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Technological resources in the teaching-learning process of students with autism spectrum disorder.

Technological resources in the teaching-learning process of students with autism spectrum disorder

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Abstract:

This study aims to analyze the contributions of technological resources to the teaching-learning process of students with Autism Spectrum Disorder (ASD) between the end of Early Childhood Education and Elementary School I, a phase highlighted by literacy. It is a systematic literature review, with a qualitative and exploratory approach, conducted through academic productions related to assistive technologies and digital resources in the context of inclusive education. The literature discussion was organized into four axes: learning, communication and social interaction, autonomy and school participation, and implementation challenges. The analyzed studies indicate that these resources, such as digital games and Augmentative and Alternative Communication (AAC) tools, can expand the learning and participation possibilities of students, provided they are adapted to their needs and integrated into the pedagogical planning. Challenges related to teacher training, accessibility, and the infrastructure conditions of school institutions were also identified; however, the diversity of age groups investigated in the consulted publications limits the generalization of the results to the delimited audience. In conclusion, these technologies have the potential to contribute to the school inclusion of students with ASD, although their use must be planned, individualized, and accompanied by pedagogical mediation.

Keywords: Autism Spectrum Disorder; Assistive technologies; School inclusion; Teaching and learning; School psychology.

Abstract

The present study aims to analyze the contributions of technological resources to the teaching and learning process of students with Autism Spectrum Disorder (ASD), from the final years of Early Childhood Education through the first years of Elementary Education, a stage marked by literacy development. This is a systematic literature review with a qualitative and exploratory approach, conducted through academic publications related to assistive technologies and digital resources within the context of inclusive education. The literature discussion was organized into four main areas: learning; communication and social interaction; autonomy and school participation; and implementation challenges. The studies analyzed indicate that these resources, such as digital games and Augmentative and Alternative Communication (AAC) tools, can expand students' opportunities for learning and participation, provided that they are adapted to their individual needs and integrated into pedagogical planning. Challenges related to teacher training, accessibility, and the infrastructure conditions of educational institutions were also identified. However, the diversity of age groups investigated in the publications consulted limits the generalizability of the findings to the specific population defined in this study. It is concluded that such technologies have the potential to contribute to the school inclusion of students with ASD, although their use should be planned, individualized, and accompanied by pedagogical mediation.

Keywords: Autism Spectrum Disorder; Assistive technologies; School inclusion; Teaching-learning process; School psychology.

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INTRODUCTION

Technological advancements have significantly transformed educational processes.
presenting new possibilities for promoting school inclusion, especially for
students with Autism Spectrum Disorder (ASD), which is characterized, according to the
DSM-5 diagnostic criteria (AMERICAN PSYCHIATRIC ASSOCIATION, 2014, p. 72), by
"persistent deficits in social communication and social interaction across multiple contexts", in addition to
Restricted and repetitive patterns, which poses particular challenges to the teaching-learning process.
in conventional school environments.

In this context, the use of technologies as an auxiliary resource, such as educational software,
Interactive applications and alternative communication tools have proven to be a strategy.
promising to facilitate the engagement and cognitive and social development of these students,
especially those in the final years of early childhood education and elementary school.
Elementary School I, as this period corresponds to an important stage for the development of
early literacy skills, a characteristic stage that presents communication barriers and
Social interaction is affected due to the direct impact of introducing school routines and excessive stimulation.
required that is provided in a school setting (AMERICAN PSYCHIATRIC ASSOCIATION, 2014,
p. 72).

Cognitive-Behavioral Therapy (CBT), widely recognized for its effectiveness in
Treatment of children and adolescents with ASD emphasizes the use of structured interventions and reinforcements.
positive principles, which can be enhanced by digital technologies in the environment,
However, it's important to keep in mind that CBT is not used in schools as a conventional clinical therapy.
not just as a consulting room approach, but rather as an approach that values environmental structuring and predictability.
and restructuring of behavioral responses.

In addition to this, other educational approaches and strategies, such as Treatment and Education for
Autistic and Related Communication Handicapped Children (TEACCH) and the Analysis of
Applied Behavior Analysis (ABA) can contribute to the development of pedagogical practices.
aimed at students with ASD. Although they present theoretical and methodological foundations
Although distinct, these approaches can utilize individualized strategies to meet the needs.
of the students. In this context, technological resources and assistive technologies can act as
complementary tools, promoting communication, participation and access to activities.
schoolchildren (FONSECA; SCHIRMER, 2020, p. 160).

In this sense, the use of these tools goes beyond the mere transmission of content, acting as a means to...
directly impacts the student's emotional and sensory regulation, because, for a child with this spectrum, the

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Regular school can present itself as a hyper-stimulating environment. Thus, resources such as headphones Soundproofing devices and visual routines promote the predictability needed to reduce anxiety. transforming the school space into a structured environment conducive to the development of autonomy and functional communication.

However, the successful implementation of these technologies depends not only on availability. of resources, but also of the ongoing training of teachers and the adaptation of practices. pedagogical approaches to meet the specific needs of these students, in turn, this dynamic requires to balance digital inclusion in the school context, taking into account the promises of these tools and the obstacles to their use, considering the literature of Lourdes Batista (2021) points to the potential of these resources in stimulating self-governance in students with ASD, however, For the proposal to work, there are obstacles, such as the risk of the student remaining isolated. from the screen (BATISTA, 2021, pp. 12-13) in addition to structural and financial barriers related to the lack of infrastructure and high costs (FONSECA; SCHIRMER, 2020, p. 157). Finally, another counterpoint It is the possibility that adaptive technology can be used in the classroom for non-traditional purposes. pedagogical methods, thus becoming a distraction from other teaching methods.

The general objective of this study is to analyze and contribute to the use of technological resources in... The educational process of students with ASD, highlighting its impact on communication, Socialization, autonomy, and cognitive development will therefore be the focus of a review of productions. academic studies that address assistive technologies and their pedagogical applications in education. inclusive, grounded in the perspectives of Psychopedagogy and School Psychology.

METHODOLOGY

This research is characterized as a systematic literature review, with an approach... This study is qualitative and exploratory in nature, with the aim of gathering, analyzing, and discussing academic productions. related to the contributions of technological resources to teaching practices for those who have Given this disorder, this approach allows for a critical examination of the available knowledge about it. The use of assistive technologies and digital resources in the context of inclusive education. considering its potential, limitations, and contributions to the development of students.

The bibliographic survey was conducted in the Google Scholar and SciELO databases, by search terms using the descriptors "Autism Spectrum Disorder", "ASD", "resources" "Technological technologies," "assistive technologies," "school inclusion," and "Special Education," individually and in combination. different combinations were considered, as well as academic productions related to the use of

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Technological tools in the school environment, especially those that address aspects such as communication, social interaction, autonomy, and cognitive development of students with ASD.

As inclusion criteria, studies available in full that addressed the topic were considered. use of technological resources and assistive technologies in the school learning process of these students, focusing on Early Childhood Education and Elementary School. Still on the aspect of Inclusion was based on articles that were published within the last 20 years.

As exclusion criteria, duplicate publications and unrelated research were excluded. with the investigated theme, studies focused exclusively on the clinical or diagnostic aspects of Autism Spectrum Disorder (ASD), without connection to the educational context, and work that does not consider the school age group. limited or did not present sufficient information to contribute to the objectives of research, in addition to articles with registered publication outside of national territory.

Following the bibliographic collection, based on research through Google Scholar and Initially, 21 articles related to the investigated topic were identified using SciELO, which In the screening phase, the analyses were conducted considering the previously established inclusion and exclusion criteria. established. Of the total publications identified, 15 were excluded for not meeting the established criteria. defined criteria, with 3 being excluded for having publications registered outside the territory. nationally, 7 because they did not fit within the age range defined by the research and 5 because they did not meet the criteria.

The school context was established as a parameter for the study, thus remaining the basis for 6 articles.

For the research corpus, the selected studies were Araújo and Seabra Junior (2021), Bertol et al. (2025), Nunes, Barbosa and Nunes (2021), Ratuchne et al. (2024), Fonseca and Schirmer (2020) and Batista (2021).

After the collection and selection of materials, the studies were examined through analysis. thematic content, seeking to identify recurring themes, contributions, potential, challenges and limitations related to the use of these resources in the education of students with For ASD (Autism Spectrum Disorder), the analysis was organized into thematic areas related to cognitive development and... learning, communication and social interaction, student autonomy, and the challenges for... Implementing these resources in the school environment can make it possible to organize and discuss them. critically assess the contributions of the selected literature to the requirements of the review. bibliographic.

THEORETICAL FOUNDATION

From the perspective of CBT as formulated by Aaron Beck (BECK, 2017, pp. 48-55), the functioning and An individual's adaptation to their environment depends on how they process information and structure their...

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Cognitive beliefs, complementing this clinical model, Judith Beck (BECK, 2013, p. 34) points out
that behavioral changes occur in an integrated way when the environment offers
predictability and
restructuring dysfunctional responses, within the school context of Early Childhood Education, to the demands
Socioemotional challenges require that the cognitive and behavioral rigidity inherent in the disorder receive
Interventions focused on facilitating the processing of educational and environmental stimuli.
Adapting these approaches to the context of Developmental and Educational Psychology.
Special features include the theoretical contributions of Cleonice Bosa (BOSA, 2006), in analyzing the
Psychoeducational interventions warn that autism "involves serious lifelong difficulties."
in social and communicative skills", requiring strategies that directly stimulate
Reciprocity and the child's flexibility are essential for the school inclusion process to occur in a way that...
Effective in childhood, Lourdes (BATISTA, 2021, p. 11) and Cleonice (BOSA, 2006) argue that the
The school needs to be established as a mediated support environment, where characteristic deficits
The challenges of shared attention and imitation are softened through structured routines and resources.
Tangible visuals that organize the student's daily school life.
Given this need, the integration of technological resources can act as a facilitator of...
The educational process, as highlighted by Lourdes Batista (BATISTA, 2021, p. 12), the tools
Digital assistive devices contribute to expanding functional skills, reducing barriers to
communication and allowing the student to express basic needs autonomously. According
with the investigations of Juliana and Carolina, (FONSECA; SCHIRMER, 2020, p. 160), the application
practice using specific resources such as communication boards, digital visual aids, and headphones.
Soundproofing devices and educational software on tablets embody the principle of positive reinforcement and...
The token economy proposed by CBT and methods such as ABA and TEACCH. These technologies
They operate as "cognitive prostheses" that decode the abstract classroom environment into commands.
Direct and predictable visuals.
The importance of incorporating these technologies into daily school life lies, above all, in the urgency of...
to transform the regular school into a space of predictability and emotional regulation, according to
argues Cleonice Bosa (BOSA, 2006), the persistent difficulties in shared attention and in
Social reciprocity makes the schooling process a severe challenge for children with ASD.
creating barriers that go far beyond conventional literacy. In this scenario, the intentional use
The use of assistive technology ceases to be a mere playful device and begins to fulfill a function.
The essential socio-pedagogical role is to act as a structured support that mitigates anxiety.
It organizes routines and prevents sensory crises. The importance of investigating this topic in school.
It is therefore based on the need to ensure that the student with ASD not only occupies a

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physical space in the classroom, but one that has real conditions for participation, overcoming the risk of digital isolation (BATISTA, 2021, p.11) through conscious teacher mediation that validates Technology as a bridge to independence and meaningful learning.

Furthermore, discussing the centrality of assistive technologies in the school context requires recognizing that A fundamental distinction between the simple physical inclusion of a student with ASD in the classroom and their Effective inclusion. Historically, conventional schools have operated under standardized logics that... They prioritize excessive verbal communication and intuitive social interaction, precisely the areas of greatest... vulnerability for the autistic student, according to the diagnostic criteria of the DSM-5 (AMERICAN PSYCHIATRIC ASSOCIATION, 2014).

When the school institution neglects the need for environmental adaptation, the environment educational processes become a constant source of sensory overload and cognitive frustration, being From this perspective, research into technological tools gains strategic relevance, as with the inclusion of tools such as tablets with educational software, communication boards Alternative and noise-canceling headphones operate as semiotic mediators and regulators of behavior. allowing the student to decode implicit social rules and understand abstract commands in concrete visual structures, however, contemporary literature warns that the pedagogical value The challenge of these technologies lies not in the device itself, but in the quality of the teaching mediation. It avoids, Thus, the mistake of reducing technology to a mere pastime or of becoming isolated from student in front of the screen (BATISTA, 2021, pp. 11-13). The academic and social importance of this study It therefore resides in the proposition that assistive technology, based on structured principles from CBT, ABA and TEACCH (FONSECA; SCHIRMER, 2020), has the potential to give new meaning the pedagogical practice, transforming the classroom into a predictable, welcoming and... truly empowering for child development.

In this way, scientific publications are mapped in databases such as SciELO and Google. Academics emphasize the need to avoid using technological resources in a way that... isolated, but integrated into an intentional plan. Juliana, Carolina (FONSECA; SCHIRMER, 2020, p. 157) and Cleonice Bosa (BOSA, 2006) converge in highlighting that the effectiveness of any The tool in the classroom is linked to pedagogical training and behavioral management of... educator. The articulation between the clinical criteria established by DSM-5 (2014), and the techniques of Cognitive regulation by Aaron Beck (2017) and Judith Beck (2013), the developmental perspective socio-educational approach by Cleonice (BOSA, 2006) and the technological findings of Lourdes Batista (2021) They provide epistemological legitimacy to support the use of assistive technologies such as Inclusion and learning mechanisms for students with ASD in the final years of education. Children's.

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RESULTS AND DISCUSSION

An analysis of the literature on the use of technological resources in the teaching process.
Learning for students with ASD allows for discussion of the contributions of these resources to the
learning, communication, social interaction, and self-sufficiency in the school environment, too.
highlights challenges related to the choice of tools, teacher training, and suitability.
From resources to the individual needs of students.

It is important to note that the contributions identified in the literature should not be generalized.
For all these students, the suitability of resources depends on factors such as characteristics.
individual needs, pedagogical objectives, forms of communication, and the conditions offered by
Furthermore, the analysis should prioritize studies related to the defined period within the educational institution.
through research.

Comparative chart: State of the art on the use of technological resources in the education of students with ASD.

Authors Year Periodical/Source			**Sample / Ratio breakdown**	**Type of technology**	**Key findings with the age**
Araújo; Seabra Junior	and needs. It emphasizes that t		Students with ASD, Highlights the importance of cons considering the educational technology should be planned,	context of Early Childhood made available.	dering digital games, developing games Education and the development of skills
Authors Year Periodical/Source			**Sample / Relationship Type of technology Main**		**findings with the age group**
		al. 2025 Education in Because it encompasses	Amazônia: Revista Bertol; et Science and Mathematics. Understanding of mathematical concepts, problem-solving, engagement, relevant discussions, and motivation. different age groups, its results are considered complementary		Identifies favorable results in Students with ASD evidence to the scope of the present study.
Nunes; Barbosa; Nunes	electronic	Spectrum Disorder) devices. The resources (Brazilian Journal of Special	but limitations were identified, aged 3 to 12 years, encompassing need to be accompanied by Education, Early Childhood Education and Elementary Education, 2021)	Communication: AAC presented positive results for communication, mainly in the context of requests. Children with ASD (Autism boards, primarily in the predominance of pictograms, and opportunities for interaction and mediation by professionals.	

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learning, inclusion, and social interaction. Reinforces the need to expand research and analyze the conditions under which these technologies produce results.			Children with ASD, focusing on the educational context. Points out the potential of assistive technologies (Ratuchne et al., 2024). Teaching & Research and the applicability of assistive technology to		of to and
Fonseca; Schirmer	resources	technologies in the context of communication, to support your resources to pedagogical practices and individualized strategies. This study, published in the journal Educação 2020, considers Culture Contemporary	Children, devices highlighting the application of visual figures, software, tablets, and other software to support learning and communication in Early Childhood Education and Elementary Education.	Applications for Autistic the potential of mobile devices, application resources and assistive support learning and communication, functioning as complementary and	
Baptist	2021	Repository UNILAB	Children with ASD (Autism Spectrum Disorder) show potential for expanding functional skills, using digital resources and educational/ assistive technology, focusing on communication and autonomy. It warns of the risk of isolation in the educational context of screens and highlights the need for teacher mediation. This applies to early childhood and school settings.	node	

Technological resources and the learning process

Technological resources can be complementary tools to teaching practices.
students with ASD, especially when used in a planned and articulated way to
For pedagogical purposes, digital aids in education can present content by
through images, sounds, symbols and interactive activities, offering different possibilities of
Access to information, however, must be made in accordance with the needs of each student.
and should not replace the teacher's guidance.

Araújo and Seabra Junior, in conducting a systematic review on digital games, aimed at
developing skills and abilities in students with ASD, they discuss
Important elements for the development of these resources, the study highlights the relevance of considering
the characteristics of the students in the development of the games, so that the tools are
appropriate to the educational objectives and needs of the target audience, this
This perspective helps to understand that the use of digital games in the school context requires planning, and not
just the provision of electronic devices (ARAÚJO; SEABRA).
JUNIOR, 2021).

In a complementary manner, Bertol (BERTOL et al., 2025) analyzes the contributions of technologies.
digital tools for teaching and learning mathematics directly to these students, the authors
They identified favorable results related to the understanding of mathematical concepts, to
problem-solving, engagement, and motivation, although these findings contribute to the

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Discussing the pedagogical potential of technologies, the study includes students with ASD without
if restricted to the school range defined in this research, then its results should be considered
as supplementary evidence, and not as direct proof of specific effects.
In this context, technological tools can expand the possibilities of
presentation of the content and encouragement of student participation in educational activities,
For children in their early school years, it is important that the tools present language...
accessible, understandable instructions and activities compatible with the level of development and the
learning objectives. Therefore, the contribution of technology lies not only in its use, but
in the way it is integrated into pedagogical planning and inclusive practices.

Communication and social interaction

Communication is an important aspect in the school inclusion process for these students.
In this context, assistive technologies and AAC resources can offer possibilities for
that students with complex communication needs express desires, choices,
Needs and opinions, these resources may include communication boards, pictograms, albums.
of figures and electronic devices, according to the needs and possibilities of each student.
Nunes and Barbosa (NUNES; BARBOSA; NUNES, 2021) present an integrative review on the use
Regarding AAC (Augmentative and Alternative Communication) by students with autism in mainstream schools, the analysis compiled eight published studies.
Between 2015 and 2018, with participants aged 3 to 12 years, the authors identified positive results.
related to the use of AAC, although they also observed limitations in the interactions
communicative, especially regarding the predominance of requests and the exploration of other
Regarding the functions of language, these results demonstrate that providing a communication resource
This is not enough to ensure broad communicative participation; it is necessary to promote...
Opportunities for interaction in different school situations.
The presence of communication resources in the educational environment can contribute to expanding the
opportunities for student participation in activities and in relationships with peers and teachers,
However, it is essential that professionals understand how to use these resources and offer them.
opportunities for communication to occur in a functional and meaningful way, communication does not
It should not be limited to answering questions or requesting objects, but it should also allow for choices.
Comments, expression of feelings, and participation in group activities.
The discussion proves relevant to the school age group investigated, as communication contributes to
Social relationships and learning, therefore, visual resources and AAC systems can be
incorporated into daily activities, respecting each child's forms of communication,
However, since the review by Nunes and Barbosa covers a broader age range, specifically,

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a year older than the position in question, its findings should not be directly interpreted as exclusive results from children in Early Childhood Education and Elementary School I (NUNES; BARBOSA; NUNES, 2021).

Autonomy and participation in school activities

Autonomy in the school environment involves the ability to understand guidelines and carry out... choices, participate in activities, and gradually develop greater independence, according with the characteristics and needs of each student. For children with ASD, resources such as Visual sequences, pictograms, illustrated schedules, and digital organizational tools can to help in understanding the steps of an activity and in anticipating the school routine. Araújo and Seabra Junior's discussions on planning digital games for this audience, They contribute to reflecting on the importance of adapting resources to the skills one intends to develop. develop. When a tool presents clear instructions, organized steps, and activities. compatible with the student's capabilities, it can offer opportunities for participation and However, the effects on autonomy need to be analyzed in relation to task completion. The objective and results of each study make it impossible to conclude that every technological resource promotes independence (ARAÚJO; SEABRA JUNIOR, 2021).

Similarly, AAC systems can expand the possibilities for choice and expression. For students in their daily school life, the possibility of communicating needs and preferences can To encourage more active participation in activities, the use of these resources still requires... The participation of teachers and other stakeholders, so that the forms of communication to be recognized and respected in the educational environment; in this way, technology can contribute. for autonomy when it is associated with individualized pedagogical strategies and opportunities Regarding actual participation, the choice of resources should consider the routine, skills, and needs. support and the educational goals of each child, therefore it is important to understand the Autonomy as a process built through interaction between the student and the resources. available and accessibility conditions offered by the school (NUNES; BARBOSA; NUNES, 2021).

Challenges and limitations of implementing technological resources.

Despite the possibilities presented, the use of these resources in the education of students with Autism Spectrum Disorder (ASD) also involves challenges, such as the availability of devices, internet access, and adaptation. of the materials, teacher training, and the integration of tools into pedagogical planning These are factors that can interfere with its use; therefore, the presence of technology in schools...

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It does not, in itself, guarantee inclusive educational practices.

Ratuchne et al., in a review on assistive technology in the education of children with ASD, discuss the use of these resources as strategies that can contribute to learning, inclusion and social interaction, the study also highlights the importance of examining the available research on the topic, considering the results and limitations of scientific production (RATUCHNE; et al., 2024).

This perspective reinforces the need to expand research into the application of technologies. assistive technologies in the educational context and to understand the conditions under which they are used. contributions for students.

In the field of communication, limitations related to the use of AAC (Augmentative and Alternative Communication) are identified in certain situations. schoolchildren, indicating that communication opportunities need to go beyond one-off requests, This finding allows us to reflect on the need for training and monitoring of... professionals, so that resources are incorporated into everyday interactions and not used only in isolated activities (NUNES; BARBOSA; NUNES, 2021).

Another challenge is selecting tools that are compatible with the needs and objectives of Children's learning. Overly complex resources, inaccessible instructions, or Activities unrelated to the school curriculum can hinder participation. Therefore, the Planning should consider the pedagogical purpose of the tool, teacher mediation, and... possibility of adapting the activities.

It is also necessary to prevent the use of digital devices from becoming an isolated practice, without interaction with the teacher and classmates, technology should act as a complementary resource to pedagogical and social experiences, and not as a substitute for human relationships, thus, its The contribution to inclusion depends both on the characteristics of the tool and on the conditions of Use, accessibility, and organization of the school environment.

Considering the scope of this research, it is also important to identify studies that... investigate specifically children in Early Childhood Education and Elementary School I, although, The reviews consulted contribute to a general understanding of the potential of technologies in In the education of students with ASD, not all studies present results separated by age group or stage. school.

Summary of results and discussion

The literature reviewed indicates that technological resources and assistive technologies can contribute to expand the possibilities of study capacity for people with autism spectrum disorder, especially when used in a planned manner and appropriate to individual needs. Among The contributions discussed include the presentation of content through different resources, and support for...

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communication, expanding opportunities for participation, and assisting in the organization of activities.
schoolchildren.

However, the results also indicate that the use of these resources requires planning.
Pedagogical aspects, teacher mediation, accessibility, and training of the professionals involved. Technology.
It should not be considered a standalone solution to the difficulties faced by students, but
a tool that can complement educational strategies and promote participation in
school context.

Regarding the defined school age range, it is necessary to interpret the results with caution when...
Studies include older children or students at different educational levels. The absence of
Specific information about a particular age range limits the possibility of attributing the results.
directly to this audience, therefore, the discussion highlights the relevance of investigating the use
these tools in a contextualized way, considering the characteristics of the children, the
Learning objectives and the specific conditions for school inclusion. The contribution of these
Resources depend on their integration into pedagogical practices and the school's commitment to promoting them.
Accessibility, participation, and learning opportunities.

FINAL CONSIDERATIONS

This study was conducted with the aim of analyzing the contributions of resources.
technological tools for the teaching-learning process of students with ASD, considering the
Delimitation of the investigated school range, allowing us to identify that assistive technologies and games
Digital tools, educational apps, and AAC resources can offer possibilities for supporting...
learning, communication, participation, and the development of self-sufficiency in the context
school.

However, the contribution of these resources depends on their suitability to individual needs.
of the students, their integration into the pedagogical planning, and the mediation of the teachers. A
The provision of technological tools, in isolation, does not guarantee school inclusion, being
It is necessary to consider aspects such as accessibility, teacher training, infrastructure, and opportunities.
interaction with colleagues and education professionals.
It was also possible to identify the need to interpret the results with caution, since
Part of the publications consulted covers different age groups and stages of schooling.
This characteristic limits the possibility of attributing all results specifically to...
children selected for the study, reinforcing the importance of research directed at this
public.

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Therefore, it can be concluded that such technological resources have the potential to complement the

Inclusive pedagogical practices and expanding the possibilities for participation of such students,

However, its use must be associated with individualized strategies and school conditions that...

promote access to learning and participation, and it is hoped that this study will contribute to...

Reflection on the planned use of technologies in inclusive education and encourage new research.

Regarding their contributions and limitations in the early years of schooling.

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