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# Body in the forefront, again? Distance learning drawbacks and implications for policy

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The COVID-19 pandemic launched a challenge on the education system and required schools to make organizational changes in order to continue serving the local community. Essential to this process are support teachers who play a key role as agents of change. Despite their role, the perspectives, desires, and needs of these teachers have since been neglected, despite their centrality in contemporary Italy. Accordingly, the specific aim of this study revolves around supporting teachers' experiences with digital technologies (i.e., learning applications, telecommunication media, and interactive devices) within a pandemic context, especially technologies used to maintain the educational bond with students with disabilities. Attuned to an interpretative paradigm, this qualitative research has an ethnographic design, which was implemented in a secondary school in a Northern Italian city. Throughout the article, we discuss the three main drawbacks found in fieldwork: (i) the prevailing change in bureaucratic management; (ii) the pervading mind–body binarism in teaching; and (iii) a long-term vision for inclusion being subject to a passive logic of adaptation. Finally, we reflect on some emerging implications. The first points to a necessary move from a rationalistic school management to an alternative model focused more on guaranteeing social justice among educational stakeholders. The second is that the very introduction of a new technology should be aimed at engaging actors whose work has been invisible to date in a school setting to empower them as key agents for change. The third suggests that, to overcome community disaggregation and mind-body binarism, a teacher-researcher figure is needed, a figure with holistic skills in addition to those of a technical nature delivered by institutional training programs.

## KEYWORDS

digital technology, disability, teacher training, inclusive school, ethnography

## Introduction

### The philosophy of inclusion in Italy

The philosophy of inclusion has a long history in Italy; it dates back to the 1970s when students with disabilities were first allowed to attend mainstream educational institutions due to a process called “integration” [Law 118/1971, in the [Italian Official Journal \(1971\)](#)]. [Zanazzi \(2018\)](#) defines the model of Italian schools' inclusion as radical as it supports the inclusion of students with disabilities in mainstream classes and strongly advocates for their attendance in the classroom together with their classmates, prioritizing the socialization process ([Ianes et al., 2020](#)). The role of the support teacher was legally created

in 1975 as a “specialist teacher,” distinct from other main teachers. It was then further defined by Law 517/77 (Italian Official Journal, 1977). To attain qualification as support teachers, student teachers must attend a mandatory limited-enrollment 1 year academic training course, the program and activation of which depend on the Ministry of Education [Ministerial Decree 249/2010, in the Italian Official Journal (2010)]. Support teachers form part of the teaching team and participate in all activities related to the class, such as planning and assessment.

## The need for a change in approach

Despite Italian schools having a long tradition of inclusive practices, the role of support teacher and the related training are characterized by continuous redefinitions (Tammaro et al., 2017; Gaggioli and Sannipoli, 2021), mainly due to the organizational culture and weaknesses identified in digital skills (Valverde-Berrocoso et al., 2021). Not only main and support teachers but also students with disabilities have experienced considerable difficulties in relation to education according to the current times and the systems imposed by the use of digital technology (Averett, 2021). As Averett also points out, students with disabilities often encounter great difficulties in attending distance learning lessons. Moreover, in the Italian context, critical issues have emerged, and the use of digital technology for distance learning has *de facto* excluded students with disabilities from participating in the educational community and from the possibility of learning (Parmigiani et al., 2021).

The COVID-19 pandemic has challenged the global education system, and the United Nations Educational, Scientific, and Cultural Organization (UNESCO, 2021) recognizes educational personnel as agents of change for restructuring educational processes and institutions with a view toward sustainability, from an inclusive perspective, and within a changing societal and educational context (del Arco et al., 2021). Furthermore, according to UNESCO, educational personnel would be the main actors responsible for steering digital technology and its relationship with education toward inclusiveness. Therefore, there is a need for training programs aimed at teachers and providing them with special skills to act in the present context (Ramos-Pla et al., 2021). Specifically, it is urgent to gain a better understanding of the support teachers' experience, as there is a gap in the literature and their role is crucial in the Italian educational environment. However, the research into digital technology revolves around universities (Ramos-Pla et al., 2022), leaving secondary schools in oblivion, and there is research based mainly on quantitative analysis (Tomaino et al., 2022) and a review of literature (del Arco et al., 2022), but there is little ethnographic research. Consequently, this article presents evidence of teachers' experience of distance learning in a secondary school in northern Italy during the COVID-19 pandemic. This is the second part of a broader project that aims to clarify how the experiences of actors in the educational process are being transformed (Milani Marin and Jacomuzzi, 2022).

We are studying this topic because, as stated by UNESCO (2021), it is a key element in responding to the changes taking place in the field of education worldwide. It is important to study the Italian context because Italy has a long history of inclusion, but only under the pressure of COVID-19 did it begin a process of digital transformation that highlights poor digital literacy among teachers

(Tomczyk et al., 2023). Due to the nature of the research, the contribution is neither theoretical nor methodological but rather practical in nature, and it is aimed at sharing experiences and knowledge on different local contexts to fuel the broader debate on the topic, in line with the aforementioned UNESCO (2021) statements. For academics, it is important to keep the discussion on inclusion alive and encourage the exchange of research experiences between different cultural and organizational contexts (European Commission, 2019). For practitioners, this study could be useful to renew the policies relating to the academic path for support teachers and the training curricula, in line with the changing characteristics of the educating and learning community (UNESCO, 2021).

## Purpose of the research

In summary, the crucial focus of this study refers to the great challenges aimed at ensuring inclusion, involving a change both in the school management and in the support teacher culture. This context requires teachers to learn new skills and stay up to date with skills and technology. However, there are other actors that collectively deal with school and the social inclusion of students with disabilities; these actors include support teachers, school management, local networks, and national policies. In this study, the focus is on teachers and school management, following the study of Hopkins and Stern (1996), who argue that teachers and schools have much more power to bring about change than they imagine.

Through this article, we intend to pursue the following goal: to investigate support teachers' experiences with digital technology in terms of the educational relationship with students with disabilities during the pandemic. Consequently, three leading questions were at the basis of this explorative qualitative research:

What are the drawbacks related to distance learning for the relationship between students with disabilities and teachers?

How do these drawbacks challenge the dimension of care in schools?

What changes seem useful for a non-static inclusive school?

## Methodology

This qualitative research has an ethnographic design, and the field researcher also acted as a trainee in the support teacher specialization course. The participant observation technique was implemented within a single educational institution in a city in northern Italy and lasted 4 months. Additionally, 20 semi-structured interviews were conducted with nine main teachers (MT), seven support teachers (ST), and four educators (E). Regarding the sampling, the cases were selected using the convenience technique in participant observation and the snowball technique for semi-structured interviews (Corbetta, 2003). All participants gave verbal informed consent; all the interviews were digitally audio recorded with the participants' permission. All the interviews began with a list of predetermined specific themes and continued in a dialogical manner, offering participants the possibility to freely discuss topics they felt to be relevant in their own words. Data from the interviews and field notes were inductively analyzed following a thematic approach to theorizing (Riessman, 2005). Data collection analysis followed the work of Stambekova et al. (2022).

According to [Atkinson and Hammersley \(2007\)](#), grounded theorizing is a qualitative analysis method that allows for the triangulation of multiple sources, as in this research. This study finally arrives at a level of conceptual ordering of the data, as discussed by [Strauss and Corbin \(1990\)](#). In terms of the scope of this article, partial analysis results based on ethnographic materials and concerning digital technology experience have been selected for the next discussion. As far as methodological limitations are concerned, the sample represents the main methodological limitation of this investigation, the results of which are not sufficient for statistical inferences or generalization ([Colombo and Santagati, 2022](#)) but can give a preliminary and exploratory overview of the issue. Additionally, the research was carried out in one school only due to the particular role of the researcher who entered the field.

## Results and discussion

This research was performed in a specific context and does not necessarily reflect the experience of the entire country. However, our findings are in agreement with existing studies that have been performed throughout Italy ([Parmigiani et al., 2021](#)) as well as with international literature ([Pozo et al., 2021](#); [UNESCO, 2021](#)). Through the findings of this study, we aim to contribute to the ongoing debate on the main topics of interest in research into education that have emerged, by presenting some suggestions. From the interviews with participants, it can be determined that there are several drawbacks to the effective implementation of inclusive education strategies in the distance learning environment. Three of these drawbacks were identified as having the biggest impact.

The first major drawback identified lies in the organizational culture and management of schools, which seem to prevent the effective inclusion of support teachers in the first place and inhibit collaborative processes among teachers, as shown in the first part of this research. This is partly due to the time taken up by bureaucratic activities ([Skrtic, 1995](#)), which distract support teachers from the core aim of their profession: the complex management of the care relationship. The second drawback that emerged during the pandemic involves the introduction of digital technology into the care of students with disabilities. This introduction highlighted, on the one hand, the sense of inferiority already experienced by support teachers, and, on the other, the limitations of the emergent and idealized introduction of digital technology into the care relationship, which led to a mind-body separation in the educational process. The third drawback is the lack of qualified educational personnel ([Monyai, 2019](#)), especially among support teachers ([ISTAT, 2020](#)). Moreover, main teachers are also perceived as lacking both pedagogical knowledge, which is essential to managing the care relationship with a student with disabilities, and an interest in getting involved in this relationship, as they prefer to delegate the responsibility to the support teacher, as stated by [Ciambrone \(2017\)](#). In the following paragraphs, these drawbacks are presented and implications are discussed.

### Bureaucracy and social justice framework

Despite the evolution of the international public health emergency, national legislation guaranteed the physical school attendance of

students with disabilities and special education needs from the beginning of the following school year (2020–2021). However, the physical return of these students and support teachers was difficult, not only in terms of the contagion risk but also because of the need to rebuild a caring relationship in a completely different social and environmental setting. Specifically, distance learning exacerbated an existing unease among support teachers: the increase of bureaucracy within the school system. This constant increase seems to be causing a discrepancy between humans and the organizational needs, specifically between the times and methods of both the learning and the care process and what the school requires in terms of documentation. In his interesting and, albeit slightly outdated, still valid research, [Skrtic \(1995\)](#) comments on this paradox of inclusive schools requiring more and more documentation, taking time away from the educational-pedagogical relationship. As one of the support teachers interviewed (I) points out:

The 2 years of distance learning have been an executioner's axe, a tool that has killed the students' bodies, and bureaucracy in this context is what has defined the behaviour of school personnel. Bureaucracy overshadows human intentions and needs. (ST8-I)

Bureaucracy is in direct conflict with the ways in which both students and educational personnel move around school spaces and build their learning community through their daily actions as has already emerged in other research conducted in Europe ([Araújo et al., 2023](#)). In this way, bureaucracy is an obstacle to the development of the care relationship and to individuals' natural predisposition to manifest their own will. This vision of the interviewed support teacher recalls the concept of the iron cage of Weberian memory, which highlights the growth of rationalization inherent in social life and the fact that individuals are embedded within organizations that follow principles of efficiency, rationality, and control ([Greenwood and Lawrence, 2005](#)). However, when considering the philosophy of inclusion applied to school, it should be necessary for teachers to find a balance between these principles of management rationalization, on the one hand, and the adaptability and personalization of the pedagogical path, on the other hand ([Cottini and Morganti, 2016](#)). Recognizing diversity and disability and the consequent readiness of the school's organization and physical structure to accommodate all students, as well as the configuration of teachers' mindset and practices in terms of inclusion, is the responsibility of schools' management ([Ryu et al., 2020](#)). From the teachers' experiences, a rational model of school management emerges, in which the timing and interactions between school management and teachers, both curricular and in terms of support, are defined by bureaucracy. [Liasidou and Symeou \(2018\)](#) suggest that the role of school management should be reviewed and that schools should move away from the conception of accountability, efficiency, and effectiveness that education systems have in the current times. Their suggestion is based on the idea that these elements subordinate an alternative vision of schooling based precisely on the principles of inclusion and social justice. It is precisely the bureaucracy resulting from inclusive processes that leads to schools finding themselves in a paradoxical situation, in which the opportunities for collaboration and confrontation among teachers diminish, thereby producing a bureaucratic machine ([Skrtic, 1995](#)).

In short, the information uncovered to date highlights the weakness of school management in taking an inclusive approach, which perhaps requires a reconsideration of the role of management itself, as well as the role of teachers. To this end, the social justice framework is a noteworthy element, through which the inequalities in power and social injustices that influence the lives and educational trajectories of students with disabilities can be redressed (Liasidou and Symeou, 2018). However, this approach should be aimed primarily at support teachers, to prevent schools from playing a leading role in both causing inferior professional trajectories and the subordination of support teachers to the dominant view. The work of Laloux (2014), who states that school organizations should reinvent themselves and plan a new model in which teachers are more in control of their profession and learning, is interesting in this sense. This renewed teacher role and awareness may encourage the inclusion process to move beyond the current rigid bureaucratic borders. To decrease the demeaning hierarchy and to create structural conditions conducive to support teachers in managing their time and engaging in collaboration with other actors, it is necessary for the management to take a team-oriented and developmental approach, as suggested by Coyle (1997).

## Digital technology and care

The increase in the already pressing bureaucracy, together with the introduction of digital technology, has caused support teachers to feel both the social and school management pressure to become familiar with digital tools by transferring the physical classroom and care relationships into a virtual environment. However, upon returning to the classroom, support teachers and educators discovered that students with disabilities had not made any progress in the subjects of learning and that they had also missed some social, cognitive, and emotional milestones due to the virtual learning environment. A recent literature review on the effects of the use of distance learning with students with disabilities (Petretto et al., 2021) draws attention to the risks in the use of digital technology with these students when there are no “reasonable accommodations” (ivi, p. 100) for every single student or when they do not have digital accessibility. According to some support teachers, distance learning has been put aside and digital technology has regained its former place: writing emails, downloading files, and working with .doc and .ppt files as a mere learning aid. One support teacher recalls the return to the classroom and the difficulties experienced by students with disabilities in their first months of physical attendance.

All the students returned to school in September with regressions at relational, autonomy, and cognitive levels. J. came back with an infinite sadness and her mother said that sometimes she talked about suicide. [...] At school she was very sad. It has been devastating for the kids. (ST2-I)

Through digital technology and the computer screen, the relationship between the support teacher and the student with disabilities could not be defined in the conventional terms of care. As reported by the support teachers interviewed, their experience as trainees and my daily confrontation with support teacher colleagues reveal a landscape in which digital technology becomes a tool that

isolates students with disabilities from the school community, distances them from a relationship with their support teachers, and requires a physical effort that is beyond their capabilities. The way in which digital technology has been used in the care relationship has put in place an educational policy that favors the mind-body separation of students with disabilities. Indeed, as Winner (1980) writes, technology neither contributes to efficiency nor possesses exclusively positive or negative effects on society; it also embodies specific forms of power and authority. It can stabilize certain forms of institutional control, unevenly re-distribute risks and responsibilities among actors, and guide end-user perceptions through versions of truth and what is right envisioned by designers and implementation managers.

Through the screen, the sensory dimension, a key element used by students with disabilities to get to know the world, is missing, as pointed out by support teachers during our field research. One of the support teachers mentioned the following:

M. did take part in distance learning but, for his specific pathology, it's quite alienating. I think that, for most kids with a disability it's absolute madness, a tool you can't even imagine working with; these kids need constant physical contact [...] as we know [...] like her sister G., M. has genetic problems which give her severe migraines and she can't use the computer very much. (ST1-I)

Physical presence is essential if the care relationship is to take place at all; otherwise, it becomes, as the interviewee says, absolute madness. In short, a state of alienation and a feeling of loss emerge, affecting both actors, due to temporal and sensory structures imposed by digital technology used in the care relationship. Furthermore, as also reported by researchers of the critical disability approach (Mills, 2017; Poobrasert et al., 2022), it is crucial to know the characteristics of the disability and the psychophysical needs of students with disabilities, critically planning and organizing the use of digital technology on this basis. Another support teacher had a similar experience.

Online learning was delirious last year. P. absolutely refused to make eye contact through the computer [...] I didn't know how to handle it: it was the first time. Speak louder? Be condescending? N. had no autonomy and his mum had to be around all the time. (ST2-I)

The rules of distance interaction proved to be completely different from those governing the relationship when it takes place within the school's physical space. During distance learning, the support teacher experienced a great sense of ineffectiveness in relation to and working with students with disabilities, revealing the need for teachers to have adequate digital literacy to meet the new needs (Li and Yu, 2022). Students were working from a disadvantaged position due to the technology policy approach, as is often the case with people with disabilities (Goodley and Runswick-Cole, 2013).

The consequence of the use of digital technology not only changed the interaction dynamics between support teachers and students with disabilities but also had a disruptive effect on the wider school community (Baber, 2022). A main teacher reflected on the consequences of distance learning focusing on the relationships among teachers (Bruno et al., 2023).

Distance learning has broken down the school as a community, destroying relationships and leading individual teachers to focus on themselves. (MT5-I)

The breakdown of the school community was accompanied by the teachers' change of attitude toward others, in light of their own survival. As has already emerged, the peculiar social and physical environment during distance learning caused stress and anxiety among teachers, diminishing their comfort and performance levels (Al-Tkhayneh et al., 2023). The uncertainty of the evolution of the pandemic and the commitment required to learn how to use digital technologies for teaching led teachers to feel catapulted into self-centered isolation.

Later, as previously mentioned, physical school spaces reopened to students with disabilities and special educational needs in September 2020. These spaces have been reinvented, along with educational activities; creative workshops have become more widespread and, as reported by a support teacher (ST4-O), classrooms are currently occupied differently. In this way, the physical and social conditions were fashioned for students with disabilities to be able to act according to alternative forms of thinking and learning, beyond linear thinking, which is often rigid and unsuitable for learning (Legrenzi and Jacomuzzi, 2020). This is in line with the key feature of disability studies that has to do with making the invisible visible by promoting alternative and critical thinking (Cypher and Martin, 2008). Another support teacher states the following:

I did a lot of work with manual creativity: creativity and art, not technology. [...] It was only by doing the scale model that I was able to connect with the other curriculum subjects [...] And it was all about doing, getting their hands dirty. (ST1-I)

From this statement, it becomes clear that there is a certain type of education that needs physical contact and the use of technology that goes beyond a digital device. Cognitive processes, emotions, motivation to learn, and care relationships are all mediated by body-based systems. In the current exceptional circumstances, nature has returned to the center and in a relationship in which mind and body clearly cannot be separated and in which the body is actively involved in experiencing the educational process. Interestingly, while the education process looks at subjectivity and personalization, the interest in the disabled body is still in the background (Erevelles, 2000). The experience of teaching and learning through digital technology has highlighted the importance of the human factor in the teacher-pupil relationship, the essential nature of the physical place in establishing contact and trust, and the knowledge needed to manage this embedded interaction. This knowledge goes beyond pedagogical and didactic knowledge to involve both intrapersonal and interpersonal skills, as well as what Sennett (2012) defines as empathy—a form of awareness of the other—which are all essential for managing both the care relationship and professional interactions with colleagues. While distance learning was delivered by the main teachers to the class, support teachers and students with disabilities physically experienced new forms of the care relationship in the traditional space of the school. Their physical attendance during the pandemic put students with disabilities back at the center, emphasizing the indispensability of the mind-body union in the care relationship. As Macedonia (2019) states, the body, both through actions and

gestures, is a powerful instrument in understanding and in learning school subjects. School spaces become places of new encounters and knowledge, where the main actors in the educational process come to know each other. In these places, the care relationship grows beyond bureaucracy and the excluding effect of digital technology and distance learning.

The pandemic and its related precautionary measures forced schools to introduce digital technology and to reflect on how to manage educational processes and on the role of support teachers in the inclusive process. The switch to digital technology established the school as an educational institution embedded in a constantly changing emergent state, where students and teachers suffered negative consequences (Averett, 2021). In fact, this digital artifact allowed didactic flexibility by creating alternative spaces for the mere transmission of knowledge; however, it allowed only the efficiency of school organization by guaranteeing teaching hours and the progress of the curriculum. The introduction of digital technology in education is a widely debated topic, and as Starkey et al. (2021) suggest, schools should not only introduce it but also define the goals of its use. According to de la Bellacasa (2011), technology is an actor and, consequently, its introduction gives the educational relationship a new shape. The author's contribution to this subject is interesting: This researcher started from the experience of marginalized people to study care, which is understood as attention to those at risk of being adversely affected by a socio-technical combination, such as the use of distance learning (i.e., technology) that could take away the value of care and the voice of the actors involved. de la Bellacasa also points out that care is also an indicator for jobs that are crucial to everyday life, but the value of which is hardly ever recognized, such as teaching.

## Agents of change: the teacher-researcher

As discussed above, the pandemic inverted the terms of the educational equation, leaving students with disabilities and support teachers inside the classroom and putting students without disabilities and some curriculum teachers outside the school. Main teachers transferred linear thinking into online lessons, emphasizing order, efficiency, and assessment, all of which are aspects that reflect the standard—or “normal”—educational experience (Van Dooren et al., 2008; Pozo et al., 2021). The support teacher and the student with disabilities are negated in this system; however, they found the essence of their relationship in bodily presence and in the sharing of educational space. A main teacher reflected on the positive consequences of this inversion of terms for students with disabilities, who found themselves attending school without their peers.

Thanks to distance learning, students with disabilities experienced a privileged situation, as they were able to attend school in person. (MT2-I)

Due to this change, students with disabilities were able to benefit from a special merit: attending school activities in person. This increased socialization among students with disabilities from different classes, as a support teacher (ST3-O) reports.

Additionally, students with disabilities were able to meet and get to know the main teacher, went to school to do the online lesson,

while the rest of their classmates were at home, as a main teacher told us.

He came to school and his classmates were at home, involved in remote learning and doing exercises, while I could work with him. It was good, I was finally able to meet his and get to know him, I understood more about his difficulties and was able to develop strategies to help him [...] It was necessary to create a situation, a calm moment to work with him. (MT3-I)

The main teacher concluded by expressing the hope that their main teacher colleagues would be able to spend some time alone with these children to better understand their difficulties. This interaction suggests that the main teachers' lack of knowledge of these children's disabilities and the school's organization, which does not allow moments and spaces for personal encounters among teachers, might partially explain the lack of main teachers' educational co-responsibility and poor collaboration with the support teachers. Indeed, as Sennett (2012) points out, the educational organizations of the current times, while claiming to be in favor of collaboration, actually prevent it.

Another main teacher talks about the benefits of a deeper knowledge of the characteristics and specific needs of students with disabilities. In fact, face-to-face lessons, as opposed to the imposition of digital technology, have shed a renewed light on social and human factors, such as the interaction between the main teacher and students with disabilities, and the time dedicated to the relationship and learning.

He stayed in the classroom alone with the support teacher and found it very beneficial. [...] Moreover, all the main teachers were able to keep an eye on him. (MT4)

Paradoxically, the pandemic has given back to students with disabilities their time for relationships and learning. In this original relational configuration, the need for main teachers to have a deeper knowledge of the students' disabilities and personal characteristics emerges, and awareness of one's profession and what it requires is a fundamental premise for change. As Griffin and Steen (2011) point out, agents of change in social justice have an awareness of their own worldviews and biases, as well as their desire to become more culturally skilled and capable of advocating on behalf of and promoting the empowerment of their students and families. In this context, it might be useful to rethink the initial and ongoing training (Ramos-Pla et al., 2021; González et al., 2023) received by main and support teachers, which is aimed at creating teachers without the "technician" mentality taught in all teacher training environments, as well as the support teacher specialization course. Specifically, support teachers play an essential intermediary role among the different actors involved at different ecological levels of an inclusive educational system. Indeed, support teachers are intermediaries among national policies, socio-medical and health professionals, parents, the entire school community, and students with disabilities. This pivotal role requires multifaceted training that goes beyond the methodological and didactic knowledge transmitted in the university specialization course, in which the researcher participated as a trainee support teacher. In addition, support teachers are increasingly seen as actors who need to build, through their training and

professional path, leadership for social justice and equity (Brown, 2004).

According to Hlebowitsh (1990), it is necessary for teachers to emancipate themselves from this "technician" mentality to be able to act together as a more critically minded profession. The author became a support teacher-researcher, to gather and analyze data, thereby allowing individuals to reflect on their own epistemologies, practices, and personal professional trajectories (Alexakos, 2015). As the author emphasizes, these reflective processes lead to greater awareness and mindfulness, contributing to the advancement of research and also restoring support teacher centrality.

However, change is complex and requires the involvement of the entire organization. As Ianes (2014) points out with regard to the Italian context, it is essential for the school management to subscribe to clear and specialized roles that operate at different levels in the inclusion processes: the intermediate level of management, coordination, and supervision. Indeed, the increasing number of support teachers—some without specialization (ISTAT, 2020)—and the complexity of the care relationship with students with disabilities require that the individual support teacher be sustained in their work by a wider group of experienced professionals. Specifically, these groups can be either at school or at local government or community levels. The first is a coordinated school-based group working on inclusion activities, while the second comprises highly specialized advisors, according to the type of disability, working in networks at the local or community level. This should be an active movement toward change that should include support teachers as agents of change.

## Conclusion

The complex perspective emerging from our findings shows the need to develop and implement education policies that involve different actors at different levels at the same time. Three drawbacks that hinder the effective planning and implementation of inclusive strategies in schools emerged from our study. These drawbacks include bureaucracy, a lack of educational personnel with digital literacy, and organizational culture and management in contradiction with an inclusive approach based on care. In view of the changes imposed by the COVID-19 pandemic and the problems described above, there is a clear need for education policies that shed new light on the role of school management as a facilitator of collaborative processes and that act as a guide in the process of change. Moreover, a school management that is able to think and act as a leader capable of empowering teachers and enhancing the different roles that revolve around the philosophy of inclusion is also necessary. However, it is also essential to reform teacher training, moving toward a teacher-researcher perspective, which will allow actors to reflect on their epistemology and their actions, thereby increasing their ability to drive change.

Despite the fact that scientific literature has been valuable in the past few years, many features, defined as lines of future research, still need to be examined: best practices of the change in school management toward an inclusive care approach because school management plays a key role in the change processes (Ainscow and Sandill, 2010). Additionally, those aspects related to teachers' co-responsibility in the process of inclusion stimulate pro-social

community behavior connected with the principles of the philosophy of inclusion and the social justice framework. Efforts might well be focused on carrying out more experimental approaches that combine quantitative and qualitative methodologies, as required by the complexity of the matter (Cottini and Morganti, 2016), that analyze the potential of (digital) technology in different educational environments and different types of disability (Mills, 2017; Poobrasert et al., 2022). Finally, de la Bellacasa's (2011) concept of the matter of care may be of interest, inspiring new research into interactions in education through the lens of technology, beyond its digital connotation.

## Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## Ethics statement

Ethical approval was not required for the studies involving humans because Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study. The studies

were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

## Author contributions

LM and AJ have contributed equally to the research project and the writing of the manuscript. All authors contributed to the article and approved the submitted version.

## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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