SPECIAL EDUCATION IN THE PANDEMIC: STRATEGIES AND CHALLENGES IN PRIMARY EDUCATION

🆔 Adriana Pagaime[I]

🆔 Kate Mamhy Oliveira Kumada[II]

🆔 Silvana Lucena dos Santos Drago[III]

🆔 Rosângela Gavioli Prieto[IV]

🆔 Douglas Christian Ferrari de Melo[V]

🆔 Amélia Artes[VI]

TRANSLATED BY Fernando Effori de Mello[VII]

[I] Fundação Carlos Chagas (FCC), São Paulo (SP), Brazil; apagaime@fcc.org.br

[II] Universidade Federal do ABC (UFABC), Santo André (SP), Brazil; kate.pedagogia@gmail.com

[III] Universidade de São Paulo (USP), São Paulo (SP), Brazil; silvanaldrago@gmail.com

[IV] Universidade de São Paulo (USP), São Paulo (SP), Brazil; rosangel@usp.br

[V] Universidade Federal do Espírito Santo (UFES), Vitória (ES), Brazil; dochris.ferrari@gmail.com

[VI] Fundação Carlos Chagas, (FCC), São Paulo (SP), Brazil; aartes@fcc.org.br

[VII] Freelancer, São Paulo (SP), Brazil; feffori@gmail.com

Abstract

This study analyzes the strategies and challenges identified in the beginning of the Covid-19 pandemic to the provision of schooling for special education students, particularly from the perspective of public primary education teachers. The data were generated by means of the responses of 937 teachers from across Brazil to an online questionnaire that was posted on an accessible platform and translated into Libras. Among the results, it was observed that despite pre-pandemic investments on digital technologies, remote learning was predominantly carried out using printed material, and teaching special education students was pointed out as the main challenge. It is expected that this study will contribute to mapping the implications of remote learning for special education.

INCLUSIVE EDUCATION • PANDEMIC • ACCESSIBILITY

EDUCAÇÃO ESPECIAL NA PANDEMIA: ESTRATÉGIAS E DESAFIOS NO ENSINO FUNDAMENTAL

Resumo

O objetivo desta pesquisa foi analisar estratégias e desafios identificados no início da pandemia de covid-19 para a escolarização do público-alvo da educação especial, com foco na percepção de docentes do ensino fundamental das redes públicas. Os dados foram gerados a partir das respostas de 937 docentes de todo o Brasil a um questionário *on-line*, divulgado em plataforma acessível e traduzido em Libras. Dentre os resultados, observou-se que, apesar do investimento no fomento de tecnologias digitais antes da pandemia, o ensino remoto foi, predominantemente, conduzido pelo uso de material impresso, sendo o trabalho com esse alunado a distância apontado como o maior desafio. Espera-se com este estudo contribuir para o mapeamento das implicações do ensino remoto para a educação especial.

INCLUSÃO ESCOLAR • PANDEMIA • ACESSIBILIDADE

EDUCACIÓN ESPECIAL EN PANDEMIA: ESTRATEGIAS Y DESAFÍOS EN LA ESCUELA PRIMARIA

Resumen

El objetivo de esta investigación fue analizar estrategias y desafíos identificados al inicio de la pandemia de covid-19 para la escolarización del público objetivo de educación especial, centrándose en la percepción de los docentes de escuela primaria pertenecientes a redes públicas. Los datos fueron generados a partir de la respuesta de 937 docentes de todo Brasil a un cuestionario en línea, publicado en una plataforma accesible y traducido a Libras. Entre los resultados, se observó que, a pesar de la inversión en la promoción de tecnologías digitales antes de la pandemia, la educación remota fue impulsada predominantemente por el uso de material impreso, y trabajar con esos estudiantes a distancia fue el mayor desafío. Se espera que este estudio contribuya a mapear las implicaciones de la educación remota para la educación especial.

INCLUSIÓN ESCOLAR • PANDEMIA • ACCESIBILIDAD

ÉDUCATION SPÉCIALISÉE ET PANDÉMIE: STRATÉGIES ET DEFIS DE L'ENSEIGNEMENT PRIMAIRE

Résumé

L'objectif de cette recherche était d'analyzer les stratégies et les défis, identifiés au début de la pandémie de covid-19, concernant la perception de enseignants sur la scolarisation des élèves de l'enseignement primaire spécialisé. Les données proviennent des réponses à un questionnaire en ligne publié sur une plateforme accessible et traduite en langue des signes (Libras), soumis à 937 enseignants dans l'ensemble du Brésil. Parmi les résultats, il a été observé que, malgré l'investissement dans la promotion des technologies numériques avant la pandémie, l'enseignement à distance s'est principalement appuyé sur du matériel imprimé, et que travailler avec ces élèves à distance a constitué le plus grand défi. Cette étude entend contribuer à la cartographie des implications de l'enseignement à distance pour l'éducation spécialisée.

INCLUSION SCOLAIRE • PANDÉMIE • ACCESSIBILITÉ

THIS ARTICLE PRESENTS THE RESULTS OF THE STUDY TITLED "INCLUSÃO ESCOLAR EM tempos de pandemia"[1] [Inclusive education in the pandemic] (Pagaime et al., 2020), developed in July 2020, during the first few months of suspended in-person classes due to the Covid-19 pandemic (World Health Organization [WHO], 2020).

To contain the spread of the disease, as of February 2020, Brazil implemented several preventive health measures, among which were quarantine and social distancing,[2] causing the reduction of economic activities to the point of totally interrupting some social and cultural practices (such as events and sports and religious activities) involving any form of gathering (Pletsch & Mendes, 2020). Similarly, in-person education across the country, both in basic and higher education, was made more flexible to allow the suspension of compulsory in-person classes and the minimum number of school days for 2020, while keeping the total of class hours (Medida Provisória n. 934, 2020; Parecer n. 6, 2021).

It is well known that the impacts of the SARS-CoV-2 virus were observed in schools around the world as their environments were considered high risk for contagion. According to Arruda (2020), while the school is mostly formed by groups that are less likely to have severe symptoms of the disease (children and youths), their contact network has the potential to reach people of the vulnerable groups (school personnel and/or family members). Due to these characteristics, the author records that, by April 2020, nearly 90% of students around the world were not attending in-person classes, and most countries adopted remote learning technologies (Arruda, 2020).[3]

In this period, Paulo et al. (2020) point out a number of challenges inherent in the Brazilian context, since many teachers were inexperienced in the use of technologies. Most public schools lacked the necessary infrastructure, and there was no time to reorganize curriculums for remote learning. Therefore, this option was implemented with "numerous tribulations, including the lack of devices and quality internet connection on the part of students and teachers, anxiety, overwork, dropping out, among others" (Paulo et al., 2020, p. 197, own translation).

With regard to the special education target group (SETG), namely students with disabilities, global developmental disorders (GDD) and high ability or giftedness (HA/G) (Lei n. 9.394, 1996), because they were associated with a vulnerable group, other barriers were imposed and/or aggravated. According to Pletsch and Mendes (2020), among the main problems facing this group of students are:

> . . . the inaccessibility of information and communication, especially for those who are deaf, blind or with intellectual disability, the non-accessibility to software and platforms for this population group to attend online classes, when these were provided. In addition, the pandemic also revealed more systematically the unpreparedness of health systems to serve the specificities of these persons. (p. 4, own translation).

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1 The study encompassed public and private education teachers of all stages of basic education. The technical report with the descriptive results was published on the Fundação Carlos Chagas website: https://www.fcc.org.br/inclusao-escolar-em-tempos-de-pandemia/. This article analyzes only the results for the public municipal and state education systems, specifically for primary education (grades 1 to 9).

2 According to Law n. 13.979 (Lei n. 13.979, 2020), the concept of isolaton was associated with the separation of ill or contaminated persons, as well as objects affected (such as mail, luggage, means of transportation). In contrast, quarantine was understood as the restriction of activities or the separation of persons (and respective objects and animals) with suspected potential to contaminate others.

3 Although it was initially commonly referred to as "distance learning", over time, the term "remote learning" (or remote emergency learning) became more widely accepted in the educational context experienced during the pandemic (Saraiva et al., 2020). According to Arruda (2020, p. 262, own translation), remote learning is characterized by classes "broadcast in real time through web conference systems, the so-called lives, which allows teachers and students to interact and organize their learning time similarly to in-person education".

In addition, it is worth noting that, according to a study of Fundação Carlos Chagas (FCC) of April 2020, in many parts of the country, remote learning was not immediately implemented, leaving school communities without any pedagogical activity during the first months of the pandemic. Thus, the complexity of this scenario, as well as the developments from remote learning, helped to increase the risk of exclusion for some groups of students already disadvantaged, such as immigrants, ethnic minorities and persons with disabilities. Therefore, defining strategies and guidelines to maintain academic activities during the pandemic became an urgency.

In July 2020 much was being debated about the effects of suspended classes on Brazilian students' learning and life. Until then, however, there had been no news of studies focusing on SETG, therefore, this study was conducted solely with teachers working with these students, whether in general education classrooms or in special education services (SES).

Thus, the aim of this investigation was to analyze the proposed strategies and the challenges to the provision of schooling for SETG during the first four months of suspended in-person classes, focusing on the perceptions of teachers of public state and municipal basic education systems. Such delimitation of focus is due to the fact that, according to the Basic Education Census 2020, 84% of enrollments in special education were concentrated in these systems, 54% and 30%, respectively (Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira [Inep], 2021).

It is worth noting that many articles, books and reports about education in the pandemic were published, especially in theme dossiers. In a short literature review (Gil, 2002) conducted in February 2021 through a search in Google Scholar, 105 articles published in Brazilian journals from 2020 to January 2021 were found. However, of this number, only 22 dealt directly or indirectly with SETG, i.e., in some papers the focus was on remote learning, mentioning also SETG students, though without an in-depth discussion of the subject. Of these, 12 studies addressed basic education, and 9 provided contributions to thinking about didactic strategies in this period, the focus of this article.

In this context, some studies were situated in specific locations, such as the research of Oliveira et al. (2020) about education in the municipality of Fortaleza, in the state of Ceará, from the perspective of SES teachers. Similarly, Martins et al. (2020) described a special education project with an inclusive education approach implemented during the pandemic, with strategies tailored for this group, in the municipality of Floriano, in the state of Piauí. In turn, Nozu and Kassar (2020) focused on the educational strategies used in the municipal education system in the wetlands of Corumbá, in the state of Mato Grosso do Sul.

Some studies look at a particular subgroup of special education students, such the works about autism spectrum disorder (ASD) in primary education (Souza & Dainez, 2020; Cardozo & Santos, 2020) and in early childhood education (Dias et al., 2021). In turn, Shimazaki et al. (2020), as well as Souza and Vieira (2020), addressed the educational context of deaf students, and Pletsch and Mendes (2020) focused on students with multiple disability from the perspective of teachers.

Based on this survey, it is possible note the scarcity of studies evaluating teachers' work with special education students during the pandemic at the national level, the purpose of this study, which addresses mainly the actions implemented by the education systems. Thus, in addition to the introduction, the sections below present the methodological procedures, the results and discussion, and the final considerations.

Methodological procedures

This quantitative-qualitative study (Ferraro, 2012; Gamboa, 2013) was conceived from an electronic questionnaire developed using the Survey Monkey[4] platform, according to the following stages: a) questionnaire creation and pilot testing; b) analysis of data collected from the testing and adjustment process; c) translation into the Brazilian Sign Language (Libras), pre-testing the content and accessibility conditions (contrast, font type and size); d) adjustments based on testing accessibility features; e) application; and f) data processing and analysis.

The pilot testing stage had the collaboration of 49 professionals, of which 44 were basic education teachers, and five were special education specialists. Also, this stage had the contribution of another three blind professionals who were screen reader users, four with low vision (who evaluated contrast – background color and font type), as well as teachers with physical disabilities (one of them being a face-tracking technology user). In turn, the Libras content was pretested by seven teachers, of which one was a deaf male, five were deaf females, and one was a deafblind female. Also importantly, one of the researchers involved in this study is a person with low vision disability.

The online questionnaire, comprising 26 close-ended and three open-ended questions, was publicized in the period from July 10 to 27, 2020 through social media, e-mail lists and the communication material of partner institutions. Also, WhatsApp was another important promotion instrument.

To participate in the study, it was necessary to agree to the Free Informed Consent Terms (TCLE)[5] and confirm one's status as a basic education teacher who worked in the first semester of 2020 with SETG students, whether in general education classrooms or SES.

To ensure participant teachers' anonymity, for the presentation of data, we adopted letter P (for participant) followed by the number corresponding to the order of tabulation of the research data. In addition, the teachers were further identified as GE when they worked with general education classrooms, or SES for special education services, and as M when they worked in a municipal system, or S for those working in a state system. In turn, teaching grades 1 to 5 was identified by the acronym PE1 (for primary education, stage 1), and grades 6 to 9, by PE2 (primary education, stage 2).

The study reached 1,594 respondents from all federation units, with a significant participation of teachers from the state of São Paulo (64%). These respondents were subdivided into four groups, according to the type of classroom/school they worked with or the services they provided: GE with SETG students (67.5%); SES (25.4%); bilingual schools or classrooms for deaf students (2.4%); and special schools or classrooms (4.7%). Of the group of respondents, it is noteworthy that 61 teachers self-identified as persons with disability, and it is therefore justified that research in this sphere considers the different characteristics of their public, making it possible for everyone to participate and show their contribution.

The data were exported from Survey Monkey and treated using SPSS[6] software, and were then tabulated and analyzed using Excel spreadsheets. Table 1 presents the scope of this article, comprising data for PE1 and PE2, with the distribution of participants who work with GE and SES.

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4   Private software for data collection and storage.

5   The TCLE was also available in Libras. The study was authorized by Universidade Federal do ABC's (UFABC) Research Ethics Committee Opinion n. 4.040.480 – CAEE n. 31746620.0.0000.5594.

6   IBM© SPSS© Statistics 22.0.

Table 1
Distribution of respondents of PE1 and PE2 by education system and classroom/school/service type (GE and SES)

Education system	PE1 – GE (N)	PE1 – GE (%)	PE2 – GE (N)	PE2 – GE (%)	PE1 – SES (N)	PE1 – SES (%)	PE2 – SES (N)	PE2 – SES (%)	Total (N)	Total (%)
Municipal	287	70.9	86	30.9	156	75.0	44	35.2	573	56.4
State	73	18.0	169	60.8	46	22.1	76	60.8	364	35.8

Source: Data from the study.

Consistently with the enrollment numbers for SETG students reported by the Basic Education Census (Inep, 2021), in this study the greatest concentration (92.2%) of respondents working with this group is also in public municipal and state education systems, 56.4% and 35.8%, respectively. Thus, the scope delimitation encompassed most of respondents, totaling 937 teachers.

The results regarding the analysis of the proposed strategies (including the remote learning format adopted, the activities and the presence of accessibility for SETG) and the challenges faced (from contacting students and student participation to helping with assignments and learning) in the schooling of SETG are then presented. Besides the organization by education systems, the discussion considers the responses of PE1 and PE2 teachers working with GE, comparing them with those of participants working with SES.

Remote learning strategies and challenges

In July 2020, according to the participants, 94.9% of the education systems employed some remote learning action. It is undeniable that digital technologies have been in use in school contexts for some time, and initiatives aimed at fostering digital education can be seen, for example, from the release of the *Guia de tecnologias educacionais* [Education technologies guidebook] (Ministério da Educação [MEC], 2009) to teacher continuing education in this area (Santarosa et al., 2014). Nevertheless, as shown in Table 2, regarding the strategies used in the first four months of suspended in-person classes, the use of printed material was still the main resource indicated by approximately 70% of teachers of both systems, and by a greater proportion of teachers of PE2, both for GE and SES.

Table 2
Strategies used by education system, stage and classroom/school/service type (%)

System	Remote learning strategies	PE1 (GE)	PE2 (GE)	PE1 (SES)	PE2 (SES)
Municipal	TV	7.0	7.1	11.6	0.0
State	TV	47.9	47.8	47.3	39.5
Municipal	Radio	1.0	0.6	0.0	0.0
State	Radio	1.4	0.0	1.8	1.3
Municipal	Recorded classes	36.0	42.3	34.9	20.5
State	Recorded classes	46.6	52.2	42.0	32.9
Municipal	Live online classes	22.7	17.3	24.4	20.5
State	Live online classes	34.2	41.3	34.9	35.5
Municipal	Printed material	73.8	73.1	61.6	79.5
State	Printed material	61.6	78.3	67.5	76.3

Source: Data from the study.
Note: For this item, respondents could choose more than one option.

According to Fiscarelli (2008, p. 17, own translation), since the 1990s, countries in Latin America have invested on the incorporation of didactic material based on "new technologies", understood as "television, video, computer, internet, video games, multimedia, etc.". In spite of this, the author observes in her study that most teachers continue to base their classes mainly on "old technologies", such as "chalk, board and didactic books" (Fiscarelli, 2008, p. 18, own translation).

Thus, this study evidences the use of printed material, whether for in-person or remote learning, before or during the pandemic, respectively. This reality is aggravated, according to Bruns and Rausch (2020), by the fact that many students do not have a computer or a compatible device (like a tablet or cellphone) at home or internet access, as can also be seen in our study, in the following accounts.

P21 – There were 36 [students] attending before the pandemic, and now just 15 with internet access. The others are not having classes. There's nothing the school can do. A very poor, vulnerable community. The two autistic students have an engaged, involved family that supports all the initiatives proposed. The others struggle. *In some families, the cellphone is shared by 3 or 4, and sometimes there's not enough internet access for everybody in that environment.* (GE S PE1, emphasis added).

P50 – . . . in big cities [or in] metropolitan areas, I believe most students have access, but we have *students from rural areas and the really low-income ones where there's only one device for several students, the children.* (SES S PE2, emphasis added).

P93 – [We teach] with classes available on the school's blog and via the Google Forms application, and for those who can't access it, [we provide the didactic material] printed by the school. (GE S PE2).

P19 – *Printed material is still the most accessible.* Because with the material in their hands, they can do the activities. (GE S PE1, emphasis added).

Apart from the connection problems faced by most of P21's students, the need to share a single device between school age siblings is pointed out in the accounts of P21 and P50 as an obstacle that students of low socioeconomic status or located far from big cities face when classes are taught in virtual format only. Moreover, other factors can compromise the remote learning strategies adopted, as stressed in the following excerpts of P92 and P61, which describe issues like ever-changing phone numbers or the lack of means to keep the device connection during the school term.

P92 – . . . the difficulty contacting the family because of ever-changing phone numbers, the lack of money to keep the cellphone working and connected, the family not being available to help at home because they believe it's the school's job to do that, the students' own needs, *the education system's delay to provide the necessary material and means for holding classes and activities, passing on to teachers and the school the responsibility to meet students' internet needs and teachers' remote learning work, the system's slow decision making and guidance for schools*, among others. (GE S PE1, emphasis added).

P61 – . . . they don't have internet access, . . . *they don't have any support and in many cases the families are illiterate or have little education*, which really hinders their learning, since it has to be autonomous. (GE M PE2, emphasis added).

Therefore, this reality, experienced by many students, justified the use of printed material as a "more accessible" alternative or means of instruction, as expressed in the excerpts of P93 and P19. Notwithstanding, other problems remain in delivering remote learning to SETG, such as families being unable to help with assignments, since they are often "illiterate or have little education" (P61).

Or, still, because of education systems' delays in providing guidance and taking measures to meet students' needs (P92). Such developments confer on P92's account the feeling that teachers bear alone the responsibility for students' learning during the pandemic.

Similar results can be found in the study of Oliveira et al. (2020), whose respondents were SES teachers in the municipal system of the city of Fortaleza. In their accounts, the teachers said that, in addition to the scarce guidance from managers and the lack of support from families in taking responsibility for students' education, they found themselves having to use their own resources to maintain their classes during the pandemic. And in this context, the teachers frequently lacked broadband connection or equipment like computers.

Thus, it is hardly surprising that video-recorded lessons were used much more frequently than live online classes (Table 2). When education systems are compared, the study indicates that state systems resorted more to remote learning, both for recorded and synchronous classes.

Recorded lessons were used to a greater extent than live classes, both in municipal and state systems, except among SES teachers of PE2, who had the same proportion of responses for both strategies in the municipal systems (20.5%). In the state system the difference was small between live classes (35.5%) and recorded lessons (32.9%). The fact that live classes were more used with SES, particularly for PE2, may indicate that these teachers had more contact with students in this category, since they interacted more directly with them, as seen the accounts of this group.

Indeed, live classes and recorded lessons (YouTube being the platform most often referred to) were recurrent strategies in the period of suspended in-person classes also in other education levels and stages. According to a study with 144 secondary and higher education teachers, the use of recorded lessons almost tripled in classrooms during the pandemic, and live classes, previously inexistent, became recurrent (Silva et al., 2020).

In turn, while infrequent in municipal systems, the use of TV as a remote learning strategy was more often referred to by state systems, sometimes overtaking video-recorded lessons and live classes among SES teachers of PE1 and PE2, as well as among those working with GE in PE1.

As for classes broadcast on radio, despite their small representation, it is worth noting that they were an alternative for almost 2% of SES teachers in the state system (PE1), even though it is difficult to imagine their accessibility for some groups, especially deaf and deafblind students. At the same time, among municipal SES teachers, no participant indicated this alternative.

This scenario reveals the variety of strategies and designs in the Brazilian school context, though it should also be considered that around 5.1% of respondents were still not ready to deliver any form of remote learning. In the wake of this logic, it is worth questioning whether the pedagogical activities had considered the accessibility necessary for this group of SETG students.

Remote learning accessibility

Considering that to participate in school activities, whether in-person or remote, some students need conditions that ensure their access and participation, this study sought to identify the accessibility resources provided in the beginning of the period of suspended classroom activities. It is worth stressing that, according to art. 3 of the Brazilian Law for the Inclusion of Persons with Disabilities (LBI), accessibility means:

> I – The possibilities and conditions that enable the use, in a safe, autonomous manner, of urban spaces, street furniture, facilities, buildings, transportation, information and communication, including their systems and technologies, as well as other services and facilities open to the public, of public use, or private but collective use, in both urban and rural areas, by persons with disabilities or reduced mobility. (Lei n. 13.146, 2015, own translation).

In this sense, accessibility presupposes not only enabling people with disabilities to participate in activities or access services and information, but also that the resources used eliminate any barriers to their social and educational participation. Besides being seen as a resource that can promote some adaptation, accessibility is a necessary condition for exercising one's rights, and in the case in question, one's right to education.

Considering that printed material was the most recurrent format among respondents, Table 3 presents the accessibility conditions provided in or with the material:

Table 3
Accessibility conditions in the printed material designed by the education systems (%)

System	Accessibility conditions in the printed material	PE1 (GE)	PE2 (GE)	PE1 (SES)	PE2 (SES)
Municipal	Not applicable	25.7	23.3	17.0	18.2
State	Not applicable	29.2	19.2	17.8	18.7
Municipal	Not accessible	23.9	32.6	23.5	15.9
State	Not accessible	20.8	22.2	15.6	9.3
Municipal	Enlarged font	20.1	18.6	23.5	29.5
State	Enlarged font	20.8	19.8	17.8	26.7
Municipal	Braille	2.1	1.2	3.3	6.8
State	Braille	2.8	1.8	0.0	4.0
Municipal	Image description	19.4	11.6	24.8	22.7
State	Image description	19.4	25.1	20.0	22.7
Municipal	Libras illustration or translation	8.1	11.6	16.3	13.6
State	Libras illustration or translation	4.2	16.8	11.1	12.0
Municipal	Accessibility for intellectual disability (ID)	28.2	29.1	55.6	47.7
State	Accessibility for intellectual disability (ID)	27.8	37.1	48.9	56.0
Municipal	Accessibility for GDD	30.3	30.2	51.0	34.1
State	Accessibility for GDD	15.3	24.6	35.6	29.3
Municipal	Accessibility for HA/G	3.2	1.2	10.5	0.0
State	Accessibility for HA/G	1.4	4.8	11.1	6.7

Source: Data from the study.
Note: For this item, respondents could select more than one option.

Taking the percentage extremes as reference for the analysis, the accessibility conditions identified in the printed material distributed during the remote learning period which were suitable for students with ID were mentioned by 27.8% (PE1 – GE) to 56% (PE2 – SES) of teachers of the state system, and by 28.2% (PE1 – GE) to 55.6% (PE1 – SES) for municipal systems, followed by the group of learners with GDD, represented by rates between 15.3% (PE1 – GE) to 35.6% (PE1 – SES) for the state system and within the thresholds of 30.2% (PE2 – GE) to 51% (EF I – SES) for municipal systems.

Next come students with visual impairment, for whom image description was guaranteed according to 11.6% (PE2 – GE) and 24.8% (PE1 – SES) for municipal systems, and 19.4% (PE1 – GE) to 25.1% (PE2 – GE) for the state system. Enlarged font was indicated by 17.8% (PE1 – SES) and 26.7% (PE2 – SES) of teachers of the state system, and by 18.6% (PE2 – GE) to 29.5% (PE2 –

SES) for municipal systems. Thus, the students with the lowest level of accessibility in their printed material were those with visual impairment who rely on braille, and those with HA/G.

Here, it is worth noting that the findings in Table 3 are in line with the proportion of enrollments of students with these characteristics reported by the Basic Education Census.[7] In other words, the results showed that the printed material was more often adapted for students with ID, the group which is also the largest population among SETG students. At the other extreme, in the same question, students with HA/G are the least mentioned in our study, and are likewise the minority in the reference group.

Initially, we considered that there would be a greater proportion of SES teachers among the respondents who identified accessibility conditions in the printed material provided, due to their specialist work and qualifications (i.e., they are expected to know how to make the necessary adaptations). Although this was confirmed in most of the results, as shown in Table 3, it was observed that GE teachers had a major participation in conducting accessible didactic strategies.

Still in this analysis, it is worth stressing that in the state system the highest level of braille accessibility was indicated by 2.8% of GE PE1 teachers and by none of SES teachers. In contrast, in GE PE2 image description was indicated by 25.1%, against 22.7% for SES, while Libras illustration and/or translation, in the same system and education stage, was adopted by 16.8% in GE and 12% in SES. In the municipal systems, only the accessibility provided by GE PE2 teachers for HA/G exceeded that provided by SES teachers, representing 1.2% and zero, respectively.

In view of the above, while adaptations and accessibility resources in the printed material were generally used to a higher degree among SES participants, the data of this study reveal a significant presence of accessibility provided by GE teachers. This indicates an evolution in the participation of these teachers in materializing an inclusive education. This advance is found in comparison with accounts of GE teachers, which before the pandemic were characterized by reluctance towards inclusion, with the argument that they had not being prepared to deal with the specificities of the process (Pletsch, 2009).

Another important aspect of the information obtained in this study consists in comparing the results between municipal and state systems, as seen in Table 4. Considering that municipal systems used mostly printed material, it was expected that the accessibility resources included in remote classes (via television, radio or online, whether live or recorded) would be more present in state systems. Thus, this difference can be found in almost all requisites, except for audio description in PE1 SES, which is greater in municipal systems (18.7%) in relation to the state system (8.7%).

Table 4
Accessibility resources provided for remote classes via the internet (live or recorded), TV or radio, organized by their system/school (%)

System	Accessibility resources provided in remote classes (online, recorded, via TV or radio)	PE1 (GE)	PE2 (GE)	PE1 (SES)	PE2 (SES)
Municipal	Not applicable	55.8	47.1	46.0	59.1
State	Not applicable	40.3	28.7	26.1	37.0
Municipal	No accessibility resources	32.2	36.5	22.0	15.9
State	No accessibility resources	19.4	19.8	32.6	16.4

(To be continued)

7   According to the 2020 Basic Education Census, total enrollments in SES correspond to 1,528,875, of which 870,483 (56.9%) are persons with intellectual disability; 246,769 (16.1%) with autism spectrum disorder (ASD); 153,895 (10%) with physical disabilities; 86.528 (5.7%) with multiple disability; 76,454 (5%) with low vision; 39,442 (2.6%) with hearing impairment; 24,424 (1.6%) with HA/D; 23,139 (1.5%) with deafness; 7,216 (0.5%) with blindness, and 525 (0.03%) with deafblindness (Inep, 2021).

(Continuation)

System	Accessibility resources provided in remote classes (online, recorded, via TV or radio)	PE1 (GE)	PE2 (GE)	PE1 (SES)	PE2 (SES)
Municipal	Subtitles	5.7	5.9	10.7	11.4
State	Subtitles	9.7	15.0	10.9	15.1
Municipal	Libras interpreter	7.1	12.9	18.0	6.8
State	Libras interpreter	27.8	44.3	39.1	38.4
Municipal	Audio description	6.4	7.1	18.7	15.9
State	Audio description	16.7	16.2	8.7	17.8

Source: Data from the study.
Note: For this item, respondents could select more than one option.

With regard to the service of Libras interpreters in remote classes delivered by the state system, their presence was reported by 27.8% (PE1) and 44.3% (PE2) of respondents. However, as shown earlier in Table 2, it is worth stressing that around 40% of teachers of this system indicated that one of the most used strategies was remote lessons via television. Thus, it was estimated that state systems would be less committed to employing this accessibility strategy, considering the possibility of replicating classes translated into Libras for a greater number of students.

Regarding the "not applicable" option, it can represent both SETG students who do not need the resources listed and networks which were not prepared for remote learning by then. It was also observed that the lowest level of accessibility (with the "no accessibility resources" option) appears in municipal GE (32.2% for PE1 and 36.5% for PE1). Conversely, the highest rate or responses indicating a lack of accessibility in remote classes is seen in the SES of state systems, presented by 32.6% for PE1 and 16.4% for PE2.

Despite the fact that the education systems could not organize in advance to face the consequences of the pandemic, it is worth noting that the responses in this study indicate a difficulty to plan services for special education students that is not restricted to this context. According to the studies of Ferreira and Carneiro (2016), pedagogic actions for this group are traditionally marked by improving, no accessible learning plans, and non-adapted activities, even where these are necessary.

Another dimension explored, of the utmost importance also during the pandemic, concerns the work responsibility of GE and SES teachers, as well as their contact and partnership in the process of schooling for SETG students. Considering the educational specificities to PE1 and PE2, it is important to analyze separately the discourses of GE and SES teachers about the pedagogical activities proposed for the remote learning provided for SETG.

In this respect, remote learning activities were defined by the National Education Council as:

> . . . the set of activities, technology-mediated or not, intended to ensure essential schooling during the period of restrictions in order to conduct school activities without the physical presence of students in basic or higher education units. (Parecer n. 5, 2020, own translation).

Thus, regarding the activities proposed in GE, the respective teachers said they conducted these with corrections and adaptations for which they received support and guidance from the SES teacher. The excerpts below show that there was communication between GE and SES, since GE teachers described the work that was carried out by SES during this period:

> P226 – In the school where I work, *we are thinking about inclusive activities, but we also have the teacher from the multifunctional resources room who is adapting and sending them to the families via WhatsApp.* (GE M PE1, emphasis added).

P18 – *I'm general education teacher* [and] *my students have this support teacher helping them on a daily basis in this pandemic* with video conferencing, and participating with them in the daily online classes, too. (GE S PE1, emphasis added).

On the other hand, SES teachers working with students in the same grades highlight the challenges of ensuring this specialist service in a very solitary manner, which was intensified by the context of the pandemic:

P26 – . . . I make small kits thinking about the student's individuality, so the student is happier and feels the interaction more. I'll take sterilized plastic and add practical activities, thinking of what the student needs to practice. (SES S PE1).

P130 – First I was making kits with activities. Parents would call to pick them up. Then the school accepted printing, and I'm making the activities with 25 sheets, I help caregivers choose the activities, and *I'm always reminding teachers* to adapt to the activities. We give parents support via WhatsApp, with guidance and tips. (SES M PE1, emphasis added).

P8 – The workload tripled, because we have to do the APNPs [Remote Pedagogical Activities] for all areas *without the general teacher's help*. Knowing, also, that we don't master these school subjects. (SES S PE1, emphasis added).

The kits mentioned by P26 and P130 were a frequent strategy during the remote learning period, whether containing educational activities and material and/or with a meal. The study of Nozu and Kassar (2020), for example, presents data for the municipal system of Corumbá, situated in parts of the Wetlands that are difficult to reach and subject to flooding by the Paraguay River and its tributaries. According to the authors, in this context, where the main means of communication is traditionally the radio, since mobile coverage and internet connections are unreliable, even before the pandemic some groups of students could only access schooling via "school boats" and "tractors with integrated trailers" (Nozu & Kassar, 2020, p. 8, own translation). Thus, during the remote learning period, the kits were critical for maintaining schooling for these learners whose challenges were intensified by the pandemic, a period even more complex for students with disabilities, who face a double exclusion, i.e., "due to the region they are from and their organic condition" (Nozu & Kassar, 2020, p. 13, own translation).

The kits are carefully made, as explained by P26, who uses sterilized plastic and selects activities that respect each learner's individuality. In contrast, in the account of P8, the predominant perception is that of the SES teacher is overburdened with work she does often "without the general teacher's help".

This narrative of more responsibilities for SETG education being placed on SES teachers was corroborated by the accounts of GE respondents, particularly in PE2. In this group, most respondents pointed out that differentiated and adapted activities are proposed by SES teachers, as seen in the excerpts of P32 and P148 below:

P35 – Adaptations in remote activities are done by support teachers, supervised by the special education coordinator. (GE S PE2).

P148 – The student gets individual help from a support teacher from the school via social media. (GE M PE2).

About SES teaching, Nascimento et al. (2020) reiterate that despite the restrictions inherent the urgency context of remote learning, such teaching work is irreplaceable to maintain the tie with the school world, especially in terms of pedagogical mediation and actions.

Moreover, this study made it possible to outline the main difficulties facing teachers who work with SETG and, in this respect, the perceptions of GE and SES teachers are very similar, as

shown in Table 5.

Table 5

Difficulties of teachers working with SETG, by system, stage and type of classroom/service (%)

System	Difficulty	PE1 (GE)	PE2 (GE)	PE1 (SES)	PE2 (SES)
Municipal	Joint work of GE and SES teachers	31.1	24.4	48.0	45.5
State	Joint work of GE and SES teachers	31.5	45.2	39.1	47.3
Municipal	Working with this group in remote learning	69.6	69.8	70.4	67.9
State	Working with this group in remote learning	60.3	60.2	63.0	56.8
Municipal	Encouraging their participation in the group	53.4	51.2	51.3	36.4
State	Encouraging their participation in the group	58.9	45.8	54.3	45.9
Municipal	No knowledge/little knowledge of platforms' accessibility resources	25.8	30.2	19.7	18.2
State	No knowledge/little knowledge of platforms' accessibility resources	21.9	21.1	21.7	25.7
Municipal	Accommodating these students' specificities	46.3	47.7	44.7	29.5
State	Accommodating these students' specificities	46.6	45.8	43.5	39.2
Municipal	Contact with students and/or families	45.2	54.7	44.7	27.3
State	Contact with students and/or families	32.9	42.8	50.0	47.3

Source: Data from the study.
Note: For this item, respondents could choose more than one option.

From the analysis of Table 5, the main difficulty was "working with this group in remote learning", indicated by approximately 70% of respondents of municipal systems and 60% for state systems.

The challenge of encouraging the participation of SETG in the group comes second, with nearly 50% for most stages and classroom/service types, except for municipal teachers in SES PE2, for whom that difficulty was indicated by 36.4%.

The third difficulty was "accommodating these students' specificities", which was around 46% for both municipalities and states, except for SES PE2, in which it was indicated by 29.5% of municipal teachers and by 39.2% of state teachers.

Regarding the difficulties indicated in this study, the research of Oliveira et al. (2020) corroborates these findings as it reveals the scarce participation of these students or their scarce interaction in the activities proposed by the school during the pandemic. This is also in line with results in Table 5, concerning the evidence that in most groups the perception of difficulty contacting STEG and/or their family nears 50%.

Likewise, the accounts of P33 and P62 illustrate how the absence of persons who commit to helping with remote activities was perceived both for SES and GE as the main difficulty faced during the remote learning period.

P33 – Despite all the support from the school team for special education target groups, our main difficulty is currently *the parents' lack of commitment or even their lack of education,*

making them unable to help their own children with the activities. (SES S PE2, emphasis added).

P71 – Unfortunately, in my municipality, parents with more than one child prioritize the one without disabilities for using devices. The student with disabilities feels once more, this time at home, the effects of exclusion. (SES M PE1).

P62 – The contact with parents of *inclusion students* [sic] is very difficult, for *many of them it's hard work teaching at home*, since their learning outcomes are slow. (GE M PE1, emphasis added).

A correlation is known to exist between the incidence of people with disabilities and socioeconomic vulnerability, aggravated by issues like: extreme poverty, malnutrition and lack basic sanitation (Barnes, 2010). This certainly reflects, as demonstrated earlier, the complexity of providing the minimum infrastructure to ensure the necessary conditions for remote learning, from technological devices and internet access to pedagogical support (given the low education level of many of these families and/or their lack of information on how to deal with SETG). Thus, before making a rushed conclusion to blame the families for students' insufficient participation, it is necessary to relativize this culpability, analyzing these aspects in each social context, abandoning the notion based solely on lack of commitment (Oliveira et al., 2020, p. 43, own translation).

In this respect, it is worth noting that there are accounts, though isolated, of positive aspects regarding the increased participation of family members, as P34 illustrates:

P34 – Parents are participating and *supporting their children more in remote activities than in* the period of *face-to-face classes and are also more willing to contact* the teachers and the school. (SES S PE2).

In turn, another difficulty identified in Table 5 regards the option "no knowledge/little knowledge of platforms' accessibility resources", since the hypothesis at the time was that the remote class model, like the need to use digital technologies, would be an aggravator to the teacher-student relationship. However, this aspect was marked by at least 20% of SES PE1 and AFII teachers in the municipal systems; and by 25.8% for GE PE1 and 30.2% for GE PE2. As for state systems, this issue was also indicated by around 20%, except for SES PE2, which reached 25.7%. Considering that in these systems the most used strategy was printed material, supported by WhatsApp for communication, we can infer that these results confirmed that the public systems used digital platforms and their possible accessibility resources to a lower extent.

If on the one hand the perceptions of GE and SES teachers match with regard to the difficulties of working with these students, they differ when it comes to "joint work between GE and SES teachers". In the municipal systems, among GE teachers, joint work with SES was indicated as a difficulty by 31.1% for PE1 and 24.4% for PE2. Among SES teachers, this difficulty was observed by 48% for PE1 and 45.5% for PE2, corroborating the idea that this group perceives their work as markedly solitary, as expressed by P130 in an excerpt discussed earlier.

In state systems, this difference of perceptions was also manifest, though in a more balanced manner. In PE1 this difficulty working together was pointed out by 31.5% of participant GE teachers and by 39.1% for SES; among those working in PE2, this difficulty was indicated by 45.2% for GE and 47.3% for SES.

While establishing this joint work was considered a challenge, it is worth noting that evidence of partnership was found in the discourse of teachers in the study, though to a lesser extent, as in the accounts below:

P7 – WhatsApp groups were created for the classes, and the teachers send activities to the families. *In our network we work in collaboration with the general education teacher.* The activities are the same as those for the other students, but we *think together about adaptations for students of the special education target group.* (SES M PE1, emphasis added).

P135 – Collaborative teaching. *I work as a partner of the general classroom teachers and we think together about the activities.* But accessibility only takes place because I, an [special] education teacher, make the resources with money from my wage. I have no support. (SES M PE1, emphasis added).

Thus, the excerpts reveal positive experiences with the joint planning of activities through "collaborative work" (P7) where, according to this teacher, "we think together about the activities" (P135). However, there is the salient fact that, on these instances, it is still necessary to face the lack support from schools/education systems and the spending of one's own money to ensure accessibility.

Beyond the problems with infrastructure, communication and adaptation to this new context, the teachers also expressed their concern about the teaching and learning process. As the excerpt of P30 illustrates, thinking about activities that consider SETG students' individual characteristics can be challenging. This perception is complemented by P108, who says that the situation is even more critical when the school has no Libras translators or interpreters, support teachers, or teachers with training in special education.

P30 – *It is hard to deliver the approached content*, even with flexibility, and the activities that would be necessary for the student's individual development. (SES M PE2).

P108 – If we know *all about their learning difficulty and their inability to learn and progress*, for how many years can this student repeat the same grade? It's a very delicate situation and we know that, inclusion looks very good on paper, but in our schools without trained teachers, no interpreters, no support teachers, it is hard to help them. (GE S PE2, emphasis added).

Indeed, poor initial and continuing teacher education in the field of special education was recurrent in this study and denounces the ableist[8] discourse that correlates disability to a supposed inability to learn and progress (Pagaime & Melo, 2021). This scenario reveals attitudinal barriers that must be overcome, understanding this concept in line with Castro and Almeida (2014, p. 179, own translation), for whom attitudinal barriers "are those arising from people's attitudes towards disability as a result of lack of information and prejudice, which eventually results in more discrimination and more prejudice".

However, these adversities are not exclusive to the pandemic period, since the analysis of discourses like those of P178 and P84 shows that the difficulties listed are not associated with remote learning specificities. In fact, they are historically present in the context of special education and were maintained or aggravated in this period.

P178 – The school has a blog and didn't want to add a tiny spot for SES activities to it. I requested it several times; that's exclusion. They claim it will confuse parents. (GE M PE1).

P84 – *I have difficulty working with the special education group.* Like many, *I had no elements in college.* So I prepare my classes trying to identify what they already know and to teach the

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8 Ableism: "the way people with disabilities are treated as 'incapable', bringing the demands of movements of people with disabilities closer to other forms of social discrimination, like racism, sexism and homophobia". (Mello, 2016, p. 3272, own translation).

students capable of learning. The information we get is generical. That's the reason for this *insecurity feeling*. (GE M PE2, emphasis added).

The need for proper training to teach SETG students was conspicuous in the study, more emphatically among respondents working with GE, who feel the need for support to "organize strategies, guidance and monitoring for accessibility resources in the general classroom and/or school, articulated with other teachers, the school, the family, among others", as already identified by Oliveira and Prieto (2020, p. 345, own translation).

The lack of support and training to work with SETG were the object of several studies prior to the pandemic (Monteiro & Manzini, 2008; Pagnez et al., 2015; Otalara & Dall'acqua, 2016; Monico et al., 2018; Oliveira & Prieto, 2020; Oliveira et al., 2020). The literature compiles the perception of teachers as they feel unprepared to teach their classes, considering the differences between the student groups, be they cognitive, sensory, physical or emotional, which interfere significantly with the teaching process and learning outcomes. These aspects were confirmed in the excerpts below:

> P44 – I believe *they should give us specific information* to work properly with these students, *this mode of inclusion, it actually excludes*. (GE S PE1, emphasis added).

> P52 – We receive guidance from [Department]. But *it doesn't materialize*, in my opinion, *no effective work is done to provide guidance and technical training for teachers. Not even for the specialists working in* [specialist service]. I received guidance from them in the beginning of the year, and they guided me with loose activities, without passing me the student's real situation. Some of my investigations about family and possible sources of the difficulties in order to find better approaches, I was even asked not to go into that matter [family investigation]. Eventually, *I found this online course*, and I'm studying methods of literacy *for autistic children* because I *didn't have any kind of in-person guidance* to work properly with these students, *never mind online accessibility tools*. (GE M PE1, emphasis added).

> P113 – *Continuing education to develop and improve work with this public* doesn't happen in the system where I work. (SES M PE1, emphasis added).

> P46 – There is a lack of *specific training* for those licensed to teach grades 6 to 9. For example, math teachers, many of them can't make a proper adaptation in the curriculum to suit students with disabilities. (GE M PE2, emphasis added).

Thus, whether in GE (according to P44, P52 and P46) or in SES (P113), teachers are clearly uncomfortable with the lack of information to work with SETG, a situation that underscores the importance of looking further into the subject of curriculum in initial teacher education programs, as well as in-service training that covers continuing, reflective and collective teacher education:

> Developing competences for IE [inclusive education], while it may involve a sensitizing stage in initial teacher education, can only be fully reached over the course of an in-service process – also because in IE the commitment to educating all students applies to the whole school. Paraphrasing the African proverb, "It takes a whole village to educate a child", we would say, "it takes a whole school to develop an IE project". (Rodrigues, 2006, p. 307, own translation).

In view of the above, it is presumed that investing in education still is the way forward, since, in the words of Rodrigues (2006, p. 311, own translation), "if IE [inclusive education] is costly, we'd better not want to know the price of exclusion".

Final considerations

This study, situated in the first four months of the period of suspended in-person classes due to the Covid-19 pandemic in Brazil, demonstrates that pedagogical actions based on GE-SES collaboration are worth highlighting, even with the difficulties facing education systems and schools and the emergency posed by the situation.

Despite the massive presence of digital technologies in contemporary day-to-day, the results showed that the public education systems still based their remote activities for SETG on the use of printed material, whose accessibility resources were generally left for teachers to provide.

In addition, while the performance of SES teachers was significant, a major participation and sense responsibility were observed on the part of those working with GE, characterizing an advance in this area, probably due to the national policy on inclusive education (MEC, 2008).

With regard to the challenges listed, the analysis presented here corroborated the literature in exposing the weaknesses of schooling provided for SETG students, evidencing the lack of support for teachers related with the scarcity of guidance and technological resources. In line with Oliveira et al. (2020), these elements can reflect on irrecoverable losses from the perspective of social life and aggravate the exclusion of these students from the teaching and learning of curriculum contents. However, it is necessary to stress that many of the difficulties uncovered in the pandemic have roots in the history of special education.

While a concern can be seen in teachers for the participation of this group, in addition to the advances mentioned earlier, some expressions like "inclusion students", "special students", "inability to learn and progress" and "slow to learn" are recurrent. In these instances, the difficulties are attributed to the disability and, consequently, to the student, their family or their social vulnerability, resulting in low expectations about SETG students' learning.

This vision, which reduces a person to their disability and still characterizes them as a separated group, is rooted in the integration paradigm (Mendes, 2006) and bears the strong mark of the medical model of disability, against Brazilian education policies and the achievements of the movement for the social model of disability (Diniz, 2007), themes which deserve further examination in future contributions.

References

Arruda, E. P. (2020). Educação remota emergencial: Elementos para políticas públicas na educação brasileira em tempos de Covid-19. *EmRede – Revista de Educação a Distância*, *7*(1), 257-275. https://doi.org/10.53628/emrede.v7.1.621

Barnes, C. (2010). Discapacidad, política y pobreza en el contexto del "Mundo Mayoritario". *Política y Sociedad*, *47*(1), 11-25.

Bruns, J. P., & Rausch, R. B. (2020). Narrativas de uma professora em final de carreira: A educação frente à pandemia. *Dialogia*, (36), 102-115. https://doi.org/10.5585/dialogia.n36.17883

Cardozo, P. R., & Santos, A. M. dos. (2020). A criança com TEA: O ingresso no ensino fundamental em meio a pandemia. *Brazilian Journal of Development*, *6*(*7*), 46193-46201. https://doi.org/10.34117/bjdv6n7-302

Castro, S. F., & Almeida, M. A. (2014). Ingresso e permanência de alunos com deficiência em universidades públicas brasileiras. *Revista Brasileira de Educação Especial*, *20*(*2*), 179-194. https://doi.org/10.1590/S1413-65382014000200003

Dias, A. A., Santos, I. S., & Abreu, A. R. P. de. (2021). Crianças com transtorno do espectro autista em tempos de pandemia: Contextos de inclusão/exclusão na educação infantil. *Zero-a-seis*, *23*(especial), 101-124. https://doi.org/10.5007/1980-4512.2021.e79005

Diniz, D. (2007). *O que é deficiência?* (Coleção Primeiros Passos, 324). Brasiliense.

Ferraro, A. R. (2012). Quantidade e qualidade na pesquisa em educação, na perspectiva da dialética marxista. *Pro-Posições*, *23*(*1*), 129-146. https://doi.org/10.1590/S0103-73072012000100009

Ferreira, J. A. de O., & Carneiro, R. U. C. (2016). Educação inclusiva: O trabalho pedagógico com alunos público-alvo da educação especial do ensino fundamental II na sala de aula comum. *Revista Ibero-Americana de Estudos em Educação*, *11*(especial), 969-985. https://doi.org/10.21723/riaae. v11.esp2.p969-985

Fiscarelli, R. B. O. (2008). *Material didático: Discursos e saberes*. Junqueira & Marin.

Fundação Carlos Chagas. (2020). *Educação escolar em tempos de pandemia na visão de professoras/es da educação básica: Informe 1.* https://www.fcc.org.br/fcc/educacao-pesquisa/educacao-escolar-em-tempos-de-pandemia-informe-n-1/

Gamboa, S. S. (2013). Quantidade-qualidade: Para além de um dualismo técnico e de uma dicotomia epistemológica. In J. C. dos Santos Filho, & S. S. Gamboa (Orgs.), *Pesquisa educacional*: *Quantidade-qualidade* (8a ed., pp. 83-108). Cortez.

Gil, A. C. (2002). *Como elaborar projetos de pesquisa* (4a ed). Atlas.

Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (Inep). (2021). *Censo da educação básica 2020*: *Resumo técnico*. Inep. https://www.gov.br/inep/pt-br/centrais-de-conteudo/acervo-linha-editorial/publicacoes-institucionais/estatisticas-e-indicadores-educacionais/resumo-tecnico-do-censo-da-educacao-basica-2020

Lei n. 9.394, de 20 de dezembro de 1996. (1996). Estabelece as diretrizes e bases da educação nacional. Brasília, DF. http://www.planalto.gov.br/ccivil_03/leis/l9394.htm

Lei n. 13.146, de 6 de julho de 2015. (2015). Institui a Lei Brasileira de Inclusão da Pessoa com Deficiência (Estatuto da Pessoa com Deficiência). Brasília, DF. http://www.planalto.gov.br/ccivil_03/_ ato2015-2018/2015/lei/l13146.htm

Lei n. 13.979, de 6 de fevereiro de 2020. (2020). Dispõe sobre as medidas para enfrentamento da emergência de saúde pública de importância internacional decorrente do coronavírus responsável pelo surto de 2019. Brasília, DF. http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2020/lei/l13979.htm

Martins, A., Cavalcanti, A. L. L. A., & Dourado, A. C. S. (2020). Educar em tempos de incertezas: A implementação do ensino remoto na rede municipal de Floriano-Piauí. *Dialogia*, (36), 73-85. https://doi.org/10.5585/dialogia.n36.18619

Medida Provisória n. 934, de 1º de abril de 2020. (2020). Estabelece normas excepcionais sobre o ano letivo da educação básica e do ensino superior decorrentes das medidas para enfrentamento da situação de emergência de saúde pública de que trata a Lei n. 13.979, de 6 de fevereiro de 2020. *Diário Oficial da União*, Brasília, DF, *158*(63), 1. https://www.in.gov.br/en/web/dou/-/medida-provisoria-n-934-de-1-de-abril-de-2020-250710591

Mello, A. G. de. (2016). Deficiência, incapacidade e vulnerabilidade: Do capacitismo ou a preeminência capacitista e biomédica do Comitê de Ética em Pesquisa da UFSC. *Ciência & Saúde Coletiva*, *21*(10), 3265-3276. https://doi.org/10.1590/1413-812320152110.07792016

Mendes, E. G. (2006). A radicalização do debate sobre inclusão escolar no Brasil. *Revista Brasileira de Educação*, *11*(33), 387-405. https://doi.org/10.1590/S1413-24782006000300002

Ministério da Educação. (2008). *Política Nacional de Educação Especial na perspectiva da Educação Inclusiva*. Presidência da República. http://portal.mec.gov.br/arquivos/pdf/politicaeducespecial.pdf

Ministério da Educação. (2009). *Guia de tecnologias educacionais 2009*. Secretaria de Educação Básica.

Monico, P. A., Morgado, L. A. S., & Orlando, R. M. (2018). Formação inicial de professores na perspectiva inclusiva: Levantamento de produções. *Psicologia Escolar e Educacional*, *22* (especial), 41-48. https://doi.org/10.1590/2175-3539/2018/040

Monteiro, A. P. H., & Manzini, E. J. (2008). Mudanças nas concepções do professor do ensino fundamental em relação à inclusão após a entrada de alunos com deficiência em sua classe. *Revista Brasileira de Educação Especial*, *14*(1), 35-42. https://doi.org/10.1590/S1413-65382008000100004

Nascimento, A. S. B. do, Sousa, D. L. S., & Versolato, M. S. (2020, 19 de dezembro). *O impacto da pandemia na educação especial na perspectiva da educação inclusiva: Um balanço preliminar pela ótica de professores do atendimento educacional especializado na rede municipal de Santo André.* Anped. https://anped.org.br/news/o-impacto-da-pandemia-na-educacao-especial-na-perspectiva-da-educacao-inclusiva-um-balanco

Nozu, W. C. S., & Kassar, M. C. M. (2020). Escolarização de crianças e adolescentes pantaneiros em tempos de covid-19. *Práxis Educativa*, *15*, Artigo e2016193. https://doi.org/10.5212/PraxEduc.v.15.16193.080

Oliveira, A. A. S. de., & Prieto, R. G. (2020). Formação de professores das salas de recursos multifuncionais e atuação com a diversidade do público-alvo da educação especial. *Revista Brasileira de Educação Especial*, *26*(*2*), 343-360. https://doi.org/10.1590/1980-54702020v26e0186

Oliveira, A. S., Neta, Nascimento, R. M. do, & Falcão, G. M. B. (2020). A educação dos estudantes com deficiência em tempos de pandemia de covid-19: A invisibilidade dos invisíveis. *Interac*ções, *16*(54), 25-48. https://doi.org/10.25755/int.21070

Otalara, A. P., & Dall'acqua, M. J. C. (2016). Formação de professores para alunos público-alvo da educação especial: Algumas considerações sobre limites e perspectivas. *Revista Ibero-Americana de Estudos em Educação*, *11*(*2*), 1048-1058. https://doi.org/10.21723/riaee.v11.esp2.p1048-1058

Pagaime, A., Artes, A. A., Melo, D. C. F. de, Kumada, K. M. O., Prieto, R. G., & Drago, S. L. S. (2020). *Inclusão escolar em tempos de pandemia: Informe pesquisa*. Fundação Carlos Chagas. https://www.fcc.org.br/inclusao-escolar-em-tempos-de-pandemia/

Pagaime, A., & Melo, D. C. F. (2021). Vamos falar de capacitismo na escola? In R. Drago, M. P. M. Araújo, & I. R. Dias (Orgs.), *Inclusão de pessoas com deficiência e transtornos globais do desenvolvimento em espaçostempos educativos: Reflexões e possibilidades* (pp. 42-57). Encontrografia.

Pagnez, K. S. M., Prieto, R. G., & Sofiato, C. G. (2015). Formação de professores e educação especial: Reflexões e possibilidades. *Olhares*, *3*(1), 32-57. https://doi.org/10.34024/olhares.2015.v3.320

Paulo, J. R. de, Araújo, S. M. M. S., & Oliveira, P. D. de. (2020). Ensino remoto emergencial em tempos de pandemia: Tecendo algumas considerações. *Dialogia*, (36), 193-204. https://doi.org/10.5585/dialogia.n36.18318

Parecer n. 5, de 28 de abril de 2020. (2020). Reorganização do Calendário Escolar e da possibilidade de cômputo de atividades não presenciais para fins de cumprimento da carga horária mínima anual, em razão da Pandemia da COVID-19. Brasília, DF. http://portal.mec.gov.br/index.php?option=com_docman&view=download&alias=145011-pcp005-20&category_slug=marco-2020-pdf&Itemid=30192

Parecer n. 6, de 5 de agosto de 2021. (2021). Diretrizes Nacionais orientadoras para a implementação de medidas no retorno à presencialidade das atividades de ensino e aprendizagem e para a regularização do calendário escolar. Brasília, DF. http://portal.mec.gov.br/index.php?option=com_docman&view=download&alias=195831-pcp006-21&category_slug=julho-2021-pdf&Itemid=30192

Pletsch, M. D. (2009). A formação de professores para a educação inclusiva: Legislação, diretrizes políticas e resultados de pesquisas. *Educar em Revista*, (33), 143-156. https://doi.org/10.1590/S0104-40602009000100010

Pletsch, M. D., & Mendes, G. M. L. (2020). Entre a espera e a urgência: Propostas educacionais remotas para crianças com síndrome congênita do zika vírus durante a pandemia da covid-19. *Práxis Educativa*, *15*, Artigo e2017126. https://doi.org/10.5212/PraxEduc.v.15.17126.106

Rodrigues, D. (2006). *Inclusão e educação: Doze olhares sobre a educação inclusiva*. Summus Editorial.

Santarosa, L. M. C., Conforto, D., & Schneider, F. C. (Orgs.). (2014). *Caderno pedagógico: Curso de formação continuada de professores em tecnologia da informação e comunicação acessíveis*. Evangraf.

Saraiva, K., Traversini, C., & Lockmann, K. (2020). A educação em tempos de covid-19: Ensino remoto e exaustão docente. *Práxis Educativa*, *15*, Artigo e2016289. https://doi.org/10.5212/PraxEduc.v.15.16289.094

Shimazaki, E. M., Menegassi, R. J., & Fellini, D. G. N. (2020). Ensino remoto para alunos surdos em tempos de pandemia. *Práxis Educativa*, *15*, Artigo e2015476. https://doi.org/10.5212/PraxEduc.v.15.15476.071

Silva, A. C. O., Sousa, S. A., & Menezes, J. B. F. de. (2020). O ensino remoto na percepção discente: Desafios e benefícios. *Dialogia*, (36), 298-315. https://doi.org/10.5585/dialogia.n36.18383

Souza, C. J. de, & Vieira, A. A. (2020). A utilização das tecnologias assistivas para alunos surdos em tempos de pandemia: Um estudo introdutório. *Itinerarius Reflectionis*, *16*(1), 1-25. https://doi.org/10.5216/rir.v16i1.65382

Souza, F. F. de, & Dainez, D. (2020). Educação especial e inclusiva em tempos de pandemia: O lugar de escola e as condições do ensino remoto emergencial. *Práxis Educativa*, *15*, Artigo e2016303. https://doi.org/10.5212/PraxEduc.v.15.16303.093

World Health Organization (WHO). (2020). *WHO Director-General's opening remarks at the media briefing on COVID-19 – 11 March 2020*. WHO. https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020

Note on authorship

Adriana Pagaime, Kate Mamhy Oliveira Kumada and Silvana Lucena dos Santos Drago participated in the bibliographic review, data analysis, writing and final review of the text. Rosângela Gavioli Prieto, Douglas Christian Ferrari de Melo and Amélia Artes participated in the bibliographic review, data analysis and final review.

Data availability statement

The contents underlying the research text are contained in the manuscript.

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