


WHEN TECHNOLOGY BECOMES A BRIDGE AND NOT A BARRIER: CRITICAL REFLECTIONS ON ACCESSIBLE RESOURCES IN SPECIAL EDUCATION IN SPECIALIZED EDUCATIONAL SERVICE CLASSES

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ABSTRACT

The presence of technology in the field of specialized education can no longer be conceived as a technical response to specific demands, nor as a simple tool for functional adaptation. When situated in the context of Specialized Educational Service (SES), its power is revealed in the ability to produce new pedagogical grammars, in which access to knowledge is not made by concession, but by law constituted within practices sensitive to difference. Technological mediation, in this horizon, requires more than instrumentalization: it calls on the school to revisit its logics of naturalized exclusion and to reinvent itself as a space for the shared production of meaning. This study aims to deepen the critical understanding of the ways in which accessible technological resources have been integrated into the daily routine of Specialized Educational Service, seeking to recognize in these devices not only the material mediation of access, but the symbolic gesture of legitimizing the presence of the subject in school. To sustain this reflection, a bibliographic methodology anchored in contemporary productions that tension the relations between accessibility, pedagogy and technology is adopted, privileging analyses that situate the teaching practice as an ethical field of decision and inclusive construction. Thinking about accessibility, therefore, is not adapting the existing, but reconstructing the conditions of belonging, opening space for each student to be recognized in their uniqueness without being reduced to it.

Keywords: Accessibility. ESA. Inclusion. Mediation. Technology.

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INTRODUCTION

The history of inclusive education in Brazil is marked by normative advances that, although consistent in their formulation, still face resistance rooted in school daily life. When observing the reality of many institutions, it is perceived that the recognition of difference as a formative value remains conditioned to structures that are not very sensitive to the singularity of the subjects. In this scenario, the Specialized Educational Service (SES) has occupied an ambivalent place: sometimes treated as a space of technical support, sometimes as a territory of pedagogical invention that tensions the limits of conventional schooling.

Thinking of SEA as a field for the production of subjectivities and the expansion of the right to learning implies questioning the logics that sustain the centrality of the normative curriculum and standardized pedagogy. Effective inclusion does not result from the insertion of technologies in environments of exclusion, but from the symbolic reconstruction of the ways of teaching and learning with and from difference.

It is in this in-between place — where the presence of the subject cannot be mediated by concessions, but by recognition — that accessible technological resources become tools of epistemic displacement, capable of establishing new ways of belonging, interacting and producing knowledge.

The presence of technology in specialized education should not be interpreted as a universal response to the challenges of inclusion, but as a potentially plural language, which acquires different meanings according to the subjects, contexts and pedagogical intentions that mobilize it.

In this sense, accessible devices do not operate only on the technical dimension of access, but directly affect the constitution of the school experience as a territory of legitimate enunciation, opening fissures in the logic of corrective adaptation that still predominates in many institutional practices.

Technological mediation, when situated in its ethical and political density, allows for tensioning the ways in which knowledge is presented, distributed and validated in educational institutions. What is at stake is not the application of ready-made solutions, but the construction of environments that recognize the multiplicity of ways of learning without translating difference into deficit.

Contrary to what a pedagogy of lack supposes, technological accessibility can be converted into a gesture of material listening, where the language of the support does not silence the subject, but expands his capacity for expression and authorship.

This study aims to deepen the critical understanding of the ways in which accessible technological resources have been integrated into the daily routine of Specialized Educational Service, seeking to recognize in these devices not only the material mediation of access, but the symbolic gesture of legitimizing the presence of the subject in school. To sustain this reflection, a bibliographic methodology anchored in contemporary productions that tension the relations between accessibility, pedagogy and technology is adopted, privileging analyses that situate the teaching practice as an ethical field of decision and inclusive construction.

The reflections developed here cover experiences and meanings attributed to the technologies accessible in the SEA, examine their materiality and symbolic effects, question the limits of public policies in the face of school practices and call the educator to ethical responsibility in the construction of non-exclusive formative paths. The article investigates, therefore, the interfaces between technology, pedagogical mediation and recognition of difference as a legitimate instance of knowledge, expanding the debate on the role of schools in the formation of subjects who not only access knowledge, but participate in it in its entirety.

METHODOLOGY

The investigation was conducted from a qualitative approach of bibliographic nature, whose methodological choice was justified by the interest in understanding, with interpretative depth, the meanings attributed to the use of accessible technological resources in the Specialized Educational Service. The research was not limited to the search for descriptive data, but prioritized the theoretical tension between inclusive pedagogical practices and the presence of technologies in the reconfiguration of training processes.

The selection of sources favored productions published in the last decade, with emphasis on studies that discuss accessibility as a constitutive dimension of the educational experience, and not as a complementary attribute to the school structure.

To delimit the analytical corpus, indexed databases such as CAPES Periódicos, Scielo and Google Scholar were consulted, using combinations of terms such as "assistive technology", "inclusive education", "SEA", "accessible resources" and "pedagogical mediation".

Strict inclusion criteria were applied, considering the timeliness of the publications, the theoretical coherence of the arguments, and the centrality of the theme. Classical reference works were mobilized in a complementary way, as long as they allowed the proposed reflection to be deepened. The reading was guided by categories that emerged from the texts themselves, being systematized in axes that allowed to give organicity to the discussion.

The methodological structure was supported by authors who, in the last decade, have been contributing significantly to the field of inclusive education and technology-mediated pedagogical practices. Reading allowed us to situate inclusion as an ethical and political process that crosses the entire school organization, while studies made it possible to understand accessible resources not as technical solutions, but as practices loaded with meanings that require qualified pedagogical reading. The choice for a critical approach was necessary in view of the limitations imposed by adaptive models and the urgency of making visible school experiences in which technology acts as a language of recognition and curriculum reconstruction.

ASSISTIVE TECHNOLOGY AS A WAY TO RECOGNIZE DIFFERENCE IN THE SCHOOL CONTEXT

The constitution of the school as a public space for the legitimate circulation of knowledge is still marked by structures that, instead of promoting the recognition of difference, often operate under the logic of adequacy. In this scenario, the presence of accessible technological resources cannot be understood as a technical solution, but as a symbolic opening to other forms of teaching and learning, in which the subject is no longer seen as an exception to be included and is affirmed as a legitimate instance of knowledge production.

It is in this horizon that the disruptive potential of assistive technology is recognized, especially when it operates as a language that expands the subject's expression and not as an adaptive prosthesis. According to Penha et al. (2024, p. 154), "assistive technology and alternative communication have been important in promoting the autonomy and active participation of people with disabilities". The statement signals that access to knowledge should not be mediated by concessions, but by devices that embrace the multiplicity of ways of learning.

When discussing the urgency of concrete practices, Costa and Braga (2015, p. 48) observe that "inclusion is a reality and it is not possible to stay only in discussions. It is

necessary to seek solutions that alleviate the difficulties and enable the construction of students' knowledge". By highlighting the need for action, the author shifts the debate from the sphere of discourse to the field of ethical and pedagogical responsibility.

It was observed how assistive technology and alternative communication have been important in promoting the autonomy and active participation of people with disabilities, despite the practical and organizational challenges faced in their implementation. The conclusion reinforces the relevance of these technologies as vital tools for social inclusion, highlighting the need for continuous efforts to overcome barriers and maximize their positive impact (PENHA et al., 2024, p. 157).

In light of this formulation, it is emphasized that the presence of accessible technologies in school spaces requires more than their physical availability: it demands an intentional pedagogical mediation, which understands such devices as forms of language and materialized listening. According to Souza (2015, p. 76), "teacher-researchers have the responsibility to be aware of the factors that permeate schools and large academic centers". It is about recognizing that each methodological choice is also a political position in the face of difference.

Technology, therefore, cannot be mobilized as a panacea, nor as an appendix of the curricular structure. When treated with epistemological seriousness, it redefines the parameters of school belonging, shifting the focus from adaptation to the norm to the invention of more open, responsive and legitimate educational paths. In this sense, accessible resources, far from functioning as remediation tools, assume the function of establishing new possibilities of educational existence in the daily life of the SEA.

SHEA AS A FORMATIVE TERRITORY IN DISPUTE BETWEEN PRESCRIPTIONS AND TEACHER CREATIVITY

The condition of those who teach in the space of Specialized Educational Service is rarely thought of in its complexity. Teachers are required to have technically instrumental knowledge, but at the same time, they are expected to work miracles with scarce structures, precarious training and unachievable normative goals. Between the weight of institutional prescriptions and the urgency of daily needs, a terrain marked by improvisations, tensions and creative gestures emerges that challenge the linearity of educational policies.

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Galvão Filho (2009, p. 42) observes that "the success of school inclusion depends, among other factors, on the appropriation of assistive technologies by teachers". The statement shows that the existence of the resource is not enough: it is in the way the educator reinterprets his practice that technology acquires pedagogical power. Mediation is not automatic; It is built at the intersection of knowledge, sensitivity, and political engagement with difference.

Lopes (2019, p. 21) reinforces this perspective by stating that "inclusive activities become effective when education professionals act with creativity, flexibility, and critical training". Its analysis reveals that teacher creativity is not opposed to technique, but re-signifies it, producing solutions that go beyond manuals. The challenge is not only in the mastery of the tool, but in the ability to recompose the logic of the class based on the uniqueness of the learner.

Assistive Technology emerges as an area of knowledge and research that has revealed itself as an important horizon of new possibilities for the autonomy and social inclusion of students with disabilities. In this sense, it is necessary that its incorporation into the school context takes place in a critical way, considering the specific demands of the subjects and the real conditions of public educational institutions (GALVÃO FILHO, 2009, p. 15).

From this formulation, it is understood that assistive technology only acquires inclusive power when it is critically incorporated into pedagogical practice. It is not enough to offer devices if teachers do not feel part of the process, if there is no policy of ethical and aesthetic accountability that involves the school as a whole. Teacher creativity, in this field, is not technical improvisation, but ethical reinvention of the meanings of learning.

Pedagogical creation, in this context, is neither a luxury nor an exception. It is a formative need that imposes itself in the face of the distance between what is prescribed and what is lived. In the gaps between the ideal and the possible, teachers build insurgent practices, reinvent resources, adjust routines, multiply strategies. It is in this field of negotiation that difference becomes a planning criterion and not an obstacle to execution. SEA, in this sense, can cease to be an appendix of regular education and become the beating heart of a school that learns from its students.

5 ACCESSIBLE DIGITAL RESOURCES AS DEVICES OF AUTONOMY AND PEDAGOGICAL RESISTANCE

The transformation of school environments into inclusive spaces does not depend exclusively on the presence of digital devices, but on the way in which these resources are incorporated into pedagogical practice as tools for ethical, symbolic, and political mediation. When used from a formative intentionality that understands difference as a basis – and not as a deviation – accessible materials become tools of authorship and recognition. The digital, in this case, ceases to function as an appendix and becomes a territory of materialized listening.

The construction of accessible pedagogical resources requires a teaching gesture that goes beyond the technical reproduction of ready-made models. Martins et al. (2021, p. 17) argue that "the construction of accessible pedagogical resources requires dialogue between theoretical knowledge and effective practices of school inclusion". This conception calls on the teacher to become a co-author of the materials he uses, taking into account the real contexts of learning and the ways in which his students relate to the world, to the body and to language.

When analyzing experiences with technologies in contexts of diversity, Ferreira, Rebelo, and Kassar (2021, p. 9) observe that "the presence of digital technologies in everyday school life does not guarantee, by itself, inclusive practices". The warning highlights the risk of treating digital as a magic solution. Technological resources, when devoid of sensitive mediation, can intensify inequalities, especially if thought of as an instrument of standardization. Inclusion, in this sense, is not produced by the tool itself, but by the pedagogical choice that gives it meaning.

It is in this gesture of conceiving the digital as a place of listening and not of correction that the political power of accessibility resides. Martins et al. (2021, p. 22) argue that "accessibility should be present in the very design of the resource, and not be thought of as a subsequent adaptation". This idea subverts the dominant logic, which first produces the material for the ideal subject and then adapts it for those who don't fit. When accessibility is foundational — and not patched — it generates belonging, authorship, and multiple forms of participation.

The critical appropriation of digital resources, according to Ferreira et al. (2021, p. 11), "gains strength when educators problematize both their potentialities and their

limitations". This means that to resist, in the pedagogical field, is not to refuse technology, but to refuse its instrumental appropriation. The teacher who recognizes difference as a planning criterion and not as a methodological exception mobilizes the digital as a language of invention. Its use ceases to be a compliance with protocol and becomes a manifestation of an ethical position towards the other.

Thus, to think of accessible digital resources as devices of autonomy is also to recognize their insurgent dimension. When conceived as a situated pedagogical gesture – and not as an imposed tool – they allow the school to reconfigure its symbolic and material structures, making room for plural ways of learning, teaching and existing. In this process, the teacher is no longer just a mediator of knowledge and becomes a co-author of possible worlds.

TENSIONS BETWEEN THE POLITICS OF THE POSSIBLE AND THE MATERIAL LIMITS OF THE EDUCATION NETWORKS

There is no inclusive policy that can be sustained where the school remains incarcerated due to structural absences. Between the promise of official documents and the rough ground of public institutions, a zone of tension is installed where inclusion becomes a slogan, and the subjects, a statistic. What should be a collective project of transformation often becomes a unilateral demand placed on precarious educators, as if good will were enough to make the impossible flourish.

When reflecting on the failure of educational reforms that ignore the material conditions of public schools, Saviani (2008, p. 38) points out that "the structural duality of Brazilian education reproduces, within the education system itself, the social inequalities that permeate it". The speech not only denounces the inefficiency of policies, but their historically conniving character with exclusion. If the school of the possible is the one that is content to keep the subjects in a position of waiting, it legitimizes inequality under the guise of progress.

In this same critical horizon, Freire (1996, p. 67) warns that "education does not transform the world. Education changes people. People transform the world". The sentence, far from idealizing the teacher as an isolated hero, repositions his practice as a power of social mobilization. But for the educational gesture to reach its political strength, it needs to break with the institutional isolation that suffocates it. Without real conditions of action, the teacher is not an agent of transformation, but a survivor of the system.

Education is an act of love, therefore, an act of courage. You cannot fear debate. The analysis of reality. It cannot escape the creative discussion, under penalty of being a farce. Those who think right, even if they sometimes think wrong, are the ones who can teach them to think right. To think right is to think critically. To think right is to think with others and not for others (FREIRE, 1996, p. 128).

Freire's formulation is more than a provocation — it is a denunciation. A school that is silent in the face of its own limitations, that repeats the discourse of inclusion without guaranteeing structure, becomes part of the problem. By escaping critical reflection, the educational system empties its own commitments. What is presented as a policy of the possible is often only the management of the precarious.

Saviani (2008, p. 51) proposes that "democratizing education is not only expanding access, but ensuring the effective conditions of permanence and learning". This means that the right to education is not realized in enrollment, but in presence — and presence cannot be sustained without dignity. Recognizing the tensions between the normative ideal and the material reality is the first step to think about a public policy that does not betray the subjects in the name of the spreadsheet.

Inclusion, in this context, cannot be treated as a favor or exception, but as a radical reorganization of the school. There will only be a policy of the possible where there is an ethics of listening, sharing of responsibilities, valuing the teaching work and real investment. Everything else runs the risk of being, as Freire would say, a farce.

ASSISTIVE TECHNOLOGY AND THE REINVENTION OF WAYS OF LEARNING IN BASIC EDUCATION

The presence of assistive technology in school spaces has caused significant shifts in the understanding of learning processes, especially in the context of basic education, where the forms of appropriation of the world are still being constituted. More than technical devices, these resources become triggers for pedagogical reinvention, as they displace the centrality of traditional teaching and establish new possibilities for listening, receiving and constructing knowledge. Difference, previously treated as a limit, starts to operate as an organizing principle of the educational bond.

Santos *et al.* (2024) analyze how, in multifunctional resource rooms, the insertion of simple objects — such as magnifying glasses, tactile boards or personalized visual supports — radically transforms the dynamics of the class, reconfiguring learning time and

the language of mediation. By monitoring the use of these materials, the authors highlight that assistive technology not only expands access to information, but repositions the student as an agent of his own process, actively interfering in the organization of the task and in the way understanding is built. The focus is no longer on overcoming the deficit and becomes the multiplication of ways of learning.

Lima *et al.* (2024), when carrying out a systematic survey of academic production on assistive technologies, observe that the greatest impacts of these resources occur precisely when incorporated into the school daily life with pedagogical sensitivity and listening to the subjects involved. They say that the quality of the school experience mediated by accessible technologies depends less on the degree of sophistication of the resource and more on the way it is integrated into the class routine, the teacher's planning, and the uniqueness of each student. This requires openness to experimentation, renunciation of rigid control of the class and building bonds with the unpredictable.

These analyses destabilize the idea that assistive technology should occupy a place of peripheral supplementation, as if it were at the service of a pedagogical normalization of students with disabilities. On the contrary, when incorporated as a legitimate formative language, it expands the expressive repertoire of the classroom and dismantles the hierarchies between knowledge considered valid. Learning is no longer measured only by technical performance and starts to be read as a symbolic crossing between different ways of being in the world — something that technology, in this case, does not correct, but recognizes and legitimizes.

The school that welcomes these transformations needs, however, to reorganize its operating logic. It is necessary that school times become more elastic, that teaching materials can be adapted without bureaucracy, and that teachers have access to continuing education that helps them to read assistive technologies not as instruments of containment, but as an opening. When this does not occur, there is a risk that the resources, even if physically present, will not be mobilized as pedagogical tools, but only as a decorative mark of inclusion.

Santos *et al.* (2024) point out that, in many contexts, teacher resistance does not come from ill will, but from the lack of institutional preparation to sustain differentiated practices. The work overload, the absence of specific materials and the isolation of professionals who work with special education create an adverse environment for innovation. Recognizing this scenario does not mean justifying inertia, but understanding

that reinventing the ways of learning also requires reinventing the ways of sustaining the pedagogical work.

Lima *et al.* (2024) indicate that the schools that best operate with assistive technology are those that insert it in the political-pedagogical project as a constitutive part of the curricular proposal. It is not a matter of distributing equipment, but of formulating collective questions: what does it mean to learn from a disability? What does technological mediation reveal about the limits of traditional pedagogy itself? To what extent does the body that learns also transform the space it teaches? By facing these issues, the school collective no longer sees inclusion as an addition and begins to recognize it as an axis of curricular reorganization.

The SEA, in this process, gains a new status: no longer as an auxiliary space, but as a pedagogical nucleus that articulates powerful methodologies. Assistive technology, in this sense, ceases to be a support protocol and becomes a living experience — body, gesture, image, sound and texture — that teaches the school to relearn its own limits. Learning, therefore, does not take place in spite of difference, but through it.

POWER AND LIMIT OF ASSISTIVE TECHNOLOGY IN EVERYDAY SCHOOL LIFE

The incorporation of assistive technology in schools cannot be analyzed outside the structural context that sustains – or limits – its pedagogical use. Although the inclusive discourse is present in official documents and in continuing education, the school routine imposes obstacles that challenge the effectiveness of public policies. The presence of the resource, by itself, does not ensure a significant transformation in the experience of students with disabilities. The power of technological mediation lies in the way it is mobilized by formative subjects, within school ecosystems marked by tensions between the normative ideal and the concrete working conditions.

Reinert Junior and Coutinho (2024) demonstrate, based on investigations carried out in Brazilian public schools, that the efficient use of assistive technology in the literacy of children with disabilities depends on an articulated network of factors: the preparation of the pedagogical team, familiarity with the functioning of the devices, and the curricular adequacy to the specific needs of the student. The absence of any of these dimensions compromises the effectiveness of the tool and can even turn it into another exclusion marker. Thus, the power of technology is directly related to the quality of teacher training and the pedagogical intentionality with which the resources are inserted.

Institutional narratives that exalt technological accessibility often disregard the fractures that exist between the rhetoric of inclusion and the school daily life crossed by absences. The equipment that arrives without a manual, the software that does not work in the school system, the teacher who has not received specific training — all this compromises the mediation that should favor the student. It is in this space of tension that the real field of dispute about the place of difference in the educational process is produced.

Ernandes et al. (2024), when reporting successful experiences with assistive technologies in different regions of Brazil, emphasize that the success of these practices has always been linked to the ability of schools to adapt their planning to the uniqueness of the subjects served. More than using sophisticated equipment, the differential was listening to the real needs of students and the flexibility of educators to reformulate teaching strategies. This perspective shows that it is not the degree of technology, but the degree of ethical commitment to inclusion that determines the power of the resource.

Reinert Junior and Coutinho also point out that the resistance of the professors themselves should not be interpreted in a simplistic way. In many cases, what is identified as refusal is, in fact, an expression of a scenario of overload, lack of technical support and absence of institutional policies to value pedagogical work. Technology, when inserted without dialogue with the political-pedagogical project of the school, tends to become a burden, and not a bridge. Resistance, in this sense, is also a call for real working conditions.

Ernandes et al. reinforce that the process of critical appropriation of assistive technologies requires time, experimentation and support networks. Teachers who work directly with students who are the target audience of special education need to be accompanied by professionals from interdisciplinary areas who help to enhance the use of devices, preventing them from being abandoned due to inadequacy or lack of knowledge of their application. This requires a training investment that goes beyond punctual training and reaches the pedagogical culture of the school as a whole.

What matters is the quality of the educational process, and this can only be achieved through adequate working conditions, sufficient material resources, appreciation of the education professional and policies that articulate equal opportunities with equal conditions. Without this, any proposal for democratization is a mere simulacrum" (SAVIANI, 2008, p. 16).

This formulation by Saviani repositions the debate on the use of accessible technological resources: the problem lies not only in the technique, but in the social and institutional conditions that define its meaning. A technology without political support, without teacher training, without material and symbolic support, runs the risk of becoming another artifact of legitimized exclusion under the discourse of innovation.

RESULTS AND DISCUSSIONS

The investigative path developed throughout this article revealed that the presence of accessible technological resources in school practices is not, in itself, indicative of effective inclusion. Although public policies advance in the formulation of guidelines aimed at equity, the data analyzed in the selected works demonstrate that the effects of these devices are always mediated by symbolic, material and pedagogical disputes that cross the daily life of Specialized Educational Service. Studies such as those by Costa and Braga (2015) and Ernandes *et al.* (2024) point out that the effectiveness of these resources depends on the ability of institutions to transform physical access into meaningful pedagogical participation. More than promoting access, accessible resources enhance student autonomy only when integrated with conscious, sensitive and responsive teaching practices to the singularities of the subjects involved in the educational process.

The contributions of authors such as Martins, Gomes, and Ferraz (2021), as well as Ferreira, Rebelo, and Kassar (2021), indicate that the use of accessible digital technologies lacks ethical and intentional mediation to produce truly emancipatory effects. The instrumentalization of resources, when operated in a technocratic way, tends to reinforce the same exclusionary models that they claim to combat. Resistance, in this scenario, is manifested precisely in teaching practices that recognize accessibility as a starting point and not as a corrective concession.

Reinert Junior and Coutinho (2024), for example, demonstrate how the integration of assistive resources into the literacy of students with disabilities directly impacts engagement and ways of learning. When the teacher invents paths based on difference, he breaks with the logic of adaptation and repositions SEA as a formative and political space. The analyses by Penha *et al.* (2024) also reinforce this view by pointing out that student autonomy is mobilized when technology is articulated with listening and pedagogical affectivity.

In the analysis of the meanings attributed to assistive technology, the reflections of Galvão Filho (2009) and Lopes (2019) revealed that the pedagogical effectiveness of these resources depends on the ability of schools to welcome not only the devices, but also the diverse ways of existing and learning that they summon. This mediation, in turn, requires structure, time and continuing education. Otherwise, the inclusion policy becomes an overload for the teacher, who, without institutional support, is individually responsible for a task that should be collective. Contributions such as those of Lima *et al.* (2024) and Santos *et al.* (2024) indicate that the most powerful school experiences in terms of inclusion are those that understand assistive technology as a constitutive part of the political-pedagogical project, and not as an eventual appendix. The permanence of the individualizing logic is one of the main factors in the emptying of SEA as a potent practice of subjectivation.

By articulating these analyses with the radical critique of Freire (1996) and Saviani (2008), the abyss between the possibilities projected by inclusive policies and the concrete limits imposed by public education networks is evident. The statements of these authors reveal that democratization cannot be confused with expansion, nor access with dignified permanence. The gesture of inclusion requires more than devices or norms: it requires the recognition of otherness as the basis of formation. When the school abdicates deep listening, ignores individual paths and naturalizes inequalities, it silently reiterates its function of control. The ethical reconstruction of the public school does not take place through methodological annexes, but through political repositioning — which replaces the subject at the center of the educational experience, not as an exception, but as a legitimate presence.

Although the analytical itinerary has been based on robust sources, it is necessary to admit the limits inherent to the bibliographic approach, especially with regard to the absence of empirical records of school daily life. Even so, the texts examined clearly signal the urgency of breaking with accessory visions of accessibility. It is not a matter of grafting solutions onto an already given model, but of reorganizing, from the beginning, the conditions in which learning is possible. The analysis by Ernandes *et al.* (2024), by examining concrete cases of success in multifunctional resource rooms, demonstrates that genuine accessibility requires institutional commitment and prolonged pedagogical listening. Rethinking SEA is also rethinking the school in its entirety: its spaces, its languages, its bonds and its ways of producing belonging.

What is at stake is not only the use of technology, but the reconfiguration of the very idea of education as a collective and emancipatory project. The presence of assistive technological resources in school environments, when activated in a sensitive and non-standardized way, challenges the normative curriculum and opens gaps for broader formative practices. According to Penha *et al.* (2024), learning intensifies when accessible devices not only replace materials, but also establish other ways of perceiving, narrating, and constructing knowledge. What these experiences reveal is that inclusion, in order to be effective, also needs to be a permanent reinvention of the school as a space for active listening and concrete presence.

CONCLUSION

The process of reflection on the use of accessible technological resources in Specialized Educational Service revealed a field crossed by contradictions, ethical requirements and formative possibilities not yet fully explored. If, on the one hand, there is a significant advance in the recognition of the importance of accessibility in the political-educational discourse, on the other hand, structural gaps persist that hinder its effective implementation in the daily life of public schools. Inclusion, when treated as a complementary policy or compensatory rhetoric, loses its transgressive force and is reduced to a bureaucratic gesture of adequacy.

The dialogue with the selected authors allowed us to understand that the inclusive potential of accessible technologies does not reside in the devices themselves, but in the way they are incorporated into the pedagogical project. The teacher, when understood as a creative subject and not as an applicator of tools, transforms resources into language and resistance. Its mediation, made between precariousness and desires, can both reiterate exclusions and produce deep symbolic displacements, capable of redefining the role of SEA in school organization.

One cannot talk about accessible education without honestly touching on the fissures that cross the daily school routine. What is meant by inclusion needs to leave the field of intentions to take shape in the concrete spaces of teaching, in the gestures that listen to the other as legitimate and in the structures that actually support the right to learn. It is in this movement that the objective of this investigation is inscribed: to understand the ways in which accessible technological resources have been incorporated into Specialized Educational Service, analyzing their inclusive power in the formation of autonomous

subjects. The bibliographic methodology adopted is based on contemporary authors who discuss the relationship between education, accessibility and assistive technologies, focusing on pedagogical praxis and the structural challenges of education networks.

What is evident in the reading of the analyzed texts is not the failure of the technologies, but of the structures that integrate them in a way that is dissociated from the pedagogical project. The politics of the possible, when unaccompanied by institutional will, continuing education and minimal infrastructure, becomes sterile rhetoric. To include is not only to allow entry: it is to sustain permanence, to guarantee the word, to recognize uniqueness. The SEA, in this scenario, reveals itself as a space of dispute — not technical, but symbolic — in which it is decided whether the subject will be recognized or just tolerated.

There is no way to conclude this work as if closing a question. He remains open — provoking, suggesting and demanding new confrontations. The limits of the bibliographic approach are not obstacles, but a starting point for other research gestures that walk alongside the real school, with its noises, improvisations and contradictions. The urgency now is for studies that not only describe inclusive practices, but that build them with the subjects and contexts that make them possible.

REFERENCES

1. Ernandes, I., Vergara, M. V. M., Klauch, J. J., Ferreira, S. B., Alves, D. de L., & Souza, C. A. de. (2024). Assistive technologies in special education: Success stories. *Cuadernos de Educación y Desarrollo, 16*(5), 1-12. <https://cuadernoseducacion.com/ojs/index.php/ced/article/view/5830>
2. Ferreira, F. S., Rebelo, A. S., & Kassar, M. C. M. (2021). Teachers, digital technologies and school inclusion: Challenges of special education policy in a Brazilian municipality. *Research, Society and Development, 10*(1), Article e35210112378. <https://www.researchgate.net/publication/352847860>
3. Freire, P. (1996). *Pedagogy of the oppressed*. Paz e Terra.
4. Galvão Filho, T. A. (2009). *Assistive technology for an inclusive school: Appropriation, demand and perspectives* [Doctoral dissertation, Federal University of Bahia]. Repositório Institucional UFBA. <https://repositorio.ufba.br/handle/ri/10563>
5. Lima, D. N. D., Costa, F. S. da, Oliveira, M. D. de, Constâncio Pinto, M. A. B., & Vieira, V. G. dos S. (2024). The impact of technology on the process of inclusion of students with disabilities. *Missionary Magazine, 26*(1), 1-15. <https://san.uri.br/revistas/index.php/missioneira/article/download/2045/938/7843>
6. Lopes, A. P. S. (2019). *Assistive technology for the inclusion of students with disabilities in higher education: Conception and evaluation of an educational portal to assist teaching practice* [Master's dissertation, Federal University of Maranhão]. Repositório Institucional UFMA. <https://tedebc.ufma.br/jspui/handle/tede/2773>
7. Martins, C. S. L., Gomes, J. B., & Ferraz, M. G. (2021). Production of accessible pedagogical resources: Theoretical-practical reflections in the academic-professional training of teachers. *Oikos Editora, 1*, 1-64. <https://oikoseditora.com.br/files/PRPA%20-%20Reflex%C3%B5es%20-%202.pdf>
8. Penha, M. C. S. de M., Lima, A. G. da C., Klauch, J. J., Silva, M. A. da, & Martins, P. W. A. (2024). The social inclusion of students with disabilities promoted by assistive technology and alternative communication. *Revista Ilustração, 5*(1), 153-168, Article e259. <https://journal.editorailustracao.com.br/index.php/ilustracao/article/view/259>
9. Reinert Junior, A. J., & Coutinho, D. J. G. (2024). The effectiveness of assistive technologies in the literacy of students with disabilities in basic education. *Revista Rease, 10*(3), 1-12. <https://periodicorease.pro.br/rease/article/view/16777>
10. Santos, L. M. dos, Rezende Junior, M. F., & Ferraz, D. P. A. (2024). Assistive technology resources for Science Education in multifunctional resource rooms. *Journal of Special Education, 37*(1), 1-20. <https://periodicos.ufsm.br/educacaoespecial/article/view/85089>