SPECIAL AND INCLUSIVE EDUCATION IN THE 21ST CENTURY: CHALLENGES AND POSSIBILITIES WITH THE USE OF NEW TECHNOLOGIES IN TEACHING AND LEARNING

EDUCAÇÃO ESPECIAL E INCLUSIVA NO SÉCULO XXI: DESAFIOS E POSSIBILIDADES COM O USO DAS NOVAS TECNOLOGIAS NO ENSINO-APRENDIZAGEM

EDUCACIÓN ESPECIAL E INCLUSIVA EN EL SIGLO XXI: RETOS Y POSIBILIDADES CON EL USO DE NUEVAS TECNOLOGÍAS EN LA ENSEÑANZA Y EL APRENDIZAJE

Adilson Oliveira Cruz[1], Áquila Jerard Moulin Ditzz[2], Athyla Caetano[3], Camila Bruschi Tonon[4], Eglalciane de Lyrio Tongo Castro[5], Evelyn de Oliveira Vieira da Silva[6], Renata Perozini[7], Renato Kohler Zanqui[8], Rosieli Geraldina Merotto Foletto[9], Silvana Beatriz D' Ávila Costa Lenzi[10], Thayna da Silva Raymundo[11]

ABSTRACT

The consolidation of inclusive education as a guiding principle of contemporary educational policies poses significant challenges to schools, particularly regarding the guarantee of learning rights for students with disabilities in mainstream education settings. In this context, digital technologies emerge as potential resources for overcoming pedagogical, communicational, and attitudinal barriers. This article aims to analyze the challenges and possibilities of using digital technologies within special and inclusive education, focusing on their role in mediating the teaching-learning process. This qualitative study is based on a critical literature review, grounded in national authors and official legal documents that guide inclusive education policies in Brazil. The analysis indicates that although digital and assistive

[1] Master's degree in Computer Science. Libera Universitá di Bolzano.

[2] Master's degree in Teaching. Instituto Federal de Educação, Ciência e Tecnologia do Espírito Santo (IFES).

[3] Master's degree in Science and Mathematics Education. Instituto Federal de Educação, Ciência e Tecnologia do Espírito Santo (IFES).

[4] Master's degree in Science and Mathematics Education. Instituto Federal de Educação, Ciência e Tecnologia do Espírito Santo (IFES).

[5] Master's degree in Business Administration. Instituto Federal de Educação, Ciência e Tecnologia do Espírito Santo (IFES).

[6] Master's degree in Physics Teaching. Instituto Federal de Educação, Ciência e Tecnologia do Espírito Santo (IFES).

[7] Master's degree in Science and Mathematics Education. Instituto Federal de Educação, Ciência e Tecnologia do Espírito Santo (IFES).

[8] Master's degree in Science and Mathematics Education. Instituto Federal de Educação, Ciência e Tecnologia do Espírito Santo (IFES).

[9] Master's degree in Science and Mathematics Education. Instituto Federal de Educação, Ciência e Tecnologia do Espírito Santo (IFES).

[10] Specialization certificate in School Environmental Education. Instituto Federal de Educação, Ciência e Tecnologia do Espírito Santo (IFES).

[11] Master's degree in Entomology. Universidade Federal de Viçosa (UFV).

technologies expand access, participation, and personalized learning opportunities, their effectiveness depends on structural, pedagogical, and professional development factors, such as continuous teacher training, intentional instructional planning, and the transformation of exclusionary conceptions still present in school culture. It is concluded that the critical and contextualized use of technologies can significantly contribute to building a truly inclusive school when aligned with an emancipatory and equitable pedagogical project.

Keywords: Inclusive Education. Digital Technologies. Teaching and Learning. Disability. Teacher Education.

RESUMO
A consolidação da educação inclusiva como princípio orientador das políticas educacionais contemporâneas impõe desafios significativos à escola, especialmente no que se refere à garantia do direito à aprendizagem de estudantes com deficiência em contextos regulares de ensino. Nesse cenário, as tecnologias digitais emergem como recursos potenciais para a superação de barreiras pedagógicas, comunicacionais e atitudinais. O presente artigo tem como objetivo analisar os desafios e as possibilidades do uso das tecnologias digitais no âmbito da educação especial e inclusiva, com foco na mediação do processo de ensino-aprendizagem. Trata-se de uma pesquisa de natureza qualitativa, desenvolvida por meio de uma revisão bibliográfica crítica, fundamentada em autores nacionais e em documentos legais que orientam as políticas de inclusão no Brasil. A análise evidencia que, embora as tecnologias digitais e assistivas ampliem as possibilidades de acesso, participação e personalização do ensino, sua efetividade depende de fatores estruturais, formativos e pedagógicos, como a formação continuada dos professores, o planejamento didático intencional e a superação de concepções excludentes ainda presentes na cultura escolar. Conclui-se que o uso crítico e contextualizado das tecnologias pode contribuir para a construção de uma escola verdadeiramente inclusiva, desde que integrado a um projeto pedagógico comprometido com a equidade, a diversidade e a justiça social.

Palavras-chave: Educação Inclusiva. Tecnologias Digitais. Ensino-Aprendizagem. Deficiência. Formação Docente.

RESUMEN
La consolidación de la educación inclusiva como principio rector de las políticas educativas contemporáneas plantea importantes desafíos a las escuelas, especialmente en lo que respecta a garantizar el derecho al aprendizaje del alumnado con discapacidad en contextos educativos regulares. En este escenario, las tecnologías digitales emergen como recursos potenciales para superar barreras pedagógicas, comunicacionales y actitudinales. Este artículo busca analizar los desafíos y las posibilidades del uso de las tecnologías digitales en el contexto de la educación especial e inclusiva, centrándose en la mediación del proceso de enseñanza-aprendizaje. Se trata de una investigación cualitativa, desarrollada a través de una revisión crítica de la literatura, basada en autores nacionales y documentos legales que orientan las políticas de inclusión en Brasil. El análisis muestra que, si bien las tecnologías digitales y de asistencia amplían las posibilidades de acceso, participación y personalización de la enseñanza, su eficacia depende de factores estructurales, formativos y pedagógicos, como la formación continua del profesorado, la planificación didáctica intencional y la superación de las concepciones excluyentes aún presentes en la cultura escolar. Se concluye que el uso crítico y contextualizado de las tecnologías puede contribuir a la construcción de una escuela verdaderamente inclusiva, siempre que se integre en un proyecto pedagógico comprometido con la equidad, la diversidad y la justicia social.

Palabras clave: Educación Inclusiva. Tecnologías Digitales. Enseñanza-Aprendizaje. Discapacidad. Formación del Profesorado.

1 INTRODUCTION

Special education has undergone profound transformations over the last decades, especially from the consolidation of the inclusive education paradigm, which defends the right of all students to learn, participate and live in regular education classes. This paradigm breaks with the historical logic of institutionalized segregation and proposes a school that recognizes and values human diversity as a structuring principle of the educational process. It is a change that goes beyond the pedagogical dimension, assuming an ethical, political and social character, by repositioning disability not as an individual limitation, but as a result of the interaction between subjects and social, cultural and educational barriers.

However, despite the legal and normative advances that ensure the right to inclusive education in Brazil, it is observed that the realization of this right still faces significant obstacles in the daily school routine. The presence of students with disabilities in ordinary classrooms challenges traditional pedagogical practices, rigid curricula and homogenizing teaching models. As Mantoan (2006) argues, inclusion is not limited to physical access to school, but requires the guarantee of real conditions of participation and learning for all students, which implies the revision of the conceptions of teaching, evaluation and school organization.

At the same time, the expansion of digital information and communication technologies (DICTs) has caused significant changes in educational processes, expanding the forms of access to knowledge, communication and expression. When critically integrated into pedagogical planning, these technologies can favor the personalization of teaching, the mediation of physical and cognitive barriers, and the construction of more interactive and collaborative learning environments. In this sense, as Garcia (2013, p. 1) points out, "the teacher needs to use resources that transform his classes, in order to instigate the search for knowledge, teaching dynamic, motivating and attractive classes".

However, the incorporation of technologies in the school context does not always result in inclusive pedagogical practices. In many cases, the instrumental and decontextualized use of these resources is observed, disconnected from a pedagogical project committed to equity and diversity. Thus, the following research problem emerges: how can the use of digital technologies effectively contribute to the promotion of special and inclusive education, considering the pedagogical, formative and structural challenges present in Brazilian schools?

In view of this problem, the general objective of this article is to analyze the challenges and possibilities of using digital technologies in the context of special and inclusive education, understanding their role as mediators of the teaching-learning process. In a complementary

way, the specific objectives are: (a) to discuss the historical and political foundations of special and inclusive education in Brazil; (b) reflect on the role of the teacher in the construction of inclusive pedagogical practices; and (c) analyze the potential and limits of digital and assistive technologies in the context of school inclusion.

The scientific justification of this study lies in the need to deepen the theoretical debate on the articulation between inclusive education, digital technologies and teacher training, especially in view of the gaps between the legal discourse of inclusion and its effectiveness in everyday pedagogical practices. By addressing this theme, the article contributes to the field of education by problematizing naturalized conceptions about technology and inclusion, reinforcing the importance of a critical, pedagogical and contextualized approach.

This article is organized as follows: initially, the historical and political foundations of special and inclusive education are discussed; then, the role of the teacher in the construction of the inclusive school is analyzed; subsequently, the contributions of digital technologies in the teaching-learning process and their challenges in the educational context are examined; Finally, the final considerations are presented, in which the main reflections and contributions of the study are systematized.

2 METHODOLOGY

The present study is characterized as a qualitative research, developed through a critical bibliographic review. The review focused on classic and contemporary works that address inclusive education, educational technologies, and teacher training, as well as legal and normative documents that guide public inclusion policies in Brazil.

Productions published mainly between the years 2000 and 2024 were analyzed, prioritizing reference authors in the field of inclusive education and educational technologies, such as Mantoan, Kenski, Moran, Garcia, and Schlünzen, as well as official documents such as the Brazilian Inclusion Law (2015), the National Policy on Special Education in the Perspective of Inclusive Education (2008), and the National Education Plan (2014–2024).

The analysis of the materials was guided by an interpretative and critical reading, seeking to identify convergences, tensions and gaps between normative discourses, theoretical approaches and educational practices. As a limitation of the study, the absence of empirical research is recognized, which points to the need for future research that explores concrete experiences of the use of technologies in inclusive education in different school contexts.

3 SPECIAL AND INCLUSIVE EDUCATION: HISTORICAL AND POLITICAL FOUNDATIONS

Historically, the education of people with disabilities in Brazil has been structured under a welfare and segregating logic, strongly marked by philanthropic practices and the separation of these subjects from common educational spaces. During much of the twentieth century, educational services took place predominantly in specialized institutions, far from regular schools, which reinforced a conception of disability associated with disability, abnormality and the need for correction or treatment, to the detriment of the recognition of difference as a constitutive dimension of the human condition.

This perspective was aligned with the so-called medical model of disability, which centers its analysis on clinical diagnosis and individual limitations, disregarding the social, pedagogical and structural factors that produce and reinforce barriers to school participation. In this model, educational failure was often attributed to the student himself, exempting the school and the educational system from their responsibility in guaranteeing the right to learning. As a result, the schooling processes of people with disabilities have historically been restricted, fragmented and devoid of a critical perspective focused on citizenship formation.

The transition to a new paradigm began to consolidate in the 1990s, driven by important international milestones, such as the World Conference on Education for All (Jomtien, 1990) and the Salamanca Declaration (1994). These documents promoted a significant inflection in the educational field by stating that special education should be part of the common educational system, defending the right of all children, regardless of their conditions, to attend quality regular schools. This movement contributed to the shift of the focus from disability to the existing barriers in the school environment, approaching a social and inclusive perspective.

In the Brazilian context, this new understanding gained legal support with the Federal Constitution of 1988, which recognized education as a social right and duty of the State, ensuring specialized educational service preferably in the regular school system. The Law of Guidelines and Bases of National Education (Law No. 9,394/96) deepened this principle by defining special education as a transversal modality at all levels and stages of education, guaranteeing the right to access, permanence and learning of students with disabilities.

Normative progress was significantly strengthened with the enactment of the Brazilian Law for the Inclusion of Persons with Disabilities (Law No. 13,146/2015), which consolidated the principles of equal opportunities, accessibility, and non-discrimination. By recognizing people with disabilities as subjects with full rights, the LBI reaffirms the obligation of educational systems to offer the necessary support for school participation, including

adequate teacher training, accessible teaching resources and assistive technologies, definitively shifting the responsibility of adaptation from the individual to the transformation of educational contexts.

In this same horizon, the National Policy on Special Education in the Perspective of Inclusive Education (2008) constitutes a fundamental political and pedagogical milestone by redefining the role of special education as complementary and supplementary to common education, through Specialized Educational Service (SES). The policy emphasizes the importance of continuing education of education professionals, curricular flexibility and the guarantee of architectural, communicational and pedagogical accessibility as indispensable conditions for school inclusion.

Despite this robust legal and normative framework, the Brazilian educational reality still reveals numerous challenges for the effectiveness of inclusive education. Gaps persist related to school infrastructure, the supply of accessible materials, teacher training and, above all, the overcoming of exclusionary conceptions and practices rooted in school culture. The transition from an exclusionary educational model to an inclusive model therefore requires more than legal changes: it requires a continuous ethical and political commitment to valuing diversity as an educational principle and to building a school capable of teaching everyone, without exception.

4 THE ROLE OF THE TEACHER IN THE CONSTRUCTION OF THE INCLUSIVE SCHOOL

The consolidation of inclusive education in the school routine is intrinsically related to the performance of the teacher, who assumes a central role in the mediation of the teaching-learning process. It is in the classroom space that inclusive policies materialize — or not — through pedagogical practices, teaching strategies, forms of evaluation, and relationships established with students. In this sense, the teacher is a fundamental agent in the construction of a school that recognizes and values diversity, ensuring real learning conditions for all.

However, several studies and official documents point out that many teachers still face difficulties in working in inclusive contexts. Among the main challenges are the gaps in initial training, which historically has little contemplated the theme of inclusion, and the insufficiency of continuing education policies that articulate theory and practice. As a consequence, it is common for teachers to feel insecure in the face of the presence of students with disabilities in regular classes, resorting to homogeneous practices that have little dialogue with the specific educational needs of these subjects.

According to the document *Training of Educators and the Construction of the Inclusive School* (IFES, 2020), teacher training needs to be rethought in the light of the inclusive paradigm, understanding that teaching in contexts of diversity requires more than mastery of curricular content. It requires, above all, an ethical, political and pedagogical stance committed to human rights, equity and social justice. In this context, the teacher is no longer a mere transmitter of knowledge and starts to act as a mediator, facilitator and organizer of meaningful learning experiences.

This perspective dialogues with the understanding of Garcia (2013, p. 1), when he states that "the teacher is no longer a simple transmitter of knowledge. Today, he is a mediator, facilitator of the teaching-learning process and students are the active subjects of this process". Such a conception implies the adoption of active methodologies, multisensory strategies, collaborative practices and technological resources that expand the possibilities of access to knowledge and participation of students, respecting their different rhythms, styles and ways of learning.

Another fundamental aspect of teaching in inclusive contexts refers to curricular flexibility. Inclusive education presupposes the adaptation of objectives, contents, strategies and assessment tools, in order to ensure that all students have real learning opportunities. However, as Azevedo and Passeggi (2015) point out, many teachers report difficulties in making such adaptations, especially when they do not have institutional support, collaborative work and continuing education to support these practices.

The construction of an inclusive school also requires the teacher to be able to act in an articulated way with other education professionals, such as teachers of the Specialized Educational Service (AEE), Libras interpreters, support professionals and multiprofessional teams. This collaborative action is essential for accessible pedagogical planning and for monitoring the school trajectories of students with disabilities, avoiding isolated and fragmented practices.

In addition to pedagogical skills, teaching in inclusive contexts requires the development of socio-emotional skills, such as empathy, sensitive listening, flexibility, resilience, and willingness to work collectively. Such competencies are fundamental for the construction of more humane and democratic pedagogical relationships, capable of welcoming differences as a constitutive part of the educational process.

As Mantoan (2006) emphasizes, inclusion is not achieved through specific actions or superficial adaptations, but through a profound transformation of the school culture. In this process, the teacher occupies a strategic position, as he is the one who leads the construction or denial of inclusive practices on a daily basis. Thus, ensuring adequate working conditions,

consistent continuing education and institutional support for teachers is an indispensable requirement for the school to stop reproducing inequalities and become, in fact, a learning space for all.

5 NEW TECHNOLOGIES AND THE TEACHING-LEARNING PROCESS

Digital information and communication technologies (DICTs) have caused significant transformations in the ways of teaching and learning, changing the forms of access to knowledge, interaction between subjects and production of meanings in the educational context. Such transformations directly impact the teaching-learning process, requiring the school to review pedagogical practices historically centered on the transmission of content and the homogenization of educational processes.

In the context of inclusive education, digital technologies assume even greater relevance, as they can act as mediators of learning and as instruments for overcoming pedagogical, communicational and cognitive barriers. As Garcia (2013) points out, when used in a planned and intentional way, technologies contribute to making classes more dynamic, attractive and contextualized, favoring student engagement and expanding the possibilities of participation, especially for those who have historically faced processes of school exclusion.

The incorporation of technologies into the teaching-learning process, however, should not be restricted to the replacement of traditional resources by digital devices. As Almeida and Valente (2007) warn, the pedagogical use of technologies needs to be anchored in conceptions that understand these resources as mediators of the construction of knowledge, and not as ends in themselves. In this sense, the presence of computers, tablets or digital platforms is only justified when integrated into a pedagogical project that promotes meaningful learning and the development of student autonomy.

Pedagogical mediation with the use of DICTs involves the careful selection of resources such as educational software, learning platforms, digital games, virtual learning environments, multimodal resources (audio, video, images, animations) and collaborative tools. These resources, when articulated with active methodologies, enable multiple forms of access to content, expression of learning and social interaction, respecting the different styles and rhythms of learning of students.

However, as Moran (2000) points out, the mere presence of technologies in the school environment does not guarantee innovation or quality in teaching. There is a risk that the apparent technological modernization will only reproduce traditional practices, centered on memorization and passive reception of information. Thus, it is essential that the teacher

understands the role of technologies as allies of pedagogical action, capable of expanding possibilities, but not replacing didactic planning, pedagogical intentionality and teacher mediation.

In the context of inclusive education, the use of technologies is also directly related to the promotion of autonomy, authorship, and protagonism of students. By allowing different forms of communication, production and participation, DICTs contribute to the valorization of singularities and to the construction of more democratic learning environments. This perspective is close to an emancipatory conception of education, in which subjects not only consume information, but also produce, reinterpret and share it in a critical way.

Finally, it is highlighted that the effectiveness of technologies in the teaching-learning process is directly related to teacher training. Training in technologies cannot be limited to the technical mastery of the tools, but must include reflection on their pedagogical, ethical and political foundations. Only in this way will it be possible to overcome the instrumental use of technologies and enhance their role in the construction of inclusive pedagogical practices, capable of meeting the diversity present in contemporary classrooms.

6 TECHNOLOGIES AND SCHOOL INCLUSION: ADVANCES AND CHALLENGES

In the context of inclusive education, digital and assistive technologies have been consolidated as important allies in overcoming pedagogical, communicational, physical and attitudinal barriers. These resources, when used in a planned and contextualized way, expand the possibilities of access to the curriculum and participation of students with disabilities, contributing to the construction of more equitable pedagogical practices.

Among the most significant advances, assistive technologies stand out, such as screen readers for visually impaired students, speech synthesis software, text magnifiers, adapted keyboards, alternative communicators, and augmented reality-based resources. As Passerino (2001) points out, these technologies not only compensate for functional limitations, but also enhance unique forms of interaction with knowledge, favoring students' autonomy and expression.

However, despite the recognized inclusive potential of technologies, their implementation in everyday school life still faces significant challenges. The scarcity of equipment, the precariousness of technological infrastructure, the absence of adequate connectivity and the insufficiency of pedagogical planning are recurrent obstacles, especially in public schools. Schlünzen (2005) points out that, without consistent policies for teacher training and pedagogical monitoring, technologies tend to be underused or used in a merely instrumental way.

Another relevant challenge refers to the risk of the so-called "exclusionary inclusion", when technology is introduced in the school only to comply with normative requirements, without effective transformation of pedagogical practices. In these cases, it is observed that technological resources are made available without the proper adequacy of the didactic material or without the contextualization of the proposed activities, which limits the inclusive potential of these tools and can reinforce exclusion processes.

As Kenski (2007) points out, technology should not be conceived as a substitute for the teacher, but as a resource that expands and enriches the pedagogical action. This understanding requires that technologies be integrated into the curriculum in a critical way, considering the specificities of the students and the sociocultural contexts in which they are inserted. In addition, it is essential to recognize the regional and social inequalities that impact access to technologies, highlighting the need for public policies that articulate educational inclusion and digital inclusion.

Thus, technological advances will only translate into effective school inclusion when accompanied by investments in infrastructure, continuing teacher training and changes in pedagogical conceptions. Technology, in isolation, does not promote inclusion; It is the pedagogical intentionality and the ethical commitment to diversity that give meaning to its use in the educational context.

In addition to national production, international studies have highlighted the role of digital technologies as mediators of educational inclusion, especially with regard to accessibility, personalization of learning, and universal design for learning (UDL). Reports from international organizations, such as UNESCO and the OECD, reinforce that the integration of technologies into inclusive education must be associated with consistent public policies, teacher training and ensuring equity in digital access, avoiding the expansion of educational inequalities. These debates broaden the understanding of school inclusion as a global challenge, reinforcing the need for articulation between local contexts and international agendas.

7 TEACHERS' EXPERIENCES WITH TECHNOLOGIES IN INCLUSIVE EDUCATION

Reports of teaching experiences show that the pedagogical use of technologies can promote significant transformations in educational practices, especially in contexts marked by diversity. When incorporated in a creative and planned way, technologies favor student engagement, expand the possibilities of expression, and contribute to the construction of more participatory and inclusive learning environments.

In the work organized by Azevedo and Passeggi (2015), several reports of basic education teachers who used digital tools such as blogs, virtual learning environments, video production and collaborative networks to enhance teaching are presented. These experiences demonstrate that the use of technologies can strengthen students' authorship, value their cultural identities and promote the development of communicative skills, including among students with learning difficulties or disabilities.

An emblematic example refers to the "TV Cedro Rosa" project, in which children from socially vulnerable contexts participated in the production of videos about their own reality, favoring inclusion processes through audiovisual language. Another relevant report concerns the use of online simulations in preparatory assessments of SARESP, presented by Santos (2015), which showed greater autonomy of students and greater involvement with the learning process.

Experiences with the use of digital games have also shown positive results in the context of inclusive education. As reported by Tani (2015), the use of games in Philosophy classes enabled the mediation of knowledge through play and visual language, benefiting students with cognitive difficulties and expanding access to curricular content. Gamification, in this sense, proved to be a powerful strategy to promote student participation and interest.

These experiences reinforce the importance of spaces for continuing education that value reflection on teaching practice and encourage the sharing of successful experiences. The socialization of these practices contributes to the construction of a school culture that is more open to pedagogical innovation and inclusion, demonstrating that, even in contexts with material limitations, it is possible to develop significant educational actions when there is intentionality, creativity and commitment to learning for all.

8 RECENT PUBLIC POLICIES AND THE DIGITAL INCLUSION AGENDA

In recent decades, Brazil has experienced important normative advances in the field of inclusive education and the integration of digital technologies into the educational process. The incorporation of these agendas into public policies reflects the recognition that the right to full education, especially for students with disabilities, is intrinsically related to equitable access to educational technologies and teacher training for their pedagogical use.

The approval of the National Education Plan (PNE – Law No. 13,005/2014) represented a strategic milestone by establishing goals aimed at the universalization of school attendance and the promotion of the quality of education, including the expansion of the pedagogical use of digital technologies. In this context, Goal 4 stands out, which deals with ensuring access to education for students with disabilities, global developmental

disorders, and high abilities or giftedness, and goals related to teacher training, pedagogical innovation, and the improvement of the technological infrastructure of schools.

However, the achievement of these goals has been compromised by structural and institutional obstacles, such as the discontinuity of government programs, political and economic instability, and insufficient public investments. Programs aimed at integrating technologies in schools, such as ProInfo, faced difficulties related to equipment maintenance, connectivity, and teacher training, limiting their impact on daily school life.

The Covid-19 pandemic (2020–2022) highlighted and deepened the existing digital inequalities in the country, revealing the fragility of the technological infrastructure of public education networks and the insufficiency of digital inclusion policies. At the same time, this context has accelerated the debate on the centrality of technologies in education and reinforced the urgency of public policies that guarantee connectivity, digital accessibility, and teacher training, especially for the educational service of students with disabilities.

In this scenario, more recent initiatives, such as programs aimed at expanding school connectivity and digital teacher training, indicate a resumption of the digital inclusion agenda. However, for such policies to result in effective educational inclusion, it is essential that they are articulated with the National Policy on Special Education from the Perspective of Inclusive Education, ensuring that investments also include assistive technologies, digital accessibility and specialized pedagogical support.

As pointed out by Almeida and Schlünzen (2007; 2005), effective public policies in the field of education and technologies should consider local realities and promote the active participation of school communities in their implementation. Digital inclusion, in this sense, cannot be understood only as access to equipment, but as a formative and pedagogical process that involves planning, monitoring and continuous evaluation.

Thus, the consolidation of the digital inclusion agenda in Brazil requires integrated, sustainable public policies committed to equity, recognizing that the use of technologies in inclusive education depends both on material conditions and on changes in pedagogical conceptions and teaching practices.

9 FINAL CONSIDERATIONS

Inclusive education is configured as an ethical, political and pedagogical commitment to the construction of a more just and democratic society, in which human diversity is recognized as an educational value and principle. Throughout this study, it was evidenced that the implementation of this commitment, especially in the context of special education,

requires the overcoming of historically ingrained exclusionary practices and the construction of pedagogical strategies capable of guaranteeing the right to learning of all students.

The use of digital technologies, when guided by a critical and pedagogical perspective, presents itself as an important mediator in the teaching-learning process, contributing to the expansion of access to knowledge, participation and autonomy of students with disabilities. However, the study demonstrates that technologies alone do not ensure inclusion. Its effectiveness is conditioned to pedagogical intentionality, continuous teacher training and the integration of these resources into an educational project committed to equity and social justice.

It is noteworthy that teacher training is a central axis for the consolidation of inclusive practices mediated by technologies. Teaching performance, supported by flexible methodologies, accessible resources and collaborative work, proves to be decisive for the construction of democratic learning environments that are sensitive to the singularities of students. In this sense, public policies that value teachers and ensure adequate working and training conditions are indispensable for the advancement of school inclusion.

As a limitation of this study, its predominantly bibliographic character is recognized, which points to the need for empirical research that investigates concrete experiences of the use of technologies in inclusive education, considering different educational contexts. Future studies can deepen the analysis of the impact of emerging technologies, such as artificial intelligence and immersive environments, in the promotion of inclusive pedagogical practices.

It is concluded that the construction of a truly inclusive school involves the articulation between consistent public policies, critical teacher training and intentional pedagogical use of digital technologies. It is up to educational systems, school institutions, and education professionals to collectively assume this responsibility, in order to ensure that digital and educational inclusion materializes as an effective right, and not just as a normative discourse.

REFERENCES

Almeida, M. E. B. de. (2007). Tecnologias digitais na educação: O futuro é hoje. In Anais do 5º Encontro de Educação e Tecnologias de Informação e Comunicação. https://etic2008.files.wordpress.com/2008/11/pucspmariaelizabeth.pdf

Azevedo, A. B. de, & Passeggi, M. C. (Eds.). (2015). Narrativas das experiências docentes com o uso de tecnologias na educação. Editora Metodista.

Brasil. (1996). Lei nº 9.394, de 20 de dezembro de 1996. Lei de Diretrizes e Bases da Educação Nacional. Presidência da República. https://www.planalto.gov.br/ccivil_03/leis/l9394.htm

Brasil. (2015). Lei nº 13.146, de 6 de julho de 2015. Lei Brasileira de Inclusão da Pessoa com Deficiência. Presidência da República. https://www.planalto.gov.br/ccivil_03/_ato2015-2018/2015/lei/l13146.htm

Brasil. Ministério da Educação. Secretaria de Educação Especial. (2008). Política Nacional de Educação Especial na Perspectiva da Educação Inclusiva. https://www.mec.gov.br (ou link oficial equivalente do MEC)

Brasil. (2014). Lei nº 13.005, de 25 de junho de 2014. Plano Nacional de Educação – PNE 2014-2024. Presidência da República. https://www.planalto.gov.br/ccivil_03/_ato2011-2014/2014/lei/l13005.htm

Garcia, F. W. (2013). A importância do uso das tecnologias no processo de ensino-aprendizagem. Educação a Distância, 3(1), 25–48.

Kenski, V. M. (2007). Educação e tecnologias: O novo ritmo da informação. Papirus.

Mantoan, M. T. E. (2006). Inclusão escolar: O que é? Por quê? Como fazer? Moderna.

Moran, J. M. (2000). Ensino e aprendizagem inovadores com tecnologias. Informática na Educação: Teoria & Prática, 3(1). https://moran10.blogspot.com (ou link para o artigo no blog/revista)

Passerino, L. M. (2001). Informática na Educação Infantil: Perspectivas e possibilidades. In E. D. Roman & V. E. Steyer (Eds.), A criança de 0 a 6 anos e a Educação Infantil (pp. [páginas não fornecidas]). Editora da ULBRA.

Santos, F. F. dos. (2015). Ações tecnológicas para o Saresp: A prática do uso de simulados online. In A. B. de Azevedo & M. C. Passeggi (Eds.), Narrativas das experiências docentes com o uso de tecnologias na educação (pp. [páginas não fornecidas]). Editora Metodista.

Schlünzen, E. T. M. (2005). Escola inclusiva e as novas tecnologias. In M. E. B. de Almeida & J. M. Moran (Eds.), Integração das tecnologias na educação (pp. [páginas não fornecidas]). MEC/SEED. https://portal.mec.gov.br/seed/arquivos/pdf/2sf.pdf

Tani, Z. R. (2015). O uso de jogos nas aulas de filosofia: O lúdico tecnológico. In A. B. de Azevedo & M. C. Passeggi (Eds.), Narrativas das experiências docentes com o uso de tecnologias na educação (pp. [páginas não fornecidas]). Editora Metodista.