronts: 1) practical and ongoing training for teachers; 2) the provision of specialized resources and support within educational institutions; and 3) the strengthening of public policies that translate the legal framework for inclusion into concrete and funded actions. Investing in psycho-pedagogical strategies is not an expense, but a necessary investment in building fairer, more equitable, and more effective educational systems for all students, including those with ADHD.

CONCLUSION

The effective educational inclusion of students with Attention Deficit Hyperactivity Disorder (ADHD) is an achievable goal when it is supported by evidence-based psycho-pedagogical strategies. These strategies must be multimodal in nature, integrating curricular adaptations, positive behavioral management, support for executive functions, use of technology, and, crucially, strong and structured collaboration with families.

REFERENCES

1. Gallardo Peñaherrera KP, Franco Rivadeneira JE, Armijos Loo DL. Inclusión educativa fortalecida mediante adaptaciones curriculares: análisis comparativo en escuelas de Ecuador. *ReSoFro*. 2025;5. [https://doi.org/10.59814/resofro.2025.5\(4\)846](https://doi.org/10.59814/resofro.2025.5(4)846).
2. Mena Hernández EL, Villacís Lozada PF, Mora Macías CJ. La importancia de la formación docente en la educación básica en Ecuador. *Ciencia Latina*. 2024;8:163–74. https://doi.org/10.37811/cl_rcm.v8i2.10390.
3. Polanczyk G. The worldwide prevalence of ADHD: a systematic review and metaregression analysis. *American Journal of Psychiatry*. 2015. <https://doi.org/10.1176/appi.ajp.2007.070610>.
4. Faraone SV, Banaschewski T, Coghill D, Zheng Y, Biederman J, Bellgrove MA, et al. The World Federation of ADHD International Consensus Statement: 208 evidence-based conclusions about the disorder. *Neuroscience & Biobehavioral Reviews*. 2021;128:789–818. <https://doi.org/10.1016/j.neubiorev.2021.01.022>.

5. Miranda A, Soriano M. Effectiveness of a psychoeducational intervention for teachers in the management of ADHD in the classroom. *Journal of Attention Disorders*. 2020. <https://doi.org/10.1177/1087054720925886>.
6. Faraone S, Banaschewski T, Coghill D, González L. La categoría de vivencia en la teoría histórico-cultural. *Repositorio Digital MinCyt*. 2019. https://repositoriosdigitales.mincyt.gob.ar/vufind/Record/REDIUNLU_e80022dfbaa1a30a930ab9461c877d0e.
7. García J. El constructivismo en la educación y el aporte de la teoría sociocultural de Vygotsky para comprender la construcción del conocimiento en el ser humano. *Edu Poli y Val*. 2020;2.
8. García E. Estrategias psicopedagógicas en contextos inclusivos. *UDG*. 2021. <https://revistas.udg.co.cu/index.php/roca/article/view/5134/13799>.
9. Russell A. Development of a school-based digitalised intervention for ADHD using intervention mapping. *European Psychiatry*. 2023;66:S142–S142. <https://doi.org/10.1192/j.eurpsy.2023.355>.
10. Morin A. Metacognitive strategies for students with ADHD. *Understood*. 2024. <https://www.understood.org/articles/en/metacognitive-strategies-for-adhd>.
11. Deci E, Ryan R. The “what” and “why” of goal pursuits: human needs and the self-determination of behavior. *Psychological Inquiry*. 2000. https://www.tandfonline.com/doi/abs/10.1207/s15327965pli1104_01.
12. Almeida FSD. Ongoing professional development for teachers addressing the needs of students with ADHD. *REASE*. 2023;9:391–8. <https://doi.org/10.51891/rease.v9i8.10764>.
13. Velez Aguirre J. Estrategias psicopedagógicas para la inclusión de estudiante con TDAH de educación básica. *Repositorio UTEQ*. 2025. <https://repositorio.uteq.edu.ec/items/528ceacc-e814-4e6c-9550-745cba22d511>.
14. Noriega Solari H. Programa de capacitación para docentes en atención a la diversidad enfocado en alumnos con TDAH. *Repositorio Ulima*. 2021. <https://repositorio.ulima.edu.pe/handle/20.500.12724/11300>.
15. Schoeman R, Voges T. Attention-deficit hyperactivity disorder stigma: the silent barrier to care. *South African Journal of Psychiatry*. 2022;28. <https://doi.org/10.4102/sajpsy.2022.v28i0.1865>.

FUNDING

The authors did not receive funding for the development of this research.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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