

Original Article

# Planning, implementation, and evaluation of occupational therapists' actions in a support network for school inclusion

## *Planejamento, implementação e avaliação das ações de terapeutas ocupacionais em uma rede de apoio à inclusão escolar*

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### Abstract

**Introduction:** Working within support networks for school inclusion is a recurring recommendation in the literature on Special Education, emphasizing the adoption of diverse strategies to ensure the permanence and participation of students with disabilities. **Objective:** To analyze the process of planning, implementation, and evaluation of occupational therapists' actions within a support network for the school inclusion of a student with cerebral palsy, enrolled in a Municipal Center for Early Childhood Education (CMEI) in Maceió, state of Alagoas, Brazil. **Method:** Developed under a qualitative approach, this investigation is characterized as action-research. The network-based work followed the model and stages of Collaborative Consultation. Professionals from the CMEI involved with the student and a group of occupational therapists from the public health system participated in the study. The data obtained were analyzed using thematic analysis. **Results:** The network's actions played a positive role in both the child's participation in school activities and the participants' reflections on the inclusion process and its interfaces. The collaborative process proved to be an important tool for professional development, both for the occupational therapists and for the CMEI staff. The analysis conducted supports the argument that an inclusive education policy aimed at ensuring the right to education for children with disabilities requires the implementation of a network of diversified support. **Conclusion:** It is suggested that future studies investigate contexts that already have diversified services to analyze their functioning, assess the level of collaboration, and identify ways to improve them.

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**Keywords:** Occupational Therapy, Education, Special, Social Support, Cerebral Palsy, Consultant.

### **Resumo**

**Introdução:** A atuação em redes de apoio à inclusão escolar é uma recomendação recorrente na literatura da Educação Especial, que enfatiza a adoção de estratégias diversificadas para garantir a permanência e a participação de estudantes com deficiência. **Objetivo:** Analisar o processo de planejamento, implementação e avaliação das ações de terapeutas ocupacionais em uma rede de apoio à inclusão escolar de uma estudante com paralisia cerebral, matriculada em um Centro Municipal de Educação Infantil (CMEI) em Maceió/AL. **Método:** Desenvolvida sob uma abordagem qualitativa, a investigação caracteriza-se como uma pesquisa-ação. O trabalho em rede seguiu o modelo e as etapas da Consultoria Colaborativa. Profissionais do CMEI envolvidos com a estudante e um grupo de terapeutas ocupacionais da rede pública de saúde participaram do estudo. Os dados obtidos foram tratados por meio da análise temática. **Resultados:** As ações da rede desempenharam um papel positivo tanto na participação da criança nas atividades escolares quanto na reflexão dos envolvidos sobre o processo de inclusão e suas interfaces. O processo colaborativo mostrou-se um importante instrumento de formação, tanto para os terapeutas ocupacionais quanto para os profissionais do CMEI. A análise realizada comprova a tese de que uma política educacional de inclusão escolar voltada para garantir o direito à educação de crianças com deficiência requer a implementação de uma rede de apoios diversificados. **Conclusão:** Para estudos futuros, sugere-se a investigação em contextos que já possuam serviços diversificados, visando analisar seu funcionamento, avaliar o nível de articulação e identificar formas de aperfeiçoá-los.

**Palavras-chave:** Terapia Ocupacional, Educação Especial, Redes de Apoio Social, Paralisia Cerebral, Consultoria.

## **Introduction**

This study assumes that ensuring the right to education for children who are the Target Population of Special Education (PAEE) requires not only securing their enrollment but also providing the necessary supports for their participation and learning. This entails creating and/or enhancing a support network within the regular school context—composed of its professionals and in partnership with public sectors of health, social assistance, among others—to ensure that Special Education services are provided based on the educational demands identified in each situation.

In summary, it is argued that this work perspective has the potential to address the different forms of exclusion that remain prevalent in educational settings, to enhance the teaching-learning process for PAEE children and their peers, to provide the training of human resources in Special Education, to contribute to the empowerment of families and individuals with disabilities, and, ultimately, to foster an educational environment where an inclusive culture prevails.

Traditionally, occupational therapists have been invited to collaborate on the educational needs of children with disabilities through reflective processes driven by collaborative action/dialogue with teachers and other school members. The outcomes of these interventions have proven positive, as highlighted by Baleotti & Zafani (2017), Folha et al. (2020), and Dounis et al. (2023).

The scientific literature in the field of Special Education indicates that Assistive Technology is one of the central themes when it comes to the educational needs of children with disabilities, given its importance in fostering autonomy, independence, and participation for this population within the school environment (Baleotti & Zafani, 2017; Calheiros et al., 2019; Dounis et al., 2023; Calheiros et al., 2019). According to Pinto et al. (2022), who conducted a systematic review of Brazilian literature regarding the schooling of students with cerebral palsy, the prescription, fabrication, and monitoring of Assistive Technology resources and services in schools are often conducted by occupational therapists. This highlights the importance of these professionals within the composition of support networks in regular school contexts, given their significant role in minimizing access barriers to the school curriculum.

In this sense, the objective of this study was to analyze the process of planning, implementation, and evaluation of occupational therapists' actions in a support network for the school inclusion of a student with cerebral palsy enrolled in a Municipal Center for Early Childhood Education (CMEI) in Maceió, state of Alagoas, Brazil.

## **Method**

This study adopted a qualitative approach with characteristics of action-research, given its focus on collective action aimed at problem-solving and the active role of the individuals involved, both the participant and the researchers, which is essential for any proposal of network-based work (Picheth et al., 2016). Among the many characteristics of this type of research, it is noteworthy that the search for solutions is always preceded by a process of mapping and defining the theme and its context, as a way to understand the object of study in depth. Another point worth highlighting, which was rigorously applied in this research, concerns the fact that:

Even with the intervention of the researcher/interventionist, their role is not to impose which problem should be addressed. Instead, they act merely as a facilitator in understanding the problems experienced, searching for possible solutions, and implementing actions aimed at changing the current problematic situation. In other words, their role is to assist the participants in reclaiming their capacity as agents and transformers of the context in which they are embedded (Picheth et al., 2016, p. 12).

This study was conducted at a CMEI in the public school system of Maceió, selected based on the criterion of having a student with cerebral palsy among its pupils.

The support network was composed of professionals from the CMEI (internal)<sup>1</sup> and occupational therapists from other professional contexts (external). The internal

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<sup>1</sup> All participants signed an Informed Consent Form.

participants included the principal, assistant principal, pedagogical coordinator, special education teacher, regular classroom teacher, and the support professional. The external participants included three occupational therapists from a Specialized Rehabilitation Center (CER) in Maceió, a representative from the Center for Studies in Education and Diversity (NEEDI/UFAL), and the researcher responsible for the investigation, the last two also being occupational therapists. In addition to the CMEI professionals and the occupational therapists, the child with cerebral palsy and their mother participated. The participants were selected intentionally, based on the convenience criterion.

The collaborative work between the occupational therapists and the CMEI staff was structured around the Collaborative Consultation model. This model has gained prominence in Brazilian literature over the past decade as a qualified service for supporting school inclusion and professional development, as it enables school staff and specialists, such as occupational therapists, to collaborate in solving problems aimed at enhancing the participation and learning of PAEE students (Calheiros & Mendes, 2016; Baleotti & Zafani, 2017; Folha & Monteiro, 2017; Dounis et al., 2023; Lago & Tartuci, 2020).

Based on this definition, the organization of the interactions between the occupational therapists and school professionals followed the stages of Collaborative Consultation proposed by Idol et al. (2000), namely: (1) Entry and Establishment of Team Objectives, (2) Problem Identification, (3) Intervention Recommendations, (4) Implementation of Recommendations, (5) Consultation Evaluation, and (6) Follow-Up.

The following instruments were used to collect research data: a questionnaire, focus group and interview guides, document analysis, and observation with field diary records.

The data collection design involved six stages: (1) understanding the Special Education setting and identifying support services, (2) contracting services based on the support network, (3) case selection, (4) identifying the support needs of the student in the case, and (5) planning and implementing actions, (6) evaluating the network-based support service.

The corpus of this research was analyzed using thematic analysis (Braun & Clarke, 2006).

## **Results and Discussion**

The case of Beatriz<sup>2</sup>, a child with cerebral palsy, was intentionally selected for this research as it represents a relatively small subgroup of PAEE, characterized by severe motor impairments and complex communication needs. As a result, she faced multiple challenges in accessing early childhood education, the regular curriculum, and staying in the educational environment to develop her potential, as is the case with other children without disabilities.

The work on implementing the support network for Beatriz began with the Entry and Establishment of Team Objectives stage, based on an understanding of the local Special Education landscape and the identification of the existing support services. The

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<sup>2</sup>To protect the participants' identity, pseudonyms were used. Thus, the names presented throughout the text do not correspond to the real ones.

process moved toward establishing the necessary partnerships for her development and gathering information regarding her educational participation and identifying support needs. This identification process was built on input from CMEI, CER, and NEEDI professionals, Beatriz's mother, access to records related to the child, observational assessments in the educational environment, and identifying the support services offered to her.

The information gathered facilitated not only the identification of Beatriz's educational needs but also an understanding of the CMEI's pedagogical approach and general conditions. This approach mirrors what Xu & Filler (2008) consider important when starting a team discussion. In general, there was a clear focus on play, which was translated as the guiding element of the Early Childhood Education pedagogical proposal.

Following the Collaborative Consultation process, in the Problem Identification stage, issues were identified such as the indiscriminate use of Assistive Technology resources and the segregation and individualization of activities for Beatriz, to the detriment of collective participation proposals with her peers without disabilities. These factors highlighted the insufficiency of the Special Educational Support Service (AEE) – the only support service available for her participation.

It was also observed that, for the CMEI professionals, the challenges in accessing the general Early Childhood Education curriculum were seen as inherent to Beatriz, rather than as a result of a lack of specialized support, reflecting a biomedical view held by the school team about people with disabilities, as opposed to a social conception (Valle & Connor, 2014). Consequently, the measures taken for her participation in school activities were largely focused on modifying and/or improving her physical and communication characteristics.

As a result, during the stages of Collaborative Consultation – Intervention Recommendation and Implementation of Recommendations, led by the group's occupational therapists, the actions planned and implemented by the support network were highly diverse, based on Beatriz's needs and the demands raised by the pedagogical team and her family. The main actions are briefly described and analyzed below.

## **Actions planned and implemented by the occupational therapists**

### *Guidance on autonomy and communication*

Observations and reports indicated that Beatriz participated in play activities in the educational setting; however, she was not allowed to choose what to play with. Thus, her autonomy was compromised. This situation was partly linked to the negative connotations associated with Beatriz's disability, especially her difficulty in exploring the environment and communicating independently. Additionally, the low level of support – specifically concerning alternative communication – combined with the lack of opportunities provided by CMEI professionals for the child to express herself, prevented her “voice” from being considered.

For Beatriz to express her desires in response to what was offered in the educational setting, it was necessary to establish effective interaction between her and her

interlocutors. To this end, her educators needed to be attentive to the cues and communication intentions that Beatriz might manifest, in an attempt to decode her messages. In Beatriz's case, facial expressions were her primary channel of communication. In the first collaboration with the occupational therapists, this issue was addressed and identified as essential for Beatriz's active participation and educational development.

*Last year, we didn't have the habit of asking. From that moment, with this exchange, this conversation with you, this help in a good way, I started to ask more, because I was already on autopilot, I just did things. But now, what am I doing differently? I'm giving her this right, I'm giving her the option to choose, she'll be able to choose what she wants, because before I would just pick it up and give it to her—the pot, that doll, that toy. (Paula, AEE teacher).*

It is observed that the special education teacher understood Beatriz's communication cues, enabling her to have greater autonomy in educational activities. In this sense, it is noteworthy that this professional viewed the conversation with the occupational therapists as a space for reflection and change in professional practice. This response of reconfiguring practices through reflective processes, driven by the collaborative action/dialogue between occupational therapists, teachers, and other school members, has been reported very positively by several Brazilian researchers, including Baleotti & Zafani (2017), Folha et al. (2020), and Dounis et al. (2023).

### *Guidance on the use of rehabilitation resources in the CMEI*

Among the CMEI professionals, there was an expectation that resources used in the rehabilitation field could benefit Beatriz in the educational context. On one occasion, the lead teacher wanted to acquire “rehabilitation balls,” with the expectation that this resource could develop the child's manual skills and, consequently, enable her participation in language activities (writing, painting, cutting, and pasting).

For the occupational therapists involved in the support network, although the need for more intensive therapeutic intervention with Beatriz was evident, they emphasized that such interventions should be conducted in a clinical setting—appropriate for this purpose—and not within the educational environment.

*Even I, as a teacher, had this concern of wanting to do something different with Beatriz, and then he [the researcher] said: 'No, this is a CMEI, not a clinic!' (Quitéria, regular classroom teacher).*

The understanding held by this regular classroom teacher reflected the general perception of CMEI professionals, that the problem was rooted in the child, reinforcing the perspective of the medical model of disability. Valle & Connor (2014) argue that teachers should focus less on the tyranny of the deficit and more on the social and environmental barriers that prevent the child from accessing the curriculum, emphasizing that this should be the educational concern. To this end, the educational environment must recognize that the assistance people with disabilities need is not

restricted to healthcare, although it is acknowledged that, like all people, they also require health services and support (Seelman, 2004).

The teachers understood the occupational therapists' position and stepped back from the mistaken idea of using rehabilitation resources within the CMEI, so that it would not become another space directed toward clinical care, thus losing its pedagogical focus. Consequently, they realized that the CMEI's role could be to refer and monitor care in the responsible rehabilitation services, while also working in partnership with them.

Thus, instead of focusing on "fixing" children with disabilities, the changes were contextualized within the teachers' areas of competence and in classroom structures and practices, which should, essentially, be designed to meet a wide range of learning needs (Collins & Ferri, 2016).

### *Fabrication and guidance on the use of Assistive Technology resources*

Based on the needs identified during the interactions between the pedagogical team, Beatriz's mother, and the occupational therapists, the need to fabricate Assistive Technology resources was recognized, including ventral positioning orthoses for the hands, a floor chair for circle activities, and adaptations for using pencils in painting and writing activities.

The upper limb positioning orthoses were prescribed and fabricated by one of the occupational therapists from the support network, after identifying that, during her time at CMEI, Beatriz kept her hands permanently closed, which impacted her participation and educational development.

As part of the CMEI routine was conducted on the floor, Beatriz encountered difficulties participating in these moments independently, as she could not maintain the same posture as her peers. The AEE teacher had provided a positioning cushion for these moments; however, it was observed that this resource was not effective. Not only did the lying posture hinder active participation, as Beatriz could not make eye contact with her peers and teacher, but she was also positioned outside the circle, further limiting her participation. Faced with the need for adapted furniture, the CMEI professionals, together with the occupational therapists from the support network, identified that an adapted floor chair could make her more active in the learning process and in interactions with her peers.

Thus, based on the principles of the Matching Person and Technology model (Alves & Matsukura, 2016), the evaluation for the fabrication of the adapted furniture began. The construction of the furniture initially required an evaluation of biomechanical principles, motor skills, and Beatriz's body functions and structures. In the environment, the physical space, the furniture and its arrangement, and the presence of a support professional were observed. Regarding specific factors for acquiring the technology, comfort, safety, and customization were considered. The construction of the furniture required collaborative work, with recurring changes in decision-making, a postural adjustment workshop, instructional videos, and illustrative materials on how to use the resource, as described by Calheiros et al. (2019).

The use of the adapted furniture positively influenced Beatriz's participation, as it provided her with a more active role in the activities developed. Moreover, it allowed the CMEI professionals to understand and value her abilities and potential.

A third Assistive Technology need arose from the strong expectation among CMEI professionals that Beatriz should be able to write and paint. Based on this need, an evaluation process of the child's manual function began, for a possible prescription of an Assistive Technology resource. When evaluated, Beatriz showed elbow and wrist flexion, ulnar wrist deviation, and fingers in flexion, with no voluntary movement. These conditions made language activities involving writing a major challenge, even with Assistive Technology support.

A writing and painting adaptation in the shape of a sphere was fabricated using epoxy putty, with a central hole for fitting a pencil or crayon, customized to the size of the child's hand. During the use of this resource, the child faced difficulties that went beyond her specific motor limitation, making the implementation process of the adaptation even more complex.

The first challenge encountered was the inadequacy of the furniture for her positioning with the other children, leading to a series of unsuccessful attempts by the pedagogical team to address this need. The adaptations made posed a risk to the child's physical integrity and did not facilitate her participation, as she remained poorly positioned. This outcome suggests that the construction and prescription of adapted furniture, as well as postural adjustments, should be conducted by professionals with expertise in the field.

The second issue that complicated the use of the resource was Beatriz's lack of understanding of the functionality of the pencil or crayon, revealing her limited experience with these educational materials and once again highlighting her involvement in activities that were separate and different from her peers.

To address both difficulties, the involvement of a classmate in this learning mediation process was introduced to support the use of the resource. This support allowed Beatriz to understand the functionality of the pencil or crayon better and stay motivated in the activity. Peer support is recommended in the international literature on Special Education as an effective practice for supporting the school inclusion of children with disabilities, as it is evidence-based (Alzahrani & Leko, 2018).

It was found that the fabricated resource became viable for painting activities, although it did not ensure Beatriz's complete independence, as she still required physical support to hold the pencil and perform the necessary movements. Peer tutoring and the support professional were essential for Beatriz's participation.

Pinto et al. (2022), in a systematic review of Brazilian literature on the schooling of students with cerebral palsy, emphasize that the prescription, fabrication, and follow-up of Assistive Technology resources and services are central themes in publications, many of which are authored by occupational therapists. These authors link this centrality to the diversity of adaptations in various areas, such as alternative communication, postural adjustments, and the adaptation of utensils and school equipment necessary to facilitate both participation and learning for these students. In this context, it is important to emphasize the complexity of implementing Assistive Technology and the need for the process to be supervised by a qualified professional, so that the outcomes benefit both students with cerebral palsy and the school professionals who work with them, particularly in terms of training, especially in intersectoral dialogues with Health and Education professionals, as proposed by the Collaborative Consultation model (Baleotti & Zafani, 2017; Calheiros et al., 2019; Dounis et al., 2023).



Based on this premise, to make the use of Assistive Technology resources a practice at CMEI—and considering the lack of knowledge regarding the use of the wheelchair, the adapted floor furniture for circle activities, how to perform transfers, and properly position the child—a workshop was organized to demonstrate and clarify doubts related to these issues. The support professional, special education teacher, regular classroom teacher, and Beatriz's mother participated in this workshop. The workshop was conducted by the occupational therapists from the support network during the shift in which the child was enrolled, taking advantage of the opportunity when all were present in the educational space.

Although the CMEI members found the training relevant, as they gained an understanding of the main guidelines for using Beatriz's Assistive Technology resources, the occupational therapists expressed concern about whether the training had indeed provided greater safety and proficiency in the day-to-day handling of the child.

To assist with these challenges, instructional materials were created in video format, based on footage produced during the workshop. These videos could be consulted by CMEI participants whenever there were doubts about using the resources.

As a viable alternative to solving this problem, researchers in the field have recommended the implementation of a permanent support service for educational Assistive Technology for teachers, with the goal of encouraging and ensuring the continued use of these resources in the classroom (Calheiros & Mendes, 2016). In Brazil, this service proposal does not exist as public policy, unlike in the United States, where Assistive Technology is guaranteed to children with disabilities as a social right (Calheiros & Mendes, 2016; Clark et al., 2011).

### *Guidance on the indiscriminate and parallel use of resources and activities*

At times, the activities and resources planned by the special education teacher to support Beatriz's participation were conducted indiscriminately and, in many cases, executed in parallel with what was being worked on in various environments at CMEI with her peers without disabilities.

In this context, two concerns emerged from the occupational therapists' perspective. The first was the concern regarding the use of resources merely as a trend or simply because Beatriz had a disability, without a pedagogical justification. The goal was to guide CMEI professionals to ensure that the use of any resource, especially Assistive Technology, should be linked to a collective activity, which could manifest in the school context in various ways: in pedagogical tasks, play, communication, social interaction, eating, hygiene, and other purposes, all aimed at providing the child with greater autonomy, independence, and social participation (Calheiros & Dounis, 2019).

The second concern was related to the excessive focus of CMEI professionals on Beatriz's motor and sensory skill development, as if these aspects alone were sufficient to meet her participation needs.

The CMEI professionals shared a common interest in striving to eliminate the segregation and isolation of pedagogical practices intended for Beatriz, as a way to guarantee her human dignity, regardless of the characteristics that differentiated her from other children. However, they felt lost in the absence of pedagogical guidance

regarding educational arrangements and teaching practices that could achieve a higher level of participation and school inclusion.

An educational practice approach suggested by Disability Studies in Education is the Universal Design for Learning (UDL), which assumes that regular teaching can be accessible to a variety of children, provided it is intentionally planned to include multiple means of access, processing, and internalization of information (Romano et al., 2023). According to these authors, these elements help reduce barriers to accessing the curriculum without compromising the standards of this educational proposal, and also allow the teacher to engage children in the learning process, regardless of their functional abilities.

It is worth noting that, at the time, the occupational therapists were not deeply familiar with the UDL pedagogical strategy, and therefore, could provide little support to CMEI professionals in their need for pedagogical guidance.

Another decisive factor that contributed to the lack of support for CMEI professionals regarding inclusive educational processes was the sudden and early termination of the school year, determined by the Municipal Department of Education. This event sparked an important debate among CMEI professionals regarding Beatriz's academic progression or retention.

### *The decision on the progression or retention of the child at the sudden end of the school calendar*

Beatriz was enrolled in the second stage of Early Childhood Education and was expected to progress, along with her peers, to the first grade of Elementary School. However, some members of the CMEI questioned the transition to the next educational stage, believing that retaining her in Early Childhood Education would bring greater benefits to the child. It is important to highlight that the intention of these professionals contradicted the National Education Guidelines and Framework Law (Brasil, 1996), which establishes that children aged 4 to 5 years cannot be retained or held back in preschool.

The support team was invited to form a working group for reflection, which would discuss Beatriz's progression or retention given the sudden end of the school calendar. Beatriz's mother was also invited to join this group. The group also received assistance from the General Directorate of Education of the Municipal Department of Education and from the normative and guiding documents of the municipal network.

For most of the CMEI professionals and even the occupational therapists, Beatriz should be retained in Early Childhood Education, based on the belief that this decision would be more favorable to her development – as a way to compensate for her disability, assuming that if certain body components or structures were restored, her chances of advancing academically would be greater.

*In my opinion, from my perspective as an occupational therapist, I believe she should stay one more year at this CMEI. But no more than one year. (Sofia, CER).*

*I also agree, at least one more year. Because in one year, she has shown progress, like last year with her cervical control, and this year she's making small sounds.*  
(Paula, Special Education teacher).

The reasoning for Beatriz's academic retention used by CMEI professionals and some of the occupational therapists was not based on any specific competence, skill, or educational attitude that the child had failed to acquire. Even if Beatriz was "below expectations," the school and the educational system could be questioned regarding the resources and services provided to the child. In such cases, Davids (2014) recommends that if the educational institution has not made changes to teaching strategies and has not provided curriculum accessibility, the justification for academic retention becomes incoherent.

Although less prevalent, some individuals advocated for Beatriz's academic progression, considering it the best course of action. In summary, those in favor of this idea presumed that deciding on the child's progression would prevent future problems in her education, such as age-grade distortion – a common issue in the education of children, adolescents, and young people with disabilities in Brazil.

To help resolve the issue, the Departments of Special Education and Early Childhood Education of the Maceió were contacted to obtain further clarification on the matter and guidance on how to proceed with the case. According to the information gathered, Beatriz could not be retained, as it would go against the principles of the policies and legislation that underpin early childhood education and support school inclusion in Brazil (Brasil, 1996, 2009).

Contrary to the legal provisions was also Beatriz's mother, who was in favor of her retention, considering that progression would entail a change in the current educational environment, leading to uncertainty about whether another educational institution would accept her daughter with a disability. The school's pedagogical team clarified to the mother that no educational space could reject Beatriz. Instead, she would be guaranteed the right to choose which institution in her region she wished to attend, as provided by the enrollment regulations of the Maceió municipal education network.

Another concern raised was how to maintain the support services already guaranteed for Beatriz, which were essential for her continued participation in the future educational setting.

It was then decided that an *in loco* analysis of the educational institutions near Beatriz's home would be conducted, and the one that offered the appropriate support and structure for her needs would be selected. In return, the educational institutions would be able to observe the work done with Beatriz and recognize her academic potential, which would likely alleviate some of their concerns and apprehensions. The CMEI professionals understood that this proposal would benefit all children and decided to extend it to students without disabilities as well.

However, despite the intention and planning to identify the best place for Beatriz to study in the following school year, when contacted, the regular education institutions refused the visit, primarily out of fear of enrolling the child. This situation allowed the CMEI team and the occupational therapists to more closely understand the concerns and apprehensions of Beatriz's mother. As a result, the visits were not conducted, making it impossible to select an educational unit that was better suited to Beatriz's

needs. She completed the Early Childhood Education cycle and progressed to Elementary School—a more challenging stage in terms of academic performance—at an institution lacking the necessary support for school inclusion.

### **Evaluation of the actions proposed and implemented by the occupational therapists**

Given its complexity, the evaluation process of the actions proposed and implemented by the occupational therapists, in support of Beatriz's continued attendance and participation in Early Childhood Education, could not be conducted by a single individual or researcher. Instead, it had to involve all the actors and participants in this context, in order to assess the impact across all dimensions that framed the support.

### *Implications for Beatriz's continued attendance and participation at CMEI*

Throughout the structuring of the support network, actions were implemented with the aim of contributing to Beatriz's development, broadening her horizons and expectations. In this context, it was evident that these actions brought various benefits to the child, enhancing her participation, autonomy, and independence in the educational process, and enabling her to provide responses she previously did not produce:

*She became more active. Beatriz was treated like a little baby, with everything being done very carefully around her. And this idea of Beatriz getting off someone's lap, out of the positioning cushion, staying in her own space, and knowing that she could give some responses, changed how people saw her and made her more encouraged to participate. (Laura, NEEDI).*

It was also observed that, among the actions conducted by the support network, the construction of the adapted furniture stood out above the others, becoming a milestone in Beatriz's educational process. This adaptation provided her with the opportunity to move from the role of passive observer to that of active participant in circle activities, aligning her position with that of her peers. This contributed to her interaction with the group and increased attention to the lead teacher's instructions.

*[...] The support team came with this proposal that could only help, especially by ensuring that Beatriz was comfortable and better integrated into the classroom. For example, adapting a chair for her to sit with her peers and adapting writing tools to help her make better movements with her hand. So, all of this was thanks to the support network. (Quitéria, regular classroom teacher).*

The benefits brought about by the actions directed at Beatriz were not limited to her participation in classroom activities, but also extended to broader aspects of her overall child development. This was observed on various occasions, as reported in the following excerpts:

*When she wants to, she says 'Querr,' with some effort, and she didn't make that sound before. (Paula, AEE teacher).*

*When we play tag, Quitéria says: tag Aunt Keli, tag Beatriz. She was behind me in the chair, and I was running, so I said: tag her! Then she stopped like this, and moved as if she were going to tag, and when she did that, I put my hand out so she could feel she had tagged me, but she lifted herself up a little bit. She's participating, she understands. (Keli, pedagogical coordinator).*

Furthermore, it is interesting to note that the actions proposed and conducted by the occupational therapists from the support network enabled Beatriz's capacities and potential to be understood and valued by the CMEI staff. This represents an important outcome, especially when considering the processes of stigmatization and prejudice that surround the population with disabilities – a result of the sociocultural dynamics in different lived spaces and times.

In this regard, Folha et al. (2020) assert that, in Early Childhood Education, there is a strong emphasis on the child's overall development, beyond just formal school aspects. According to these authors, this characteristic suggests a clear connection with the work of occupational therapists, given their ability to work broadly and comprehensively in the daily school routine, addressing the many and varied demands of students.

*Because there were also problems when they [support team members] didn't come. And there was the issue that Beatriz missed school a lot as well. (Quitéria, regular classroom teacher).*

*There were only a few days a week, it was just one day. If it had been two, it would have had more impact. (Elisabete, assistant director).*

The aforementioned accounts distort the true role of occupational therapists as members of a support network, portraying them as the driving agents of the school inclusion process, when in fact, their function is to provide technical and specialized support for inclusion. With this misguided perception, the CMEI professionals are relegated to a secondary role, acting as mere spectators, when in reality, they should understand themselves as the key mechanism for the child's development.

### ***Implications for the training and work of CMEI participants***

The support provided by this network should aim at the training of team members, based on the difficulties, needs, and especially the potential and capacities of the child being supported, to meet their demands for continued participation, as was the case with Beatriz, where the planned and implemented actions helped assist CMEI professionals with their work practices:

*I think it contributed a lot because they adapted materials to make things easier for the AEE teacher, the lead teacher, the coordination, and the children in general. (Elisabete, assistant principal).*

This type of support also included the empowerment of the CMEI participants supported by the network, encouraging them to seek assistance to help themselves and each other mutually in the workplace, fostering teamwork. This aspect reveals that the responsibility for the educational journey and continued attendance of a child with a disability is a commitment shared by all education professionals and, therefore, should be part of the institution's collective sphere, as mentioned by teacher Quitéria:

*Certainly, if another child with a disability arrives today, we already know how to handle it [...]. We will have difficulties, yes, but we will know how to seek help. (Quitéria, regular classroom teacher).*

In this regard, it can be considered that occupational therapy actions, by proposing network-based work, met what was proposed by Rocha et al. (2022), in the sense of:

*[...] working to empower educators in the creation of inclusive educational projects, the construction of support networks inside and outside the school, the optimization of socialization processes between children with and without disabilities, and the facilitation of communication among all those involved—educators, children, families, and the community—so that the school can be a space that recognizes the uniqueness and diversity of everyone, where meaningful encounters occur. (Rocha et al., 2022, p. 8).*

Awareness of network-based work, in turn, moves away from the unilateral view that meeting the needs of the inclusive educational process is solely the responsibility of the classroom teacher.

### *Implications for the education and work of the occupational therapists involved*

The occupational therapists' progress in their education process was analyzed through their records, which showed several changes in their conceptions and practices, strengthening the formative aspect of the actions conducted within the support network.

Transformations were observed in their understanding of the roles they played as health professionals, shifting from a sovereign and prescriptive stance in their decisions and recommendations to one of listening, observing, and perceiving the network as a space for dialogue and collective learning.

*For me, it changes the way I approach the educational context today. I go more to listen than to speak. (Marina, CER).*

*The richness of this, professionally, is the challenge of working from a different perspective in which we are not sovereign. [...] when we say we're going to do consulting, the first thing the school expects is for us to arrive with all the solutions. I think that if we go down that path, we end up with a very prescriptive approach. But when we dedicate ourselves to observing and understanding how everything works, we can discover things together, and when we discover together, we are forming the other and we are forming ourselves. So, I think this is a very rich process. (Laura, NEEDI).*

This redefinition of the occupational therapists' professional activity is essential for work in the field of education. It allowed the sharing of ideas and the exchange of opinions to achieve the most appropriate development for the child with a disability.

Given its importance, network-based work in schools presents challenging aspects for professionals, as it demands skills and competencies that go beyond their everyday work environment, representing an incursion into the professional universe of others, such as teachers, and characterizing a process of continuous learning. The following excerpt illustrates the experience of this transformation process:

*For me, it was somewhat similar, being in a different area that is within the teachers' expertise and not ours. And how do we approach having this conversation where, in a way, we're interfering in someone else's work, in their domain, which is education, not mine? So, that initial moment, especially when talking to the principals, coordinators, and teachers, you notice many things that are not ideal from your perspective. And how do you say that without coming across as if you know more? So, for me, that was very valuable. (Carmem, CER).*

On the other hand, the circumstances and daily work demands at CMEI required the occupational therapists to validate educational practices, which, if not conducted consciously and in accordance with collaborative principles, could result in a prescriptive and arbitrary process. The following excerpt illustrates how this situation occurred:

*Sometimes the solutions are already happening, they just aren't seeing it. "Look, what you're already doing, you can keep doing. I think just by making a small adjustment here and there, it could be better for that child in that situation." (Marina, CER).*

This process of validating educational practices by the occupational therapists rested on a fine line. On the one hand, it could promote a movement of interaction and empowerment, in which people could relate to one another and stimulate each other; on the other hand, if conducted hierarchically, without dialogue and collaboration, under the judgment of a third party acting as an evaluator, it could lead to relationships of subordination and dependency, which would not contribute to building an inclusive community. In the case of the established support network, feedback on practices occurred through an interaction process fostered by the very structure of the service, particularly in collective meetings, where all participants were encouraged to reflect on their practices and exchange experiences in a process of mutual help.

In this sense, the perception of learning resulting from the experience aligns with the formative aspect of collaborative work, in which the actions proposed at CMEI are methodologically supported, as anticipated by Ibiapina (2008) and observed by Dounis et al. (2023).

The professional growth of the occupational therapists also became evident through their experience of the educational routine itself, which allowed them to better understand the organization and functioning of the institution, the pedagogical approach, and the nuances that occurred in the CMEI's everyday life. It is worth noting that some of them had not previously had such an immersive experience, as described in the following excerpt.

*For me, it was more about participating in the educational environment, in the routine, and understanding how things happened, how we could try to help. I think it was valuable for me – sometimes we have the adaptation in mind, the furniture the child needs, but it's one thing to think “this would be great in the educational space,” and another thing to actually go there and implement it. I think the experience was very rich. (Sofia, CER).*

Lastly, but not least, the occupational therapists' accounts indicate that their involvement in the actions proposed by the support network made them more attentive to educational needs and more supportive of the work in school inclusion, especially when working with children with disabilities.

## **Final Remarks**

The school inclusion of children with disabilities, represented here by Beatriz, is the result of the systemic accumulation of various barriers to learning and participation which, when compounded, trigger an excessive detriment to educational performance, leading to the segregation of these children from their peers without disabilities. In this sense, it aligns with Liasidou (2014) that the school inclusion of children with disabilities should be understood as a matter of social justice and equity, aimed at addressing the cumulative effects of multiple sources of social disadvantage.

It is necessary not only to guarantee the enrollment of children with disabilities but also to ensure the necessary supports. This involves creating a support network in the educational context, composed of its members and partnerships with public policies in health, social assistance, and other sectors as needed, to ensure that Special Education services are provided based on the identified needs of each PAEE student.

This study's experience highlights how occupational therapy actions within a support network are both possible and desirable in fostering collaboration between education and health professionals to enhance the educational and occupational performance and abilities of children with disabilities, as well as the work of CMEI staff. In addition, teachers may lack specific knowledge and skills related to Assistive Technology because of the evolving nature of this discussion in the education field, reinforcing the need for specialized professionals and services, such as occupational therapists, to be permanently present in educational settings (Alves & Matsukura, 2016; Calheiros et al., 2018).

Beyond the specific issues related to Assistive Technology, another important aspect observed during this process was the opportunity for learning and professional development for all those involved in the collaborative work of the support network. Along with CMEI participants, the occupational therapists had the chance to encounter new situations they had not previously considered and to recognize particular functional demands that only arise through observation and evaluation of performance in the educational context.

Thus, it becomes evident that the collaborative process is, indeed, a two-way street, where everyone benefits from the opportunity for personal and professional development, facilitated by democratic interactions between peers to solve practical problems, as previously described by Ibiapina & Ferreira (2005), Ibiapina (2008), and



noted by Mendes (2008), Mendes et al. (2011), Calheiros (2015), and Dounis et al. (2023).

It is clear, then, that to ensure the inclusion of people with disabilities in the education system, it is necessary to expand services and actions and to incorporate different professionals into public education, such as occupational therapists. These professionals, who participated in this experience, demonstrated their importance through the actions they conducted in schools.

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### Author's Contributions

D. S. Calheiros: Study design, writing of the manuscript, data collection, data analysis, discussion of results and review. E. G. Mendes: Study design, writing of the manuscript, data collection, data analysis and discussion of results. A. B. Dounis: Data collection, data analysis, discussion of results and review. E. M. de S. Santos: Data collection. F. C. da Silva: Data collection.

T. Q. de A. Nabuco: Data collection. All authors approved the final version of the text.

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