

**CONNECTIONS BETWEEN NEUROPSYCHOPEDAGOGY AND SPECIAL EDUCATION:
STRATEGIES FOR MEANINGFUL INCLUSION**

**CONEXÕES ENTRE NEUROPSICOPEDAGOGIA E EDUCAÇÃO ESPECIAL:
ESTRATÉGIAS PARA UMA INCLUSÃO SIGNIFICATIVA**

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ESTRATEGIAS PARA UNA INCLUSIÓN SIGNIFICATIVA**

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**Andréia de Cássia Mesavila, Denise Fátima Silva Pereira, Angela Maria Breancini,
Viviane Nascimento dos Santos, Márcia Dias de Oliveira**

RESUMO

Nas últimas décadas, a inclusão escolar de estudantes da Educação Especial tornou-se um dos principais desafios enfrentados pelas instituições de ensino brasileiras. Apesar dos avanços legais e teóricos, muitas escolas ainda apresentam lacunas na implementação de práticas pedagógicas que contemplem efetivamente a diversidade. As dificuldades metodológicas enfrentadas por docentes, associadas a um modelo educacional historicamente excludente, evidenciam a urgência de abordagens mais integradoras. Nesse cenário, a neuropsicopedagogia surge como uma ciência transdisciplinar capaz de oferecer subsídios teóricos e práticos para a construção de estratégias que favoreçam a aprendizagem significativa de alunos com deficiência. O objetivo geral desta pesquisa foi buscar, na literatura científica, estratégias de aprendizagem que possam auxiliar os professores responsáveis pelo atendimento a estudantes com deficiência, a partir da análise de estudos que abordam o tema sob a ótica da neuropsicopedagogia. O estudo adotou uma metodologia de caráter bibliográfico e exploratório, fundamentando-se em materiais como livros, artigos científicos e documentos institucionais. As investigações foram realizadas em bases de dados acadêmicas, priorizando publicações em língua portuguesa, com destaque para autores como Avelino (2019), Bezerra (2014), Fonseca (2014) e Rotta (2007). Os resultados apontaram que a articulação entre conhecimentos neurocientíficos, pedagógicos e psicológicos amplia a compreensão dos processos de aprendizagem, proporcionando aos educadores novas ferramentas para a prática inclusiva. Constatou-se ainda que a implementação de metodologias diversificadas, aliada ao investimento em formação docente, potencializa os processos educativos. Pesquisas futuras devem aprofundar o impacto de intervenções neuropsicopedagógicas no contexto escolar.

Palavras-chave: Educação Especial. Neuropsicopedagogia. Estratégias de Aprendizagem.

ABSTRACT

In recent decades, the school inclusion of students in Special Education has become one of the main challenges faced by Brazilian educational institutions. Despite legal and theoretical advances, many schools still present gaps in the implementation of pedagogical practices that effectively address diversity. The methodological difficulties experienced by teachers, combined with a historically exclusionary educational model, highlight the urgency of more integrative approaches. In this context, neuropsychopedagogy emerges as a transdisciplinary science capable of offering theoretical and practical support for the development of strategies that promote meaningful learning for students with disabilities. The

general objective of this research was to seek, in the scientific literature, learning strategies that can assist teachers responsible for supporting students with disabilities, based on the analysis of studies that address the topic from the perspective of neuropsychopedagogy. The study adopted a bibliographic and exploratory methodology, based on materials such as books, scientific articles, and institutional documents. The research was conducted in academic databases, prioritizing publications in Portuguese, with emphasis on authors such as Avelino (2019), Bezerra (2014), Fonseca (2014), and Rotta (2007). The results indicated that the articulation between neuroscientific, pedagogical, and psychological knowledge broadens the understanding of learning processes, providing educators with new tools for inclusive practice. It was also found that the implementation of diversified methodologies, combined with investment in teacher training, enhances educational processes. Future research should further explore the impact of neuropsychopedagogical interventions in the school context.

Keywords: Special Education. Neuropsychopedagogy. Learning Strategies.

RESUMEN

En las últimas décadas, la inclusión escolar de estudiantes de Educación Especial se ha convertido en uno de los principales desafíos para las instituciones educativas brasileñas. A pesar de los avances legales y teóricos, muchas escuelas aún presentan lagunas en la implementación de prácticas pedagógicas que atiendan efectivamente a la diversidad. Las dificultades metodológicas enfrentadas por los docentes, sumadas a un modelo educativo históricamente excluyente, evidencian la urgencia de enfoques más integradores. En este contexto, la neuropsicopedagogía surge como una ciencia transdisciplinaria capaz de ofrecer fundamentos teóricos y prácticos para el desarrollo de estrategias que promuevan un aprendizaje significativo en estudiantes con discapacidad. El objetivo general de esta investigación fue buscar, en la literatura científica, estrategias de aprendizaje que puedan ayudar a los docentes responsables de atender a estudiantes con discapacidad, a partir del análisis de estudios que abordan el tema desde la perspectiva de la neuropsicopedagogía. El estudio adoptó una metodología de carácter bibliográfico y exploratorio, basada en materiales como libros, artículos científicos y documentos institucionales. Las investigaciones se realizaron en bases de datos académicas, priorizando publicaciones en lengua portuguesa, con énfasis en autores como Avelino (2019), Bezerra (2014), Fonseca (2014) y Rotta (2007). Los resultados indicaron que la articulación entre conocimientos neurocientíficos, pedagógicos y psicológicos amplía la comprensión de los procesos de aprendizaje, proporcionando a los educadores nuevas herramientas para una práctica inclusiva. También se constató que la implementación de metodologías diversificadas, junto con la inversión en la formación docente, potencia los procesos educativos. Investigaciones futuras deberían profundizar en el impacto de las intervenciones neuropsicopedagógicas en el contexto escolar.

Palabras clave: Educación Especial. Neuropsicopedagogía. Estrategias de Aprendizaje.

1 INTRODUCTION

In recent decades, the debate on school inclusion has gained prominence in educational discussions, especially when the focus falls on Special Education students. Recent data reveal that, despite legislative and institutional advances, many of these students continue to face significant barriers in the learning process, which exposes the distance between the theoretical proposal of inclusive policies and pedagogical practice. As Silva (2008) points out, the Brazilian educational system still presents contradictions and gaps when dealing with different learning styles and rhythms, leaving teachers helpless in the search for effective methodologies.

This methodological difficulty experienced by Special Education teachers often results in exclusionary practices, even if the students are physically inserted in regular classrooms. Bezerra (2014) observes that today's society still marginalizes subjects who escape historically established standards of normality, a reality that is directly reflected in the pedagogical practices adopted in schools. In this context, neuropsychopedagogy emerges as a transdisciplinary science that integrates knowledge from neuroscience, psychology and pedagogy, offering new perspectives for understanding and intervening in learning processes. Avelino (2019) highlights that this combination has provided significant advances in the development of educational strategies aimed at the Special Education public.

The relevance of this study is justified by different perspectives. In the social sphere, there is a growing demand for inclusive pedagogical practices that guarantee the right to quality education for all students. From a legal point of view, documents such as the Federal Constitution of 1988, the Brazilian Inclusion Law (Law No. 13,146/2015) and the Law of Guidelines and Bases of National Education (LDBN) reinforce the State's obligation to ensure the inclusion of people with disabilities in regular education. From a theoretical perspective, advances in neurosciences have enabled a better understanding of the brain processes involved in learning, providing scientific subsidies for the development of more effective and personalized pedagogical practices.

Considering this scenario, the central question that guides this research is: how can neuropsychopedagogy contribute to the formulation of strategies that favor an effective inclusion of Special Education students in regular schools? To answer this question, the present study has as its general objective to search, in the scientific literature, for learning strategies that can help teachers responsible for the care of students with disabilities, based on the analysis of studies that address the theme from the perspective of neuropsychopedagogy. As specific objectives, it is intended to identify the main challenges

faced by these teachers in the teaching-learning process and to analyze the contributions of neuropsychopedagogy in the construction of strategies that promote meaningful learning.

As for the methodology, this research is characterized as bibliographic and exploratory, with analysis of books, scientific articles and institutional documents related to the theme. The choice for this approach is based on the need for an in-depth review of the available literature, in order to gather theoretical and practical subsidies that can guide the teaching work in Special Education.

Regarding the structure of this work, the first chapter presents this introduction, addressing the contextualization of the theme, the justification, the problematization, the objectives, the methodology and the organization of the chapters. The second chapter deals with the methodology used, detailing the research procedures adopted. The third chapter discusses the theoretical foundations of Special Education, highlighting concepts, legislation and the main challenges faced in the school context. In the fourth chapter, the conceptual bases of neuropsychopedagogy are presented, focusing on its contributions to the learning process of students with disabilities. The fifth chapter proposes pedagogical strategies based on neuropsychopedagogical principles, with emphasis on their practical applicability. Finally, the sixth chapter presents the final considerations, synthesizing the main findings of the research and pointing out possible paths for future investigations.

By developing this analysis, it is expected to contribute not only to the academic field, but also to education professionals, offering them theoretical and practical tools that can help them overcome the challenges imposed by school inclusion.

2 REFLECTIONS ON SPECIAL EDUCATION

Special Education in Brazil has been formally integrated into the structures of the State Department of Education since the 1960s. However, its trajectory dates back to previous periods, having undergone significant transformations since the eighteenth century, when educational services were restricted, contemplating exclusively people with deafness and blindness. It was only in 1961 that the service to students with disabilities began to be regulated, albeit in an incipient way, with the proposal to include them, whenever possible, in regular education. This expansion of the profile of students served generated new challenges for the school, requiring adjustments in the rhythms and teaching methodologies in order to meet the different learning needs.

In reality, special education in modern society, which, in its origin, absorbed organic disabilities (hearing, visual and, later, mental), with the development of the productive process, has been incorporating the population with "disabilities and disorders"

increasingly closer to the average normality determined by a "scientific approach" that is intended to be "neutral and objective", culminating in the involvement of those who do not have any evidence of deviation from this same "average normality" (Bueno, 1993, p.80).

According to Bezerra (2014), contemporary society is still characterized by the imposition of normative standards of behavior, both physical and ideological, which ends up marginalizing, rejecting and excluding those who do not fit into these established models. This historical phenomenon of building standards of normality has contributed, over time, to the creation of stigmas and social barriers.

In the educational context, this reality imposes on the school a new role, which goes beyond the simple transmission of content. The school institution must consolidate itself as a space for interaction, acceptance and respect for diversity, promoting a humanized and tolerant education. This change presupposes the creation of environments that stimulate reflection, favoring the understanding of differences, the acceptance of the plurality of ideas and the confrontation of discriminatory and prejudiced practices.

By going through the history of humanity, we realize that this thought of exclusion of the different was present in all societies, because over time they produced a standardized view and classified people according to pre-established stereotypes, electing standards of normality and forgetting that society is formed and built in diversity. (Bezerra, 2014, p.12)

Inclusive education is based on the principle of valuing students, considering their specificities and educational needs. In this context, teachers who work with this audience seek to apply different teaching methodologies, continuously evaluating the effectiveness of the strategies adopted in the learning process. However, even with the commitment of teachers, the results are not always satisfactory, which highlights the need for constant experimentation and adaptation of pedagogical practices that favor the construction of meaningful learning. The essence of inclusive education lies precisely in the promotion of respect for diversity, recognizing and welcoming individual differences as enriching aspects of the school environment.

The fundamental principle of inclusive education is the appreciation of diversity and the human community. When inclusive education is fully embraced, we abandon the idea that children must become normal in order to contribute to the world (Kunc, 1992 apud Cândido, 2009, p.5).

The laws guarantee the inclusion of students with special needs, among them are: Law No. 13,146/2015, Brazilian Inclusion Law (LBI), Law No. 4,024, of December 20, 1961, the Federal Constitution of 1988, Law of Guidelines and Bases of National Education, LDBN – Special Education, Statute of the Child and Adolescent, Program to Complement Specialized Educational Services for People with Disabilities, Educational Plan for Education - Special Education and decrees such as: Decree No. 2. 208/97 – Regulates Law 9.394 that establishes the guidelines and bases of national education; Brazilian Law for the Inclusion of Persons with Disabilities (Law No. 13,146), Decree No. 3. 298/99 – Regulates Law No. 7.853/89; Decree No. 914/93 – National Policy for the Integration of Persons with Disabilities, all together guarantee inclusion and seek to ensure quality and equal education for all, accepting the individual differences of each one as an attribute and not as an obstacle.

Special Education is a field that requires permanent articulation between different areas of knowledge, especially education, psychology and neuroscience. This interdisciplinary dialogue is essential to deepen the understanding of cognitive processes and, consequently, to the development of teaching methodologies that effectively serve students with disabilities. As Avelino (2019) points out, the integration of this knowledge has been consolidated in Brazil, giving rise to an emerging transdisciplinary science: neuropsychopedagogy. This new area of study seeks to understand more broadly the factors that influence learning, offering new possibilities for pedagogical intervention.

3 NEUROPSYCHOPEDAGOGY AND ITS CONTRIBUTIONS

The learning process is a continuous need throughout all stages of life, manifesting itself in the most diverse everyday situations, such as reading a book, starting a new project or establishing interpersonal relationships. Each of these experiences promotes the formation of new neural connections, highlighting the dynamics and complexity of the human brain. Neuroscience, by gathering a vast body of knowledge about the functioning of the Central Nervous System, has contributed significantly to the understanding of the mechanisms that involve emotions, behaviors, feelings and movements.

This approximation between education and neuroscience has shown to be especially promising in facing educational challenges, enabling the development of more effective pedagogical strategies. Rotta (2007) emphasizes that learning is capable of modifying the structure of the central nervous system, a process that refers to the concept of brain plasticity. Such plasticity represents a continuous adaptation, allowing the individual to acquire new learning even in the face of adverse environmental contexts. In addition, neuroscientific

discoveries have indicated ways for the more effective stimulation of these processes within the school environment.

According to the Code of Professional Technical Ethics of Neuropsychopedagogy, in chapter II, article 10, we find the following definition of this science:

Neuropsychopedagogy is a transdisciplinary science, based on the knowledge of Neuroscience applied to education, with interfaces of Pedagogy and Cognitive Psychology that has as its formal object of study the relationship between the functioning of the nervous system and human learning in a perspective of personal, social and educational reintegration. (Sbnpp, 2016, p.3)

Neuropsychopedagogy, according to (Fonseca, 2014, p.1), has a fundamental role in the psychopedagogical processes responsible for student learning, according to the same author, neuropsychopedagogy seeks to gather and integrate studies of the development, structures, functions and dysfunctions of the brain, while studying the psychocognitive processes responsible for learning, as stated by Herculano-Houzel (2004, p.4).

It is up to the neuropsychopedagogue to assess the cognitive needs of the student, so that there is a stimulating intervention and the possibility of understanding how the development of learning is processed, with differentiated activities, respecting the pace of development of each student in the daily school life.

The learning process results from the interaction of multiple factors, involving psychological, biological and cultural dimensions. Aspects such as social difficulties, emotional problems, family instability and precarious health conditions directly influence school performance. To achieve the expected results, an integrative approach that considers these variables in their complexity is essential. Mazer, Dall Bello and Bazon (2009) highlight that the school period, especially in the early years, concentrates decisive challenges for child development. Learning difficulties, especially in reading and writing, when not identified and treated early, can generate long-term negative impacts, affecting the educational and social path of students.

The Neuropsychopedagogue can contribute to the learning process of students, because, according to the Code of Technical Standards 01/2016, of the Brazilian Society of Neuropsychopedagogy, in article 29, the functions of the neuropsychopedagogue are summarized as:

- a) Observation, identification and analysis of the school environment in issues related to the human development of the student in the motor, cognitive and behavioral areas,

considering the precepts of neuroscience applied to Education, in interface with Pedagogy and Cognitive Psychology;

- b) Creation of strategies that enable the development of the teaching and learning process of those who are served in collective spaces;
- c) Referral of people assisted to other professionals when the case is from another area of activity/specialization to contribute with specific aspects that influence learning and human development. (Sbnp, 2016, p.4).

4 DIVERSIFIED METHODOLOGIES

One of the greatest challenges faced in the contemporary educational field is the formulation of pedagogical strategies that are capable of effectively meeting the multiple demands of students who have learning difficulties. These difficulties are caused by a variety of factors, ranging from neurological and cognitive issues to emotional, social, and cultural aspects. The heterogeneity of the public served requires educators not only to have technical knowledge, but also to be sensitive and flexible to adapt their practices. Thus, understanding the causes of these difficulties becomes essential for the development of interventions that favor more meaningful and inclusive learning.

The issue of learning difficulties has been a widely discussed and worrying subject, its reasons may be associated with factors external to the subjects or inherent to them, resulting from factors adverse to learning such as sensory deficiency, low socioeconomic power, school dropout, neurological and cognitive problems. In view of this, studying learning difficulties to understand its concept or to elaborate means of intervention is a challenge, which begins to be perceived when researching its definition. (Santos, 2022, p.9)

In order to offer support to professionals who work directly in the learning process, this study presents below a set of methodologies that have been applied by different educators in contexts marked by learning difficulties. These practices, the result of consolidated experiences, seek to meet the specificities of each student, respecting their limitations and potentialities. Peruzzolo and Costa (2015) emphasize that certain strategies are considered essential to achieve more effective results, especially when they involve the stimulation of compromised cognitive areas and the use of approaches that promote student motivation and engagement during the educational process:

The representation of entertainment and games that promote the child's motivation and interest to participate actively; contain elements of differentiation that can hold the child's attention during the process; enable the stimulation of the most compromised areas of the child, using the most developed ones in order to make the intervention as complete as possible; elimination of inhibitory factors that may block programmed stimulation (Peruzzolo; Costa, 2015, p.7).

To ensure greater effectiveness in the school environment, it is essential that the activities developed directly stimulate the Central Nervous System, promoting the engagement of the cognitive functions involved in the learning process. The use of resources such as music, games and interactive dynamics becomes especially relevant, since such strategies activate different brain areas responsible for attention, memory, language and reasoning. In addition, when planned in a playful, pleasurable and challenging way, these activities not only arouse the interest of students, but also favor the construction of more meaningful and lasting learning.

The formulation and application of educational programs such as the implementation of activities and other intervention projects that are more effective, as they are more focal and interventional in what they propose; provisions for individuals with special educational needs of a physical and/or sensory nature, offering possibilities for early interventions aimed at the full development of cognitive and emotional capacities; guidance and understanding of the role of food in educational success, guiding how adequate nutrition increases the potential of our cognitive capacity, and how inadequate nutrition brings limitations and even cognitive impairments. (Santos; Souza, 2016, p.5)

Strategies to encourage bookstore attendance, library enrollment and access to travel constitute a kind of cultural capital that is essential for success rates. Stating that attending bookstores and enrolling in libraries and access to travel would favor school performance. (Vergas, 2022).

The active participation of those responsible for the school monitoring of students with learning difficulties is an indispensable and non-negotiable condition for the success of the educational process. Avelino (2019) points out that the absence of family support, whether in the school context or in the affective environment, exposes students to feelings of insecurity, emotional deprivation, devaluation and disinterest in school activities. This lack of support can generate deep and, in many cases, irreversible traumas, with direct and lasting impacts on the development of learning and academic performance of these students.

In situations in which the student needs individualized monitoring and differentiated activities, Avelino (2019) proposes the adoption of the strategy of the so-called "productive pairs". This approach consists of organizing students in pairs, so that a student with greater mastery of the contents helps his classmate during the performance of school tasks. Such practice favors collaborative learning, stimulating both cognitive development and social interaction, in addition to promoting an environment of cooperation and solidarity among students.

According to Dutra and Roman (2012), writing plays a relevant role in society, it is everywhere and people need it at different times in life. And in this social environment, almost everything goes through writing, so the literacy process is fundamental for a better understanding of reality. For Brasil (2020, p. 38) "in spontaneous, unconventional writings, but already indicative of the understanding of writing as a system of language representation".

The child, in the process of learning to write, follows his own and individual path. And, as she has contact with reading objects, such as packaging, labels, magazines, books, posters, etc., she is starting the process of discovering the written code. When children live with written texts, they build hypotheses about writing, which is revealed, at first, in scribbles and doodles and, as they acquire knowledge of letters. (Santos, 2022, p.11)

According to Lamego and Moreira (2019), children's school failure in the first years of learning to read and write evidences certain patterns of human behavior that, because they express ways of acting that are different or distant from the socially established norm, end up being interpreted as concrete problems. It is known that the learning process involves a series of brain properties, among which emotion stands out, responsible for activating the amygdala, located in the limbic system. This activation triggers the release of the neurotransmitter dopamine, which, in turn, contributes to the improvement of the performance of the prefrontal region, directly involved in the attention mechanisms, thus favoring the learning process (Sanjaume, 2016, p.16).

5 FINAL CONSIDERATIONS

The reflections developed throughout this study sought to understand how neuropsychopedagogy can contribute in a concrete and significant way to the process of inclusion of Special Education students in regular education. From this central objective, it was possible to analyze the importance of pedagogical strategies based on the principles of neuroscience, cognitive psychology and pedagogy, reaffirming the relevance of more personalized and effective educational practices in coping with learning difficulties.

It was observed that the challenges faced by Special Education teachers go far beyond the simple adaptation of curricular content. The difficulties experienced by these professionals are often a reflection of the lack of continuing education, appropriate didactic resources and institutional support for the implementation of inclusive methodologies. This finding highlights the urgency of educational policies that promote investment in teacher training, focusing on interdisciplinary approaches and practices based on scientific evidence.

In addition, it became evident that the relationship between neuropsychopedagogy and Special Education goes beyond the theoretical field. The strategies analyzed in this study demonstrate that knowledge about brain functioning, combined with the understanding of students' cognitive and emotional particularities, can be decisive in the formulation of truly effective pedagogical interventions. This finding reinforces the need for a closer look at the neurobiological aspects that directly impact learning.

Another relevant aspect identified was the importance of building a school environment that values diversity and promotes respect for individual differences. It was noticed that the success of inclusive practices also depends on the engagement of the entire school community, including managers, families and other education professionals. Inclusion, in this sense, is no longer an isolated duty of the teacher and becomes a collective commitment.

The critical analysis of the data also demonstrated that the mere physical presence of the student with disabilities in the classroom is not enough to characterize an effective inclusion. Meaningful inclusion requires planned actions, based on accurate diagnoses and adapted pedagogical interventions, considering the learning profile of each student. This points to the need for greater integration between neuroscientific knowledge and everyday pedagogical practices.

In view of the findings, it is proposed as a path for future research the deepening of investigations on the impacts of continuing education programs in neuropsychopedagogy on teaching practice. Studies that evaluate the results of pilot projects, applied in different education networks, can bring valuable contributions to the construction of public policies more aligned with the real needs of Special Education.

Another line of research that deserves to be highlighted refers to the longitudinal analysis of the development of students with disabilities submitted to neuropsychopedagogical interventions. Researching the long-term effects of these strategies can provide important data for the formulation of more inclusive and scientifically based curriculum guidelines.

In addition, it would be timely for future research to explore the role of family and community in promoting school inclusion. Studies that consider collaborative practices between school and family environment can enrich the debate and offer new perspectives for facing the barriers that still exist.

Finally, it is essential to reinforce that school inclusion should not be seen only as a legal obligation, but as an ethical and social commitment that requires constant reflection, innovation, and dialogue between the various areas of knowledge. Therefore, it is up to

society and the public authorities to ensure that inclusion policies do not remain only in the field of theory, but are materialized in educational practices capable of transforming realities.

REFERENCES

- Avelino, W. F. (2019). A neuropsicopedagogia no cotidiano escolar da educação básica. *Revista Educação em Foco*, (11).
- Bezerra, A. de S. (2014). Métodos de ensino para a inclusão escolar de alunos com deficiência auditiva [Trabalho de Conclusão de Curso]. Universidade Tecnológica Federal do Paraná, Medianeira.
- Bueno, J. G. S. (1993). A educação especial na sociedade moderna: Integração, segregação do aluno diferente. EDUC.
- Cândido, M. P. (2009). As dificuldades da escola perante a inclusão escolar. Inesul. <https://www.inesul.edu.br/brinquedoteca/documentos/dificuldades.pdf>
- Brasil. Ministério da Educação. (2020). Base Nacional Comum Curricular – BNCC: Educação é a base (1ª ed.).
- Dutra, J. A. S., & Roman, E. C. (2012). Um olhar sobre a linguagem escrita e os processos de referenciação em cartas notariais. *Revista Linguagens em (Dis)curso*, 12(1), 47–70.
- Fonseca, V. (2014). Papel das funções cognitivas, conativas e executivas na aprendizagem: Uma abordagem neuropsicopedagógica. *Revista Psicopedagogia*.
- Herculano-Houzel, S. (2004). O cérebro nosso de cada dia: Descobertas da neurociência sobre a vida cotidiana. Vieira & Lent.
- Kunc, T. S. (1992). A estrutura das revoluções científicas. Perspectiva. (Original work published 1962)
- Mazer, S. M., Dal-Bello, A. C., & Bazon, M. R. (2009). Dificuldades de aprendizagem: Revisão de literatura sobre os fatores de risco associados. *Revista Psicologia da Educação*, 28(1), 7–21.
- Peruzzolo, S. R., & Costa, G. M. T. (2015). Estimulação precoce: Contribuição na aprendizagem e no desenvolvimento de crianças com deficiência intelectual (DI). *Revista de Educação do Ideau*, 10(21).
- Rotta, N., Ohlweiler, L., & Riesgo, R. (2007). Transtornos de aprendizagem: Abordagem neurobiológica e multidisciplinar. *Artmed*.
- Sanjaume, N. G. (2016). Neuroeducação e jogos de mesa [Proposta de intervenção].
- Santos, J. dos. (2022). Um olhar psicopedagógico para as dificuldades de aprendizagem da leitura e da escrita. *Revista Ibero-Americana de Humanidades, Ciências e Educação*, 8(7). <https://doi.org/10.51891/rease.v8i7.6000>
- Santos, C. P., & Sousa, K. Q. (2016). A neuroeducação e suas contribuições às práticas pedagógicas contemporâneas [Trabalho de Conclusão de Curso]. CNPq/UNIT Tiradentes.
- Sociedade Brasileira de Neuropsicopedagogia. (2016). Resolução SBNPpn. 03/2014. https://www.sbnpp.org.br/arquivos/codigo_de_etica_2016.pdf
- Silva, I. N. de A. (2008). Dificuldades de aprendizagem enfrentadas por professores no ensino especial [Monografia]. Universidade Estadual do Norte do Paraná, Jacarezinho.



Vargas, G. L. dos S. de S., & et al. (2022). Desigualdades escolares e seu reflexo no âmbito extraescolar: Um estudo sobre consumo de bens culturais no ensino médio. Quipá Editora.