

## State of knowledge on the challenges faced by literacy educators during the pandemic



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### Abstract

This article aims to discuss the challenges faced by literacy teachers during the pandemic period, specifically when in-person classes were suspended. Recognizing literacy as a crucial stage for learning and with the intention of seeking studies in the literature, research was conducted in scientific databases to compose the state of knowledge. From the accounts found in the literature, the challenges were identified, allowing for categorization by areas for better understanding: Technology, Assessment, Culture, Social, Health, Economic, and Educational Environment. The presented results reveal a notable lack of investment and actions from the public authorities, leading to different organizational approaches in each location. It was observed that literacy teachers were not prepared to continue their classes remotely, having to adapt without prior preparation and with limited resources. This research aims to contribute to future studies by providing a knowledge base on the challenges encountered by literacy teachers during the pandemic.

### Keywords

teacher; literacy; pandemic.

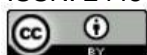
### Estado do conhecimento sobre os desafios dos professores alfabetizadores na pandemia

### Resumo

Este artigo tem o objetivo de discutir sobre os desafios dos professores alfabetizadores durante o período de pandemia, quando da suspensão das aulas presenciais. Reconhecendo a alfabetização como uma importante etapa para a aprendizagem e com o intuito de buscar estudos na literatura, foram realizadas pesquisas em bases de dados científicas para compor o estado do conhecimento. A partir dos relatos encontrados na literatura, foram identificados os desafios, possibilitando categorizá-los por áreas para uma melhor compreensão, sendo essas: Tecnologia, Avaliação, Cultura, Social, Saúde, Econômica e Ambiente Educacional. Os resultados apresentados revelam uma notável falta de investimentos e ações oriundos do poder público, fazendo com que cada local se organizasse de maneira diferente. Constatou-se que os professores alfabetizadores não estavam preparados para dar continuidade às aulas de maneira remota, tendo que se adaptar sem prévia preparação e poucos recursos. Espera-se contribuir com estudos futuros, fornecendo uma base de conhecimento sobre os desafios enfrentados pelos professores de alfabetização durante a pandemia.

### Palavras-chave

professores; alfabetização; pandemia.



## Estado del conocimiento sobre los desafíos de los educadores de alfabetización durante la pandemia

### Resumen

Este artículo tiene como objetivo discutir los desafíos que enfrentaron los educadores de alfabetización durante el período de pandemia, cuando se suspendieron las clases presenciales. Reconociendo la alfabetización como una etapa importante para el aprendizaje y con el fin de buscar estudios en la literatura, se realizaron búsquedas en bases de datos científicas para componer el estado del conocimiento. A partir de los relatos encontrados en la literatura, se identificaron los desafíos, permitiendo categorizarlos por áreas para una mejor comprensión, siendo estas: Tecnología, Evaluación, Cultura, Social, Salud, Económica y Ambiente Educativo. Los resultados presentados revelan una notable falta de inversiones y acciones por parte del poder público, haciendo que cada lugar se organizara de manera diferente. Se constató que los educadores de alfabetización no estaban preparados para dar continuidad a las clases de manera remota, teniendo que adaptarse sin preparación previa y con pocos recursos. Se espera contribuir con estudios futuros, proporcionando una base de conocimiento sobre los desafíos que enfrentaron los educadores de alfabetización durante la pandemia.

### Palabras clave

profesores; alfabetización; pandemia.

## 1 Introduction

In 2020, the world faced a challenging situation due to an invisible enemy, the Coronavirus, which causes SARS-CoV-2, known as Covid-19. This viral illness, which manifests mainly through respiratory symptoms, quickly evolved into a pandemic, with the potential to result in serious health complications and, in extreme cases, lead to death. In light of the circumstances, it was necessary to implement social distancing measures on a global scale (WHO, 2020) to contain the transmission of the virus and avoid overloading health systems. This situation has also required schools to adapt their approach to continue classes through remote teaching, and teachers to review concepts and seek strategies that would enable them to meet the demands imposed by this period. It would be beneficial to consider literacy as an essential stage of learning to understand the challenges teachers faced during the pandemic when remote lessons were implemented in literacy classes. In light of this, this article aims to contribute to the ongoing discussion by drawing on the existing body of knowledge in scientific databases to identify the challenges reported by teachers in academic studies.

The research began with defining search terms and filters that would be applied to the databases, which allowed us to identify several studies related to the topic. The works were imported into Mendeley, a software that manages bibliographic references, to facilitate their organization and accessibility. After applying the selection criteria, we identified ten publications that supported this study.

Upon reading all the selected works, it became evident that certain challenges needed to be addressed. Which led to the creation of a table that outlines these challenges. The challenges were then grouped and divided into specific categories, which were named: To identify the challenges, we considered some different areas, including technology, assessment, culture, social, health, economic, and educational environments.

In the following section, we will present the methodology that was used to develop this research. This section aims to provide a detailed account of the methods and techniques employed to collect and analyze the data, to offer insights into the research process. After that, we will endeavor to present the results obtained and engage in a constructive dialogue about the challenges facing literacy teachers during the pandemic period. In conclusion, the article offers a few final considerations, which aim to summarize the main findings.

## 2 Methodology

The objective of the bibliographic research was to survey studies published in scientific databases from April 2020 to March 2023. The objective of the investigation was to ascertain what was available in the literature on the topic to gain a deeper understanding of a certain phenomenon (Mattar; Ramos, 2021).

The authors Morosini, Kohls-Santos, and Bittencourt (2021, p. 61) define the state of knowledge “as a type of bibliographic methodology that is increasingly being used to analyze and establish the current state of research in a given area of knowledge”. Morosini, Kohls-Santos and Bittencourt (2021, p. 61) still describe it as:

[...] strategy of surveying published documents on a given subject [...] consists of identifying, recording, categorizing that lead to reflection and synthesis on the scientific production of a given area, in a given space of time, bringing together periodicals, theses, dissertations, and books on a specific topic.

To gain an understanding of the current state of knowledge in this field, searches were conducted in two scientific databases: Scopus and the Portal de

Periódicos of the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (Capes). These databases are widely regarded as valuable sources of academic literature. Additionally, a consultation was carried out in the Banco de Teses e Dissertações (BDTD), a repository that allows locating theses and dissertations defended in stricto sensu postgraduate programs in Brazil. Finally, we also searched the Revista Brasileira de Literacy (RBA). This approach allowed us to gain a comprehensive understanding of the existing literature on the topic.

In defining the search terms in English, we opted to include the terms "Teacher" AND "Pandemic" AND "Literacy" NOT "Digital Literacy." It is also worth noting that equivalent terms in Spanish and Portuguese were used to ensure comprehensive coverage. The following filters were applied to the databases, to narrow the scope of the search: peer-reviewed journals, published between 2020 and 2023, in English, Spanish, and Portuguese. The research was conducted on March 14, 2023, which represents the current understanding of the topic.

All entries identified in the databases were imported into Mendeley, and other selection criteria were applied. This included the removal of repeated works without defined authors. After reading the title, keywords, and abstract, we also removed any works that didn't match the context of the study. Works that did not make the full text available for free download were also excluded.

Finally, the selected works were subjected to analysis, and information regarding the challenges encountered by literacy teachers during the pandemic was organized and presented systematically. Table 1 was constructed based on the search terms and filters applied to present the research stages.

**Table 1** – Stages of bibliographic research

Research steps		Works uploaded	Works excluded	Works remaining
Scopus Data base	Works found	84		84
	Removal of works without authorship		6	78
	Removal of repeated works		4	74
	Exclusion of works without free access to the full text		3	71
	Exclusion of works out of context		68	3
Capes	Works found	236		239
	Removal of works without authorship		234	5
BDTD	Works found	46		51
	Exclusion of works out of context		42	9
Abalf	Works found	6		15
	Exclusion of works out of context		5	10

Source: Authors' own (2023).

The ten selected works were classified as six articles published in scientific journals and four dissertations. Following the selection process, the works were read to identify potential sources of funding for the study.

To gain a deeper insight into the difficulties encountered by literacy educators during the pandemic and to obtain contributions that would be beneficial to the present study, the ten works were subjected to a detailed analysis, the results of which will be presented below.

### 3 Results and discussion

Mateus et al. (2022) put forth a critical agenda for media education and examined the strategies employed in Argentina, Chile, Ecuador, and Peru in response to the educational context transformed by the pandemic. The study examined the perceptions of teachers in the four countries regarding the challenges and opportunities presented by media education. The researchers initially focused on identifying and analyzing official documents to ascertain the government strategies implemented in the context of the pandemic. In a subsequent phase of the investigation, two focus groups were convened in each country (for a total of eight), comprising educators from public and private institutions in urban areas engaged in basic education.

The focus group meetings were conducted via Zoom, and common characteristics were observed across the four educational systems. Initially, the research indicated a deficiency in technology that extended beyond the mere scarcity of equipment or lack of connectivity. The issue of speed connection also emerged as a significant obstacle, affecting the quality of access and participation in online activities. Secondly, the lack of adequate teacher training that extended beyond the instrumental domain of digital tools was identified as a concern.

In their article, Fonseca, Teixeira, and Carmona (2021) conducted an analysis of the positive and negative impacts of literacy instruction<sup>1</sup> during the 2020 global pandemic caused by the new coronavirus, also known as SARS-CoV-2. This discussion was informed by a socio-constructivist perspective to elucidate how the teaching and learning

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<sup>1</sup> The term refers to the set of knowledge, skills, and attitudes related to reading and writing, as well as their productive practice. (literacia).

process unfolded in 2020 within this specific context. The authors examine the impact of Information and Communication Technologies (ICT) on the literacy process during the pandemic, considering how they aid and limit aspects of this influence. The objective of the analysis was to identify the challenges and opportunities that ICTs presented for the development of literacy during this abnormal period.

The authors' research revealed that challenges inherent to remote teaching, particularly in the context of literacy, included a lack of technological resources for teachers, students, and schools; poor internet connectivity; and inadequate training of teachers in the use of ICT. The authors, however, place greater emphasis on the difficulties related to the mediation process, learning diagnosis, and the development of students in the literacy process, particularly when viewed through the lens of socio-constructivist theory, which places significant value on mediation at this stage (Fonseca; Teixeira; Carmona, 2021).

Concerning the diagnosis of the Zone of Proximal Development (ZPD) during remote teaching, both in synchronous and asynchronous classes, certain challenges were identified. Chief among these was the inability of the teacher to directly monitor students to ascertain their level of development and learning, given that the activities were conducted under the supervision of family members or caregivers. The feedback provided by the teacher was passed down by the child's guardian, who assumed the role of mediator, thereby influencing the student's perceived ability. This dynamic transformed the traditional knowledge-teacher-student relationship, which was the exclusive function of the school, into a multifaceted entity comprising four elements: the school, the family, the student, and the knowledge-teacher-family-student dynamic (Fonseca; Teixeira; Carmona, 2021).

The authors conclude that, although the use of ICTs facilitated the continuity of educational activities during the period of remote teaching, the use of these tools also gave rise to certain challenges and obstacles, particularly from a socio-constructivist perspective. Vygotsky's theory underscores the significance of social interaction in the formation of knowledge, placing a prioritizing direct engagement between children, their peers, and educators. (Fonseca; Teixeira; Carmona, 2021).

Pattnaik, N. Nath, and S. Nath (2023) conducted a qualitative study to elicit the perspectives of primary teachers employed in private schools in two Indian cities on the challenges they encountered in facilitating the successful participation of children in the

school's remote instruction efforts. In the initial phase of the study, the researchers conducted a comprehensive review of the literature from a range of sources.

It is important to note that in India, approximately 120 million children, or half of the total number of students enrolled in primary education, attend private schools. Several factors have contributed to the growth of private schools in India, including a shortage of teachers in public schools, low-quality teaching, and physical conditions that have made these institutions more attractive to parents. This expansion has occurred over the past three decades, particularly in rural and urban areas (Pattnaik; Nath, N.; Nath, S., 2023).

However, researchers and observers have indicated that online teaching during the pandemic has not been as successful as anticipated due to many challenges. These include a lack of individual access to digital tools at home (necessitating device sharing), unreliable or poor internet connection, parents' work schedules or siblings' school schedules, and general disruptions to home life due to the pandemic. The researchers also observed a decline in online class attendance, educational inequity, financial constraints experienced by parents, the purchase of internet data to facilitate their children's online education, parental absence during online sessions, low parental literacy levels, and a lack of digital competencies that have hindered their capacity to support their children's learning during the pandemic (Pattnaik; Nath, N.; Nath, S., 2023).

In conclusion, the authors explain that the transition to remote teaching and learning was not without challenges for teachers, parents, and children, particularly in the early grades of elementary school. This was due to a multitude of factors. The authors characterize the global pandemic of the new coronavirus (Covid-19) as a "socio-natural" disaster, which has resulted in the disruption of established routines and increased stress on the operation of educational institutions around the world. With the opening of India's states in January 2022, the doors of primary schools have slowly opened to in-person instruction. However, for both India and other developing nations, the loss of children's learning and the frustrations of teachers in the post-school closure era must be monitored, as they generate great concern (Pattnaik; Nath, N.; Nath, S., 2023).

In their study, Maia, Vernier, and Dutra (2021) describe the experience of one of the authors in Early Childhood Education classes in the public system and the first year

of Elementary School in a private school during the pandemic. To gain further insight, this study concentrated on the experience of a first-year elementary school class.

The teacher and researcher indicated that, in response to the ongoing pandemic and the necessity for continued remote learning, the school made available a range of digital resources and virtual meetings to facilitate the learning process. The class of 26 students was divided into smaller groups of eight to nine students to enhance the efficiency of virtual meetings, facilitate knowledge acquisition, and ensure proficiency in the use of the digital platform. Virtual meetings were conducted via Google Meet, with two meetings scheduled per week, each lasting an hour (Maia; Vernier; Dutra, 2021).

In addition to the virtual meetings, the teacher utilized supplementary short videos to respond to literacy inquiries. The production of the videos was a notable challenge for the teachers, as they lacked training in essential aspects such as lighting, sound design, and editing (Maia; Vernier; Dutra, 2021).

In her work, the teacher recounts the challenges she faced in adapting to remote teaching. She notes that it was necessary to adapt study schedules, which presented difficulties. Furthermore, the didactics used in the teaching and learning process were hindered by limitations and difficulties encountered by families in supporting their students adequately.

The study by Gonzalez and Mohamad (2022) elucidates the challenges encountered by educators in fostering quality literacy during the remote teaching period. Based on a comprehensive literature review and a questionnaire administered to literacy teachers, the authors classified these challenges as external and internal. As external challenges, the following factors were identified as significant: access to technology, lack of adequate training, inadequate technological support, dispositions and behaviors of students and parents, and lack of motivation and involvement in learning. As internal challenges, among others, the teacher's knowledge, beliefs, and culture were highlighted as important considerations (Gonzalez; Mohamad, 2022).

The study revealed that the majority of the challenges encountered during the pandemic were external in nature. Elementary school teachers across the globe have highlighted the difficulties they have faced in transitioning from in-person teaching to virtual instruction, citing a lack of adequate time and support as significant obstacles. Another challenge identified in the literature pertains to student access to technology.



Many students lacked the necessary internet network, technology, and devices to engage in successful online learning. Another challenge identified by Gonzalez and Mohamad (2022) is the difficulty of maintaining student responsibility during remote learning activities. Interruptions in learning and gaps in literacy resulting from social isolation have worsened the situation, compromising the development of essential skills for the literacy process. In conclusion, the researchers caution that this learning gap will result in long-term adverse effects on society and individuals.

The research developed by Miolo (2022) in his dissertation investigates the curricular organization adopted during remote teaching in a municipal school in Santa Maria, in Rio Grande do Sul (RS). The study, based on a case study, analyzed official documents, the experience of the researcher, who is also a teacher, and the answers of teachers in the literacy cycle collected through a questionnaire.

The research project is focused on the "Emergency Curriculum," a municipal curriculum policy developed collaboratively by teachers from the municipal school system and the Santa Maria Municipal Department of Education team in response to the pandemic scenario. The objective of this research is to analyze the implementation of the Emergency Curriculum in practice, with a particular focus on the objectives and challenges associated with remote teaching.

The researcher started the study by maintaining a field diary, in which she recorded her experiences and perceptions as a literacy teacher in remote education between the years 2020 and 2021. In these reports, the author identifies the challenges encountered in this new context, focusing on the difficulties associated with recording videos for online classes.

The findings of the study indicate that the act of producing videos led to feelings of exposure and vulnerability to judgments, which subsequently resulted in feelings of anguish, fear, and insecurity, particularly during the initial stages of video production. Furthermore, the author underscores that, despite the best efforts of the teachers, they frequently lacked the necessary resources, such as a high-quality camera and a tripod, forcing them to improvise with the available equipment at home. Moreover, the research indicates a notable increase in the teachers's workload during the pandemic. Before the pandemic, teachers typically worked approximately eight hours a day. However, during the pandemic, these hours doubled, as cell phones were consistently available to serve

parents, students, and the school, regardless of the day or time. This overload, coupled with the challenges of producing audiovisual content, underscores the complexity of teaching work during online teaching (Miolo, 2022).

As Miolo (2022) observed, while virtually all families at the school where she was employed had access to the Internet and the Google Classroom platform, some families elected to forgo printed activities due to the inability to print.

In terms of student performance, research conducted by Miolo (2022) indicates that those students who encountered the greatest challenges in literacy were those who participated in fewer proposed activities and received less feedback throughout the academic year.

Furthermore, the author underscores the onerous bureaucratic burden imposed on teachers during the pandemic, including the tedious task of filling out tables for recording activities and remote work. This additional responsibility, which the researcher deems "cruel," further exacerbates the already demanding workday, particularly given the need to simultaneously talk to families via messaging applications (WhatsApp and Messenger) without any specified time or day of the week. This overwhelming workload has led to a significant prevalence of physical and mental exhaustion among teachers, with the ramifications of this exhaustion still being felt today.

In conclusion, Miolo (2022) highlights the discrepancy between the municipality of Santa Maria/RS's initiative to collectively organize curricular activities and the lack of assistance for teachers at the national level. The author critiques the reduction in funding and the lack of investment in public policies, which have exacerbated the challenges of teaching during this period of adversity. In his research, Miolo (2022) aims to stimulate debate on the necessity of actions that prioritize the support and participation of teachers, with the objective of guaranteeing the quality of teaching, especially in times of crisis.

In her research, Machado (2000) examines the integration of remote teaching methodologies in the context of digital literacy at Domitila Castelo municipal school in Tibau do Sul, Rio Grande do Norte (RN). In this institution, the WhatsApp application was utilized as the primary means of communication, interaction, and learning environment due to its extensive reach, accessibility, and prevalence in families' daily lives.

The researcher, assuming the role of an active subject throughout the process, served as pedagogical support in one shift and as a teacher in another, facilitating the

application of action research in a year 2 class. Data collection was conducted through a questionnaire, field diary, and screen captures to analyze the principal challenges and possibilities that emerged during the intervention.

Machado (2020) identified monitoring the pedagogical process of remote classes as the main challenge, followed by others, such as obtaining feedback from students, maintaining close ties in the teacher-student relationship, monitoring mediation carried out by parents, and evaluation the teaching and learning process during the intervention. The research found that, in several cases, families took over the activities in place of their children. The challenge of establishing direct communication with the individuals in charge, as opposed to the children themselves, was also identified as a significant impediment. The considerable workload placed on all participants in the remote learning environment, who were compelled to adapt to this novel context, constituted a further crucial element. The author concludes that the didactic-pedagogical control of remote classes through WhatsApp proved to be unfeasible, particularly regarding the evolution of learning. Monitoring family mediation, comparing it with planned and guided strategies, also proved to be an insurmountable challenge.

The author also identifies socioeconomic conditions as an aggravating factor for the effectiveness of remote teaching strategies. These conditions directly impact internet access, the quality of equipment, and the storage capacity of smartphones.

Despite the difficulties encountered during the research, the author concludes that it was possible to develop remote teaching strategies for literacy, focusing on digital literacy, in a successful, collaborative, interactive, and meaningful way, using asynchronous moments. The author underscores the numerous challenges encountered in implementing the intervention proposal, which necessitated a reorientation and reinvention of pedagogical practices by teachers to meet the demands of an unconventional and emergency context. Additionally, the lack of support from public bodies was identified as a significant barrier to the integration of remote teaching with the aid of digital technologies (Machado, 2020).

Mendes (2021) conducted an investigation into the pedagogical work of alphabetization and literacy in a public school in the Distrito Federal during the pandemic. The investigation entailed an analysis of pedagogical proposals, learning objectives, difficulties, and challenges faced by professionals in the field. The research team

included five teachers from the Initial Literacy Block (ILB), in addition to the coordinator and pedagogical supervisor. Data collection occurred through a questionnaire and informal conversations via a messaging application, in addition to a bibliographic and documental study.

The findings of the research indicate that teachers were compelled to utilize their own resources to instruct remote classes, without the benefit of technological support or financial assistance from the government. This predicament necessitated that educators cultivate resilience and creativity to adapt their pedagogical practices to the novel context. The combination of an increased workload and an expanded time commitment to serving students and their families, coupled with the addition of domestic responsibilities, activities, and childcare duties, has led to a significant intensification of the physical and mental exhaustion experienced by teachers.

In examining the difficulties and challenges in promoting literacy, the research indicated that the lack of technological resources and Internet access represents a significant obstacle. The absence of these resources has led to a high rate of school dropouts, particularly among children from economically disadvantaged backgrounds. The research also identified a lack of interest among students in remote classes and the absence of family support as relevant challenges. The findings indicated that children with greater family support demonstrated better learning outcomes (Mendes, 2021).

Pigatto (2021) examines the alterations in the literacy practices of educators at a municipal school in Nova Palma, situated in the interior of Rio Grande do Sul, during the period of the pandemic. The dissertation is a qualitative research study based on data collected from questionnaires completed by two literacy teachers from the institution. The questionnaires addressed the difficulties and positive points found in the context of remote teaching. Additionally, the data set included teaching materials and activities provided by the participating teachers, as well as relevant documents.

In the teachers' view, there is a lack of start to the pandemic. In some cases, teachers reported a lack of outages in the connection, while in others, parents required the necessary knowledge to teach effectively based on the materials provided. Furthermore, the teachers emphasized the overwhelming workload in their daily routines, which included numerous administrative tasks that added to their already demanding workload. Additionally, some families lacked access to WhatsApp, which posed a challenge for

communication. Finally, the teachers highlighted the need to adapt activities that had previously been conducted more practically in person. Pigatto (2021) additionally identifies several other challenges in this context, including a lack of concentration among students during online classes, an inaccessible learning environment, even with access to tools, a lack of motivation among students to continue participating, and a lack of contact and proximity with other educators and colleagues. The author asserts that the financial demands placed upon educational institutions during the pandemic period were significantly higher than those typically experienced, which in turn negatively impacted the well-being of professionals within these institutions.

The research “Alfabetização em Rede” (2020), coordinated by professor Maria do Socorro Alencar Nunes Macedo, from the Universidade Federal de São João Del-Rei, aimed to “[...] understand in depth the situation of literacy in children in Brazil during the Covid-19 pandemic”. The study was conducted by a collective of 117 researchers from 28 universities, representing all regions of the country, formed in the first half of 2020.

The target audience for the research were Basic Education teachers who worked in Early Childhood Education and in the early years of Elementary School (1st to 5th year), prioritizing professionals from the public education system (Alfabetização..., 2020).

The initial phase of data collection, conducted between June and September 2020, employed an online questionnaire developed through Google Forms. The instrument consisted of 34 questions, divided into two principal axes: literacy during the pandemic and the reception of the Federal Government's Política Nacional de Alfabetização (Brazil, 2019). The research focused on the first axis and analyzed data from a total of 14,730 teachers (Alfabetização..., 2020).

The responses to the central research question, which investigates the daily challenges of literacy in the context of the pandemic, the role of teachers, and the possibilities inherent in the practices, indicate that 57% of teachers perceive student motivation to be the primary obstacle to carrying out the proposed activities. Another challenge highlighted by 33% of respondents was obtaining feedback from students concerning teaching proposals. This was further complicated by difficulties in dealing with activities that required monitoring of parents and/or guardians (Alfabetização..., 2020).

Concerning student involvement in remote activities, 44.6% of respondents indicated that the majority of their students engaged with the proposed activities,

whereas 42% reported that only a limited number of students responded to the activities. It is crucial to underscore that a mere 7% of educators indicated that all students participated in the execution of the activities. Even though a relatively small proportion of respondents reported that no students engaged in the activities, the data indicate a deterioration in the teaching and learning environment for children engaged in the literacy process (Alfabetização..., 2020).

The research also investigated the extent to which teachers had access to technology and the internet network in their homes. It was found that 94% of teachers had access to a computer, Internet, tablet, or smartphone. However, despite the availability of these technologies, 16% of teachers were unable to master their use. For 21% of the sample, the need to learn how to use technologies to work remotely presented an additional challenge (Alfabetização..., 2020).

In conclusion, the authors emphasize the necessity for a more comprehensive investigation of this database, with a particular focus on the analysis of teacher profiles by state, education system, and region. This approach would contribute to a more nuanced understanding of the current landscape of basic education (Alfabetização..., 2020).

### 3.1 Categorization of the works

In examining the challenges documented and perceived in the literature, we identified numerous similarities. To enhance comprehension and coherence, we elected to categorize these challenges by domain, including technology, assesment, culture, social, health, economic, and educational environments. These domains will be elaborated upon in the subsequent section.

Table 2 presents the challenges identified by the authors of the works analyzed, according to the categories listed.

**Table 2** – Challenges for literacy teachers presented in publications

(continues)

Challenges		Publications
Technology	<ul style="list-style-type: none"> <li>• Technological deficiency.</li> <li>• Lack digital skills from the parents.</li> <li>• Lack of ability to record videos.</li> <li>• Lack of knowledge and technological skills.</li> <li>• Not knowing how to use ICTs, despite having access.</li> </ul>	<p>Mateus <i>et al.</i> (2022); Pattnaik, Nath and Nath (2022) Maia, Vernier and Dutra (2021) Miolo (2022)</p>

	<b>Challenges</b>	<b>Publications</b>
	<ul style="list-style-type: none"> <li>Lack of training on issues such as lighting, sound design and video editing.</li> <li>No technological support from the government.</li> <li>Learn to use technological tools.</li> </ul>	Mendes (2021) RBA (2020)
	<ul style="list-style-type: none"> <li>Shortage of devices.</li> <li>Lack of individual access to a digital tool at home.</li> <li>Lack of technological resources.</li> <li>No didactic-pedagogical control over remote classes via WhatsApp.</li> <li>Lack of access to WhatsApp for some families.</li> <li>Difficulty to connect to the Internet, use technology and devices needed for virtual learning by students.</li> <li>Lack of technological resources.</li> <li>Quality of equipment and overload on smartphone storage.</li> <li>Being able to access ICTs.</li> <li>Difficulties for family members not having a printer to print student activities;</li> </ul>	Mateus <i>et al.</i> (2022) Fonseca, Teixeira and Carmona (2021) Pattnaik, Nath e Nath (2022) Gonzalez and Mohamad (2022) Miolo (2022) Machado (2021) Pigatto (2021) Mendes (2021) RBA (2020)
	<ul style="list-style-type: none"> <li>Lack of teachers training for use of ICTs.</li> <li>Lack of adequate training for ICTs.</li> <li>Inadequate technological support.</li> </ul>	Fonseca, Teixeira and Carmona (2021) Gonzalez and Mohamad (2022)
	<ul style="list-style-type: none"> <li>Lack of connectivity.</li> <li>Connection speed.</li> <li>Insufficient or poor Internet connection.</li> <li>Lack of access to Internet services.</li> <li>Not having internet available at home.</li> </ul>	Mateus <i>et al.</i> (2022) Fonseca, Teixeira and Carmona (2021) Pattnaik, N. Nath and S. Nath (2022) Machado (2021) Pigatto (2021) Mendes (2021) RBA (2020)
Evaluations	<ul style="list-style-type: none"> <li>Difficulty in the diagnostic assessment of learning and development of students in the literacy process.</li> <li>Get feedback from students.</li> <li>Difficulty monitoring family mediation in planned and guided teaching strategies.</li> <li>Difficulty in obtaining effective feedback from students regarding teaching proposals.</li> <li>Realize that families often carried out activities for students.</li> </ul>	Fonseca, Teixeira and Carmona (2021) Machado (2021) RBA (2020)
Culture	<ul style="list-style-type: none"> <li>Knowledge of the teacher, their beliefs and culture.</li> </ul>	Gonzalez and Mohamad (2022)
Social	<ul style="list-style-type: none"> <li>Educational inequality.</li> </ul>	Pattnaik, N. Nath and S. Nath (2022)
Health	<ul style="list-style-type: none"> <li>Mental and physical exhaustion.</li> <li>Emotional obstacles, such as insecurity and fear of illness.</li> </ul>	Miolo (2022) Mendes (2021)
Economic	<ul style="list-style-type: none"> <li>Not having adequate resources to purchase a quality camera and a tripod.</li> <li>Parents' financial difficulties.</li> <li>Impact of socioeconomic conditions that directly influenced the effectiveness of remote teaching strategies.</li> <li>Use own resources to implement remote classes.</li> </ul>	Pattnaik, N. Nath and S. Nath (2022) Miolo (2022) Machado (2021) Mendes (2021)

<b>Challenges</b>		<b>Publications</b>
	<ul style="list-style-type: none"> <li>Funding cuts and lack of investment in public policies by government officials.</li> <li>No financial assistance from the government.</li> </ul>	<p>Miolo (2022) Mendes (2021)</p>
Educational environment	<ul style="list-style-type: none"> <li>Work tripled and increased its level of demand.</li> <li>New schedules.</li> <li>Doubled working hours, as needed to always be available on through cellphone to serve parents, students and the school at any time.</li> <li>Work overload for all participants in this cycle of remote classes.</li> <li>Much greater workload, due to the longer time spent serving students and families.</li> <li>Work overload added to domestic responsibilities, including childcare and other personal tasks.</li> <li>Accumulation of tasks, including bureaucratic tasks.</li> <li>Comply with a very cruel bureaucratic part.</li> <li>Virtual appointments exceeded the workload.</li> <li>School charges much higher than normal.</li> </ul>	<p>Maia, Vernier and Dutra (2021) Miolo (2022) Machado (2021) Pigatto (2021) Mendes (2021)</p>
	<ul style="list-style-type: none"> <li>Lack of teacher training.</li> <li>Reinvent yourself and employ a lot of resilience and creativity to teach classes.</li> </ul>	<p>Mateus <i>et al.</i> (2022) Mendes (2021)</p>
	<ul style="list-style-type: none"> <li>Unpreparedness of families for the teaching process.</li> <li>Monitor the mediation carried out by parents in the teaching and learning process.</li> <li>Direct contact with those responsible, not with the children.</li> </ul>	<p>Pattnaik, N. Nath and S. Nath (2022) Maia, Vernier and Dutra (2021) Machado (2021) Pigatto (2021) Mendes (2021) RBA (202)</p>
	<ul style="list-style-type: none"> <li>Lack of student interest and involvement.</li> <li>Low attendance in online classes.</li> <li>Dispositions and behaviors of students and parents.</li> <li>Lack of motivation, involvement and learning.</li> <li>Evasion of children from less favored classes.</li> <li>Lack of student interest in remote classes.</li> <li>Lack of student concentration during online classes.</li> <li>Lack of access to the learning environment.</li> <li>Lack of motivation to continue studying.</li> <li>Difficulty in motivating students to carry out the proposed activities.</li> </ul>	<p>Pattnaik, N. Nath and S. Nath (2022) Gonzalez e Mohamad (2022) Pigatto (2021) RBA (2020) Mendes (2021)</p>
	<ul style="list-style-type: none"> <li>Professional commitments added to the routine of domestic and family life.</li> <li>General disruptions to home life due to the pandemic.</li> <li>Home becomes a classroom.</li> </ul>	<p>Pattnaik, N. Nath e S. Nath (2022) Maia, Vernier e Dutra (2021) Miolo (2022)</p>
	<ul style="list-style-type: none"> <li>Maintaining close ties in the teacher-student relationship.</li> <li>Lack of contact and proximity with educators and colleagues.</li> <li>Difficulties more directly related to the mediation process.</li> </ul>	<p>Fonseca, Teixeira e Carmona (2021) Machado (2021) Pigatto (2021)</p>
	<ul style="list-style-type: none"> <li>Didactics involved in the teaching and learning process were impaired.</li> <li>Covid-19-related learning gaps in literacy.</li> <li>Monitoring the pedagogical process of remote classes.</li> </ul>	<p>Maia, Vernier e Dutra (2021) Gonzalez e Mohamad (2022)</p>



	<ul style="list-style-type: none"> <li>• Worsening of the teaching and learning situation of children in their literacy process.</li> </ul>	Machado (2021) RBA (2020)
	<ul style="list-style-type: none"> <li>• Exposure to judgments.</li> <li>• Many anxieties, fears and insecurities.</li> <li>• Concern about distant family members, in addition to concerns about the vaccine not arriving, unemployment, among others.</li> </ul>	Miolo (2022) Mendes (2021)

Source: Authors' own (2023).

### 3.2 Discussions

A literature review on the challenges teachers face in the context of selected research reveals a lack of investment and action by governments to guide teachers and prepare them for this period.

The absence of centralized support led to the emergence of a diversity of local solutions and strategies, further intensifying existing disparities in educational outcomes across different contexts. Schools that had previously integrated digital technologies into their pedagogical practices were better equipped to transition to remote teaching, as were the majority of private schools, which had allocated resources to the preparation and development of activities. Nevertheless, several commonalities could be identified across the various reports, allowing for the categorization of the challenges into the following domains: technology, assessment, culture, society, health, economics, and the educational environment.

In the context of technology, the gap that emerged during the pandemic underscores the necessity to view access to and utilization of technological and digital resources as fundamental rights in light of the ongoing social transformations.

In the Evaluation area, it is evident that students encounter difficulties in evaluating distance, necessitating the incorporation of diverse factors into the evaluation process. This approach enables the understanding of how each individual navigated this process during the pandemic, facilitating the development of targeted strategies to support them in the post-pandemic era.

In the cultural area, it is evident that societal changes are contingent upon the accumulation of historical experiences. In light of the rapid advancements in technology, these changes must be reflected in the pedagogical practices of educators through the implementation of public policies that prioritize addressing these issues.

In the context of the social area, it is evident that social inequalities exist, and that Vygotsky's contributions, as outlined by Rego (1996), highlight the significance of social interactions in the formation of the human being. During periods of social isolation, these interactions are constrained to the family unit, which impedes access to fundamental rights.

In the Economic area, the public authorities' lack of investment in education is evident, prompting teachers to assume responsibility for meeting economic needs by utilizing their own resources to maintain the continuity of activities during periods of remoteness and in their daily practice.

In the field of Health, it was observed that teachers became ill due to a combination of factors, including feelings of insecurity, anxiety, and fear of the disease. Additionally, they were required to fulfill a multitude of demands and responsibilities.

The Educational Environment area was the one with the most reports, many of which pertained to the absence of a tangible learning environment, the inability to track the genuine advancement of students, and the dearth of emotional connections and relationships with students.

A comprehensive analysis of these areas reveals their intrinsic interconnectivity, which is essential for an effective teaching and learning process. However, a detailed examination of each area separately provides insights into their significance within the broader educational context.

Upon recognizing the necessity for educators to redefine their roles and identify effective strategies for remote literacy instruction, despite limited support and resources, it becomes evident that literacy teachers have made considerable efforts to persevere in their work remotely, despite the numerous challenges they have faced, including a lack of public investment. Literacy is a crucial stage in the learning process, as it serves as the foundation for subsequent knowledge acquisition. Consequently, it is imperative to consider the following aspects: firstly, that teachers should be afforded a voice in decision-making and the opportunity to participate in public policy; secondly, that they should be valued and adequately prepared to meet the demands of the modern educational landscape; and thirdly, that they should be provided with the requisite resources and investments in education.

#### 4 Final considerations

Identifying the difficulties encountered by literacy educators during the period of remote learning represents a pivotal starting point for the development of future studies that contribute to the reconfiguration of post-pandemic education.

About the period of the pandemic, it was observed that it had a severe impact on education, particularly on literacy. This resulted in challenges for teachers, as well as a great deal of learning. It became evident that these professionals require a high level of value and preparation for the demands of today's society, with the necessary resources for this end. Considering the prospective ramifications of this traumatic event that has caused immense devastation to our planet, we hope that we may derive insights from the experiences and pursue avenues for addressing the challenges that have emerged during this troubled period in human history.

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