

## ANALYSIS OF EMERGENCY REMOTE TEACHING IN A MICROREGION IN THE COUNTRYSIDE OF SÃO PAULO

### *ANÁLISE DO ENSINO REMOTO EMERGENCIAL NUMA MICRORREGIÃO DO INTERIOR PAULISTA*

### *ANÁLISIS DE LA ENSEÑANZA REMOTA DE EMERGENCIA EN UNA MICROREGION EN EL INTERIOR DE SÃO PAULO*

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**ABSTRACT:** This article is part of a doctoral research whose object of study is the planning of school activities for the period of emergency remote education implemented in 2020, as a result of the Covid-19 pandemic, within the scope of municipal education systems of a microregion of the countryside of São Paulo. The objective of the research is to understand how this moment was thought, identifying, describing and analyzing remote teaching strategies, difficulties, successful actions and innovations that this situation provided to these counties. Therefore, a bibliographical and documental research on remote teaching was carried out, in addition to field research with the pedagogical teams that planned it in their counties. The study presented here highlights the descriptive analysis of this research, which is relevant due to the need to record the experiences lived at that time, which, if successful, can be used in the post-pandemic to improve the quality of education.

**KEYWORDS:** Educational policy. Remote teaching. Teaching strategies.

**RESUMO:** Este artigo é parte de uma pesquisa de doutorado que tem por objeto de estudos, o planejamento das atividades escolares para o período de ensino remoto emergencial implementado em 2020, em decorrência da pandemia da Covid-19, no âmbito das redes municipais de ensino dos municípios de uma microrregião do interior paulista. O objetivo da pesquisa é compreender como esse momento foi pensado, identificando, descrevendo e analisando estratégias de ensino remoto, dificuldades, ações bem-sucedidas e inovações que essa situação propiciou a esses municípios. Para tanto, foi realizada uma pesquisa bibliográfica e documental acerca do ensino remoto, além de uma pesquisa de campo com as equipes pedagógicas que o planejaram em seus municípios. O estudo aqui apresentado destaca a análise descritiva dessa pesquisa, que se mostra relevante pela necessidade de registro das experiências vivenciadas nesse momento, as quais podem, se bem-sucedidas, ser aproveitadas no pós-pandemia para melhorar a qualidade da educação.

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**PALAVRAS-CHAVE:** *Política educacional. Ensino remoto. Estratégias de ensino.*

**RESUMEN:** *Este artículo forma parte de una investigación de doctorado cuyo objeto de estudio es la planificación de las actividades escolares para el período de enseñanza remota de emergencia implementado en 2020, como consecuencia de la pandemia Covid-19, en el ámbito de las redes de educación municipal en los municipios de una microrregión del interior de São Paulo. El objetivo de la investigación es comprender cómo se pensó este momento, identificando, describiendo y analizando las estrategias de enseñanza a distancia, las dificultades, las acciones exitosas y las innovaciones que esta situación aportó a estos municipios. Para ello, se realizó una investigación bibliográfica y documental sobre la enseñanza a distancia, además de una investigación de campo con los equipos pedagógicos que la planificaron en sus municipios. El estudio aquí presentado destaca el análisis descriptivo de esta investigación, el cual es relevante por la necesidad de registrar las experiencias vividas en ese momento, las cuales, se exitosass, pueden ser utilizadas en la pospandémica para mejorar la calidad de la educación.*

**PALABRAS CLAVE:** *Política educativa. Enseñanza remota. Estrategias de enseñanza.*

## Introduction

The years 2020 and 2021 suffered the impact of the Covid-19 pandemic worldwide. To prevent the spread of the pandemic, the governments of Brazilian states and municipalities have implemented social distancing measures, among the first is the suspension of face-to-face school activities.

Understanding the importance of institutionalized education for the teaching and learning process of students, states and municipalities mobilized to continue school activities under the influence of the experiences of Distance Education (DE), Information and Communication Technologies (ICT) and Digital Information and Communication Technologies (DICT). The implemented experiences are called remote teaching because they are not considered DE, since they do not use or are conceived within this specific methodology (CRAIG, 2020). The adjective emergency was added due to the nature in which this measure was implemented and in reference to the license granted by the National Directives and Bases Law - LDB No. 9,394 of 1996 (BRASIL, 1996) for the use of distance learning in basic education.

According to research carried out by the Center for Innovation for Brazilian Education (CIEB, 2020), which analyzed remote teaching strategies used by Brazilian Departments of Education in March 2020, compared to the State Departments of Education (SEE, Portuguese initials), the Municipal Departments of Education Education (SME, Portuguese initials) were

not prepared to develop remote teaching activities. This lack of preparation is due to the lack of experience with the use of ICT and TDIC on a large scale, resources, staff formation and student connectivity to the tools available.

Seeking to understand whether the municipalities in São Paulo were prepared for Emergency Remote Teaching (ERE, Portuguese initials), we proposed a survey with the Municipal Departments of Education (DME, Portuguese initials) of the municipalities of a micro-region in the interior of São Paulo, located in the mesoregion of Campinas.

The micro-region studied estimated, in 2020, a population of 272,000 inhabitants divided into two large municipalities, one small-sized II and one small-sized I (IBGE, 2021). These municipalities were included in this micro-region because of their territorial proximity and inter-municipal dependence on commercial activities, public and private goods and services to satisfy the population's needs (IBGE, 2017). These are municipalities with considerable mobility among the population for issues of work, health, education, consumption, among others.

With regard to education in this micro-region, the average enrollment rate for primary education in the 2010 Census was 97.8% and the average for the Basic Education Development Index (IDEB) of 2019 for the initial years of education fundamental was 6.9 (INEP, 2021). In 2020, the School Census recorded, regarding municipal education networks, 15,641 enrollments in early childhood education distributed in 127 schools, and 11,805 enrollments in the initial years of elementary education distributed in 43 schools. In all, there were 1,982 teachers located in these teaching networks (IBGE, 2021).

Contemplating the local reality, our object of study is the planning of the ERE by the pedagogical teams of the municipal education networks of this microregion, during the period of suspension of face-to-face classes caused by Covid-19. The general objective is to understand how this moment was planned by the Municipal Departments of Education. Following the specific objectives: i) to identify, describe and analyze, through the manifestations of these pedagogical teams, the teaching strategies used for the implementation of the ERE; ii) raise the difficulties and successful actions perceived during this process and; iii) reveal the innovations that this situation brought to these places. In this article, given the circumstances of the current moment, it was decided to present an analytical extract of the current study.

Thus, this is a qualitative, descriptive research, whose methodology involves a bibliographic review, a documental research and a field research with interviews with the pedagogical teams of the municipalities of this micro-region.

Our research shows, through the manifestations of the interviewees, that, as pointed out by CIEB (2020), the municipalities studied did not have experience nor were they prepared for the ERE or for the use of technology on a large scale. However, this implementation seems to have accelerated a process of transformation, through the integration of ICT and DICT, which, in the eyes of the interviewees (and ours), has the potential to bring the beginning of a new era for education.

### **Distance education, face-to-face teaching and remote teaching**

In order to better distinguish the terms Distance Education, remote teaching and face-to-face teaching, we propose a brief theoretical differentiation, for didactic purposes, in view of the legislation and scholars in the area. We will start with the term distance education, considering the legislation that regulates the modality from Federal Decree No. 9,057, which in its article 1 (BRASIL, 2017, p. 1, our translation),

It considers distance education to be the educational modality in which the didactic-pedagogical mediation in the teaching and learning processes occurs with the use of information and communication means and technologies, with qualified personnel, with access policies, with compatible monitoring and evaluation, among others, and develop educational activities for students and education professionals who are in different places and times.

The concept of distance education goes beyond a teaching and learning process between physically and temporally distant individuals mediated by technologies, but involves strategies that, in innovation, surpass those of face-to-face teaching, commonly defined by more traditional and hierarchical teaching and assessment practices.

As Machado, Czarnesk and Domingues (2015, p. 106-107, our translation) point out:

Face-to-face teaching for the purposes of this study is understood as synonymous with traditional teaching. Mizukami (1986) presents some characteristics of the traditional approach to the teaching-learning process: a) education: understood as a broad process, that is, instruction that is characterized by the transmission of knowledge, restricted to the action of the school; b) teaching-learning process with emphasis on classroom situations, in which students are taught by the teacher; c) vertical teacher-student relationship, in which the teacher holds the decision-making process; d) methodology for developing classes with frequent use of the expository method, creating an art centered on the teacher for teaching. The author explains that the teacher versus student relationship is implicit in this classroom methodology, in which the teacher is the agent and the student is the listener; and, finally, e) evaluation carried out aiming at the accuracy of the reproduction of the content communicated in the classroom.

In general, classroom teaching students have a more passive position than distance learning students, which provide collective participation tools to supply face-to-face interaction, research and production of content and activities that involve student autonomy and protagonism, bringing more dynamism to teaching practices.

As for the dynamism that technology can add to education, Nicola, Paralo and Lemes point out that (2021, p. 348, our translation),

Education needs a new look, new horizons and possibilities to stimulate the enthusiasm of both the teacher and the student. Technology comes to bring a different stimulus than traditional teaching. The intelligent application of the computer facilitates the transition from the mechanistic to the socio-interactive model.

In addition to the distinction between distance learning and face-to-face teaching, it is necessary to define what we consider here by ERE. ERE differs from distance education in the way of thinking about attendance and, as a result of the latter, it enjoys its own methodology and tools and the former adapts classroom teaching to remote teaching, using some tools and strategies from distance education, ICT and TDIC, not always in a structured.

Remote teaching is a technology-mediated schooling format, keeping the conditions of teacher and student distance. [...] Although it is directly related to the use of digital technology, teaching remotely is not synonymous with teaching at a distance, considering the latter a modality that has its own theoretical-methodological conception and is developed in a virtual learning environment, with specific didactic-pedagogical material and tutor support (GARCIA *et al.*, 2020, p. 5, our translation).

Having made the necessary distinctions, it is necessary to understand that the ERE is closer to face-to-face teaching than to distance education in terms of methodology and teaching strategies. From distance education, the ERE has, in general, borrowed only the technological resources and the way of computing attendance, maintaining practices of expository classes and activities oriented to later delivery and correction, which are traditional in face-to-face teaching.

Aware of the criticisms that the transposition of classroom teaching to remote teaching has had, but given its materiality in the State of São Paulo and the urgency of thinking about strategies for the non-interruption of classes, we highlight the favorable position to the ERE of the civil organization Todos pela Educação (2020, p. 3, our translation),

Faced with an unprecedented scenario [...] we seek to avoid [...] a “cold” reading of research on distance learning, which, in general, focuses on comparing “distance classes” with “face-to-face classes” (while, in the current

scenario, the issue is, fundamentally, a discussion between “distance classes” and “non-conducting classes”). [...] the choice of the public power to do nothing, under the argument that it is not possible to reach everyone, tends to exacerbate the inequalities resulting from the emergency situation.

Despite all the discussion about the dubious quality of the ERE, implemented in a palliative, temporary way, at the same time it is structured, All for Education (*Todos pela Educação*) argues that we cannot fail to make the educational process reach students. This has been a current discourse of the interviewees in this research.

### **The implementation of Emergency Remote Teaching**

Under Brazilian legislation, basic education follows the rules prescribed by LDB no. 9,394/1996 (BRASIL, 1996). Regarding the frequency of regular education in basic education, article 5 of LDB no. 9,394/1996 (BRASIL, 1996) prescribes that its zeal is the responsibility of the State and parents, however, it only clarifies the type of frequency foreseen for education fundamental: paragraph 4, article 32: “it will be face-to-face, with distance learning used as a complement to learning or in emergency situations” (BRASIL, 1996).

Article 24 of LDB no. 9,394/1996 (BRASIL, 1996) regulates school attendance in elementary and high school and article 31, in early childhood education; both propose a minimum workload of 800 teaching hours and a minimum number of 200 teaching days per year, with the control carried out by the school institution. During the Covid-19 pandemic in 2020, Federal Law no. 14,040/2020 (BRASIL, 2020), waived the fulfillment of 200 school days in basic education and 800 school hours in early childhood education.

Although, in the history of the school institution, attendance has been physically present, with the expansion of distance education in the 21st century, some modalities and levels of education have been thought of in the distance format, such as higher education, technical and technological education, Youth and Adults Education, among others.

With regard to basic education, Federal Decree no. 9,057/2017, which regulates article 80 of LDB no. 9,394/1996 (BRASIL, 1996), regulates the “offer of distance courses in Basic Education” and places in its Article 8 that “it is incumbent upon the authorities of the state, municipal and district education systems, within the scope of the federative unit, to authorize courses and the operation of distance education institutions”, under the terms of the law (BRASIL, 2017). Based on this Decree, states and municipalities approved the implementation of the ERE in their education systems.



In the State of São Paulo, the Deliberation of the State Education Council (CEE) No. 177/2020 (SÃO PAULO, 2020e) established premises for the reorganization of the 2020 school calendars. The Deliberation recognizes the autonomy of school institutions for this reorganization, provided that that ensure the educational objectives of the school year, approve and register the changes through the respective regulatory bodies. Among these premises are the use of all possible means to minimize the losses of students with the suspension of face-to-face classes, the reduction of 200 school days, but not the 800 teaching hours (except in the case of early childhood education), the use of ICT and TDIC, carrying out activities outside the school, respecting the specificities and age group of students, reorganizing vacation periods, recess, tests, exams, meetings and other activities, the provision of replacement periods for classes and the definition of activities for these periods (SÃO PAULO, 2020e).

Based on this Deliberation, the municipalities participating in this research reorganized their calendars to meet the 800 school hours of 2020. The reorganization of the calendar was the first step in the planning of the ERE, as it made it possible to anticipate periods of recess and school holidays, giving municipal schools time to organize and structure themselves.

Other state resolutions that helped the organization of the ERE were: Resolution Seduc-45/2020 (SÃO PAULO, 2020c), which provided for the planning, execution and registration of non-face-to-face educational activities for schools in São Paulo; Resolution Seduc-46/2020 (SÃO PAULO, 2020b), which established a protocol for delivering teaching materials to students; and Resolution Seduc-48/2020 (SÃO PAULO, 2020a), which defined the essential activities provided by the Education Departments. Based on these regulations, among others, the municipal education systems in São Paulo adapted their teaching plans in order to comply with state regulations regarding the planning and implementation of the ERE in 2020.

## **Methodology**

The methodology of this qualitative research, with a descriptive character, involved a bibliographic review on the context of implementation of the ERE, a documental research on the legislation that led to the implementation of this system and a field research in the municipalities selected for the study.

In the field research, we conducted online interviews with professionals from the pedagogical teams in charge of this planning in each of the municipalities of the selected micro-region, through the Google Meet tool, which were recorded and later transcribed for categorization and data analysis.

The interviews took place with the authorization of the Municipal Secretaries and Directors of Education, followed by contact with the participants of the pedagogical teams of the municipalities to identify volunteers, who agreed with the Free and Informed Consent Term of the research. In all, eleven volunteers or participants were interviewed.

The interviews followed a previously produced, flexible script, in which there were questions about the process of planning and implementation of the ERE in the municipalities of the selected micro-region, which aimed to respond to the general and specific objectives of the research, described in the Introduction to this article.

For data analysis, we based ourselves on Bardin's Content Analysis (2016), which suggests three phases for the organization of a research: 1st phase) pre-analysis, in which we organize the interview data, making the transcripts and a pre-selection of extracts from representative manifestations that could answer our research questions; 2nd phase) exploration of the material, in which we defined the categories of analysis and the definitive manifestations that could best represent them. The categories defined were teaching strategies, difficulties encountered, successful actions and innovations for teaching. For each category, we delimited three subcategories for discussion, in order of highest to lowest recurrence. In the 3rd phase, treatment of the results, inference and interpretation, we started the descriptive analysis of the data.

## **Data analysis**

This stage of the article aims to describe the data collected in the interviews carried out with the pedagogical teams of the municipal education networks of a micro-region of São Paulo. In these interviews, questions were asked about the ERE planning process, for the initial years of elementary school and early childhood education, in the municipalities belonging to this micro-region. These questions were intended to answer the general and specific objectives of this study. The latter defined our categories of analysis, discussed below: 1) teaching strategies; 2) difficulties faced in the implementation of the ERE, 3) successful actions in the implementation of the ERE, and 4) innovations observed with the implementation of the ERE.



## **Characteristics of ERE planning in a micro-region of São Paulo**

The implementation of the ERE in the micro-region of São Paulo studied was not uniform. Among the municipalities participating in the research, we have one small-sized I, one small-sized II and two large-sized ones. We consider the municipal size factor in this study to be highlighted, as we understand, through the manifestations of the interviewees, that it potentially had a weight in the ERE planning proposals in two ways: in the centralization of the ERE's initial planning in the SME and in the choice of the platform for online teaching as an initial strategy to implement the ERE.

In large municipalities, the initial planning of the ERE was carried out by the pedagogical teams of the SME. In the statements of the interviewees, we distinguish three arguments for this centralization: the fact that the emergency closure of schools has led to the anticipation of vacations and recesses for teachers, the urgency of thinking of a uniform strategy for the service of the municipal network as a whole and the need to prepare teachers for the implementation of the ERE.

In smaller municipalities, the initial planning of the ERE was coordinated by the pedagogical team of the DMEs and by the school managers, including consultation with teachers. These places, after periods of anticipation of vacations and recesses, focused on the work of teachers for remote pedagogical interventions with students, production of activity and class scripts and on-call questions.

The anticipation of vacations and recess was an official procedure of the São Paulo state education network, implemented by Resolution Seduc-28 in March 2020 (SÃO PAULO, 2020d), to propose a measure to contain Covid-19 and obtain time for planning the ERE. Many municipalities in São Paulo followed the SEE schedule fully or partially with the same aim. This was the case for the small municipalities in this study.

Both the suspension of face-to-face classes and their extension due to the spread of Covid-19 took the school community by surprise. In the expectation of some interviewees, the suspension of face-to-face classes would be temporary, as would the ERE, with the return to face-to-face classes still in 2020. As a result of the extension of the suspension of face-to-face classes, municipalities had to adjust the initial planning, designed to a short period of time, for the entire year of 2020. Some municipalities maintained remote teaching strategies with slight variations, while others significantly modified or complemented them. The main change made was the transfer of pedagogical intervention with students to teachers in municipalities where this had not yet occurred.

After the initial period of implementation of the ERE, all municipalities in the micro-region in question proposed in their planning pedagogical interventions between school and student mediated by teachers so that the teaching processes could be closer to the characteristics and needs of the students.

The support networks sought by the municipalities to support the planning of the ERE was another factor that influenced the planning. Small municipalities have more frequently expressed that they have sought support in the guidelines of the Education Boards of the State of São Paulo (DE), of the Union of Municipal Education Directors (UNDIME), of the educational systems of publishers to which they are linked, in the case of the municipality small I, and in the exchange of experiences with cities of other regions, than the large ones. However, this search also emerged in the manifestations of respondents from larger municipalities.

According to some interviewees, UNDIME-SP (2021) had a considerable impact on the transmission of guidelines, information and training of professionals in municipal education networks through a wide range of videoconferences, webinars and discussions on the ERE during the pandemic.

With regard to the State Education Boards, historically and legally there is a relationship of support and guidance between them and the SME and DME arising from the regime of constitutional collaboration between these federative entities (article 211 of the Federal Constitution of 1988, BRASIL, 1988). In addition, LDB no. 9,394/1996 (BRASIL, 1996), in its article 10, states that it is the responsibility of the state and municipalities to ensure elementary education, which highlights the role of the state as co-responsible for this level of education not only regarding its offering, but the maintenance of institutions and the formation of professionals. In this sense, the guidelines of the Education Board of the region influenced the planning of the ERE in the studied municipalities, especially in small ones.

Next, we will address the categories and subcategories of analysis of this study.

### **1) Teaching strategies**

For this category of analysis, we consider as a strategy every pedagogical action plan(s) selected to establish a remote teaching and learning process between the education system and its students, which may include the use of different technologies, teaching materials, interventions and even alternating them.

The municipalities of the micro-region studied used a series of teaching strategies for the non-interruption of school activities. Among the most used strategies for the availability

of teaching materials, class scripts, study schedules, guidance guides and pedagogical intervention are, as described below:

a. distribution of printed materials

The most used teaching strategy for the implementation of the ERE was the distribution of printed materials. All municipalities used it. The justification for the implementation of this strategy lies in the indispensability of reaching all students, including those who do not have access to the internet. The small municipality II adopted it as the main strategy, not officially using technological tools in the intermediation of the ERE. Even the municipalities that opted for strategies that required technology as the main action plan used the distribution of printed materials as a complementary and/or concomitant procedure for the regular context of the ERE and for the care of students without access to technology. Among the printed materials we can list the textbooks distributed by the National Textbook Program, the handouts used by the education system and the photocopied activities produced by the teachers, etc.

b. use of online teaching platform

In the case of the use of online teaching platforms, the SME of large municipalities used the Google for Education platform and its tools, such as Google Classroom. As a rule, the use of the platform with students was restricted to the availability of pedagogical materials so that they could comply with the teaching content initially produced and tutored by the SME. As soon as the planning and pedagogical interventions were transferred to the teachers, they were given free choice to record or not classes, interventions and guidelines via Google Meet or another application of their choice, which occurred on the part of some teachers, but not in a generalized or even systematized way.

Respondents from small municipalities stated that the online teaching platform was not the best option for their school community. Among the justifications are the budget issue and the precarious access of students to the internet.

c. creating classroom groups via WhatsApp or WhatsApp Business

The creation of classroom groups via WhatsApp or WhatsApp Business to carry out teaching interventions and make materials available was an official strategy in two municipalities, one small and the other large, being optional in the other two municipalities. However, after the initial phase of implementation of the ERE, all municipalities started to

use it for pedagogical interventions carried out between teacher/school and student/family, even if in a non-systematized way.

This was the most used technological tool by the municipalities of this micro-region. The following statement provides a justification for its use:

***Participant I** - “1) Because many phone companies offer unlimited data plans for WhatsApp. 2) All families or practically all families have WhatsApp and she knows how to use it, children know how to use the application, it is very simple. [3] It is an application that accepts all types of media: PDF, mpeg, MP4, audio.” (our translation)*

According to CIEB (2020), “most municipalities understand that guidance via WhatsApp, sending digital materials by the teacher and video lessons recorded and sent to students via social networks, are the most appropriate strategies for the reality of the network.” Sending guidelines via WhatsApp ranked first among the technological measures that best fit the context of municipal networks for offering the ERE. This research revealed that the fact that WhatsApp has become a basic application for communication in Brazil, made it the most appropriate tool for school-student mediation from the perspective of municipalities.

All municipalities used more than one of the aforementioned strategies, although large municipalities chose to use the online teaching platform at the beginning of the implementation of the ERE, while small municipality I used WhatsApp for pedagogical interventions since the beginning of this process and the small one II chose to use, as its main strategy, the availability of printed materials.

We noticed in the statements of the interviewees that the use of several strategies concomitantly is intended to trigger information in different ways in order to achieve broad dissemination and comprehensive care for students.

## **2) Difficulties faced for the implementation of the ERE**

Some municipalities faced specific problems in the implementation of the ERE, such as having a large part of the students in the rural area, in the case of the small municipality I, other problems, such as difficulties in accessing technology, were general. Next, we will focus on the most recurrent problems in the implementation of the ERE.

### **a. lack of access of students and teachers to selected technological resources**

The impossibility of reaching all students in the municipal school system due to the lack of access to technology was the difficulty most highlighted by the interviewees. We

discern, in the demonstrations, that this concern appeared even before the implementation of the ERE and, in small municipalities, it influenced the decision not to adopt an online teaching platform, but strategies closer to the reality of the school community. This difficulty also led all municipalities to opt for the distribution of printed materials to students with the aim of making the schooling process through the ERE reach everyone.

**Participant G** - *“We were monitoring, you know, the participation of these children. And then you see that they had a lot of problems. There are families that have five children and one cell phone, you know, and each child in a room, there is no internet [...].”* (our translation)

Some teachers also needed technological support to carry out planning and pedagogical interventions with students. To meet this demand, most municipalities offered the resources available in school institutions so that teachers could carry out these activities. Some school institutions made notebooks available to be used in a home office system.

Although, in general, the interviewed participants pointed out the municipalities' concern in providing teachers with the necessary technological resources, one of the interviewees warned that, in the case of his municipality, the capacity of the networks is limited and, if it were necessary to offer institutional resources to all teachers, principals and coordinators, there would probably be problems, especially with regard to the speed of the internet connection. This is the reality in the use of ICT in Brazil.

b. lack of digital fluency on the part of teachers

The lack of digital fluency of the students-families, but mainly of the teachers, was another factor pointed out in the interviews as a generator of difficulties. Most of the teachers were not familiar with the technological resources selected to implement the ERE, such as online teaching platforms, video and audio recordings, online classes, availability of posts, forwarding of activities via the platform, etc.

**Participant K** - *“The biggest problem was, eh, recording the video, showing the face, right? So that's it, they were kind of [...] finding it difficult to record. [...] I had a teacher with difficulty to type even the schedule himself. So what did it serve for us to observe? That teachers need more formation in the technological area.”* (our translation)

According to Tarouco (2018, p. 33, our translation), “in the current context of the so-called information society, digital literacy is one of the most critical points in the process of digital inclusion. It is related to acquiring basic skills for using computers and the Internet.”

One of the ways the cities studied faced this difficulty was to offer, formalized or not, courses and/or guidance guides on technologies and on the tools used.

c. inconsistency in the participation and delivery of pedagogical activities

The inconsistency in the participation and delivery of pedagogical activities by the students was another major problem pointed out by the participants. Respondents who work in early childhood education were the ones who most felt this inconsistency. The biggest complaints revolve around the lack of commitment of families, since young children need their guardians to organize their schedules, spaces and materials to carry out activities, and the lack of appreciation of preschool and, especially, daycare in the schooling process of the young child.

An observation made by several interviewees, from early childhood education to elementary school, refers to the discouragement that hit families in the second half of 2020, when it was found that there would be no return to face-to-face classes. This fact influenced several families to abandon the delivery of school activities.

Two procedures used to face this difficulty were the delivery of activities at home and the use of the students' active search. All municipalities applied this last artifice together with the Child Protection Services and other Municipal Departments, such as Health and Social Assistance.

**Participant E** - “[...] the principal, he has the obligation to actively search for this student. So, both on pick-up and delivery. So, for example, if 10 students were not able to withdraw the activity, the manager has to do the active search, and it's not just a call, okay. Here we do not consider calling as active search. He has to make a home visit, he has to send a registered letter, he has to have documentation that he spoke to this father, that he guided this father, for this father to get [the printed materials].” (our translation)

Active search is one of the procedures indicated by national and state legislation to deal with the absence and evasion of students even before the pandemic. In São Paulo legislation, Resolution Seduc-48/2020 (SÃO PAULO, 2020a) was the first to propose the procedure for monitoring students at risk of dropping out and dropping out of school during Covid-19. In line with this Resolution, many municipalities adopted this procedure to ensure that the ERE reached all students in their networks.



### 3) Successful actions in the implementation of the ERE

The third category of analysis indicates the successful actions achieved by the implementation of the ERE according to the perception of the interviewees in this study. Here, we consider successful actions those whose success depended on the planning exercise of the ERE or on the undertaking of SME/DME and education professionals in solving some difficulty.

Below, in order of highest occurrence, these actions are listed.

#### a. overcoming difficulties with technology on the part of teachers

The overcoming of difficulties with technology by the pedagogical team and the teaching staff, although partial, was a positive point pointed out by all the participants at some point in the interview. However, it is important to point out that this overcoming is not given, in our perception of the statements of the interviewees, as a completed action, but as part of a larger process in progress. Issues such as the domain of self-indulgence, resistance, fear and the progressive acquisition of skills to use technology in pedagogical practices are associated with overcoming difficulties with technology by the interviewees.

*Participant B* - “[...] our overcoming, is, as a professional, to see this possibility. Because until then I thought that technology was far from me, it is not and I have the ability to use it too, even with the difficulty.” (our translation)

To boost the overcoming of this difficulty, all municipalities offered some formation support for technology, either with specific courses or with specific guidelines.

Most of the interviewees expressed that the need to use technology during 2020 made the municipal education system and the employees themselves look for more qualification and formation to implement the ERE, which encouraged overcoming this difficulty.

#### b. engagement of education professionals

The concern of education professionals to provide quality education and the success in implementing the ERE was another constant in the statements of the interviewees. Most respondents emphasized the engagement of education professionals as a positive point, as the pandemic and the suspension of face-to-face classes brought out the union between them in favor of a common good, meeting the learning needs of students.

*Participant A* - “At first, we also thought that many teachers would be resistant, you know, because when talking about technology at school, many

*teachers [say]: \_ Ah, but I don't know how to assemble things on the computer. [...] So, we thought that the resistance of these teachers would be a great difficulty for us and on the contrary, [...]. And they are all very involved in this work.*" (our translation)

This engagement of teachers, according to the interviewees, can be observed in the search for more knowledge about the use of technology for education, in the expression of commitment to the teaching and learning process of students and in empathy with their situation during the pandemic.

c. proximity of school to families

The closer relationship between school and family was another positive point highlighted by several of the interviewees, many of whom pointed out that it is, in large part, the result of the successful dialogue carried out via WhatsApp. This social communication application, in the view of some of the interviewees, brought simultaneity to communications and a direct route between school and family, previously performed many times by the precarious intermediary of tickets.

In the statements of the interviewees, we distinguished another factor that favored this close relationship: the need for families to participate more actively in school activities. This need appears mainly in the teachers' concern to seek ways to encourage participation. In the view of some interviewees, this process ended up leading to greater appreciation of the school and the role of the teacher in the teaching and learning process of children.

All the interviewees pointed out these positive points in common: the teachers overcoming difficulties with technology, the engagement of education professionals and the greater proximity between school and family.

**4) Innovations observed with the implementation of the ERE**

The fourth and final category of analysis points out what, in the view of the participants, can be seen as an innovation for education, including post-pandemic teaching, as described below.

a. use of technology for teaching in the first levels of basic education

For the research participants, despite all the surprises of this period, the benefits that the ERE brought regarding the use and teaching and learning experiences involving technology for the first levels of education in basic education are unanimous, in terms of It fits here, early childhood education and early years of elementary school. What diverges, in some

cases, is regarding the target audience benefited, in this case, education professionals and/or students.

For teachers, in terms of professional growth and possibilities of intervention in pedagogical practices, the use of technology was seen by the interviewees as a factor of innovation, as it did not extend beyond the research of contents and activities for the elaboration of classes and pedagogical-administrative issues, such as producing and sending reports using basic text editing tools and electronic mail.

With ERE, teachers have learned to deal with the online teaching platform and social communication applications aimed at work groups, which involves posting materials, guidance and feedback to students, recording audios and videos, managing video classes, chats and the like etc. In addition, they have participated in online pedagogical meetings, online formation courses and learned to use other tools that help their registration, evaluation and monitoring work, such as online questionnaires and spreadsheet tools, etc.

***Participant C** - “[...] you have to see every cute thing that now, this last month, they [the teachers] had sent us some examples of activity. So, there was a little video of the teacher, you know, with the little song, the classroom teacher herself made the video, she dressed up, so, I think that's what was different. [...]” (our translation)*

With regard to students, one of the interviewees states that, in his perception, early childhood education students lost a lot in the process, since the basis of the curriculum, according to the National Common Curricular Base (BNCC) (BRASIL, 2017) is interaction between peers and teachers, which was harmed during the implementation of the ERE. As for older students, some interviewees pointed out the possibility of working with students' autonomy and protagonism, with research activities and pedagogical interaction, which was considered a positive point.

In general, technology in schools has been thought of in the sense of consumption of information, but not of authorship or production, as Tarouco (2018) points out in an article on the digital competence of teachers. For the author, digital fluency develops from a digital literacy process, but goes beyond it, placing the teacher as a learner, leader, citizen, collaborator, designer, facilitator and analyst, all skills that involve not only the issue of consumption, but exploration and integration, and we would also say interaction, skills that must be worked on and developed in students as well.

That said, the increase in the use of technology associated with the implementation of the ERE is a positive issue pointed out as a gain that education cannot let go of, since it has a

high formative potential for the emancipation and protagonism of both the teacher and the student. In addition, technology can provide interactivity and dynamism to schooling processes, bringing public education closer to the emerging media and digital culture of the 21st century.

#### b. virtual interaction

Another innovation highlighted among the participants is the virtual interaction between family and school and between the management team and teachers. This interaction revealed the enthusiasm found by education professionals in the closer proximity that the ERE provided through communication tools, such as mobile applications, digital social media and online meeting applications.

Regarding communication between school and family, which was previously carried out through phone calls and notes, it becomes more direct, stable and immediate, ensuring that the message reaches its recipient with greater security and speed. Overall, the participants of this study highlighted this as one of the most important points, as it generated not only greater communication but greater proximity in terms of relationships, motivating the school's partnership with the community. This factor is also considered a successful action.

**Participant D** - *“At the beginning, there was a school that said they would not make a group via WhatsApp, that they would try to make this contact via the school phone. It didn't work out. [...] They couldn't find another way, so they, they joined WhatsApp anyway.”* (our translation)

With regard to education professionals, virtual interaction, through technology tools, provides greater engagement between management teams and teachers. Part of this perception comes from the more direct and immediate relationship that these tools provide, such as the greater synchronous virtual proximity that has been occurring between SME/DME professionals and schools. The realization of the Collective Pedagogical Work Schedule (HTPC) online was cited by some of the interviewees as a gain in the management versus school relationship, being one of the points discussed for post-pandemic permanence.

In general, all municipalities used some type of application for online meetings and used WhatsApp to communicate with families and education professionals.

#### c. online training

Formation and qualification for the use of technology or the use of technology for formation and qualification are also cited by participants as something that must be maintained. Although not considered an innovation in itself, online formation or qualification

was not yet widespread in education networks before the pandemic. Most of the courses until then were face-to-face, leading to large displacements of personnel and resources. As an example, all the interviewees pointed out that the formation of municipal networks was always face-to-face and the offer of online formation was not welcomed.

**Participant H** - *“They [the teaching system under agreement] are reorganizing themselves, they already had, you see, some online classes, but nobody used them, you know. So now, people are looking for that more, right? So, this search for the new. I think post-pandemic this will continue.”*  
(our translation)

Among the innovations pointed out by the interviewees, the use of technology for hybrid teaching, virtual interaction and online training, we observed that all of them are already present in the digital society that we have today and in many education systems, such as higher education, however, they had barely entered public elementary schools before the pandemic, which made them recognized as a novelty.

Thus, the development of an education for technology in the early years of elementary school and in early childhood education, aimed at teachers and students who are protagonists, implies "innovations" raised in this study and others that can bring technology to school in order to enhance the schooling process.

## Final considerations

This study aimed to understand how the ERE was designed in the municipal education networks of a micro-region in the interior of São Paulo, located in the mesoregion of Campinas. The purpose of this article is based on a descriptive analysis of the main characteristics that involved the planning and implementation of the ERE in this micro-region, identifying and describing the teaching strategies, the difficulties, the successful actions and the most recurrent innovations from the scenario that now presents itself as a result of the Covid-19 pandemic in the years 2020 and 2021.

Starting with the main characteristics of this process, we noticed some confluences between the municipalities of this location, even though its planning is carried out according to the specifics of each target audience. Some of the factors that influence this confluence, according to our perception of the participants' manifestations, are the size of the municipalities, access to technology and information support networks.

Large municipalities followed similar proposals for ERE planning, such as the use of an online teaching platform and the centralization of initial planning in the SME. Small

municipalities, on the other hand, opted for a more decentralized planning, encompassing schools and teachers, in addition to the use of technological tools known by the school community as the main strategy for the implementation of the ERE, such as WhatsApp, in the case of the small municipality I, and the distribution of printed materials, in the case of small municipality II.

In larger education networks, the dimensions can be considered a complicating factor in the structuring of the ERE, since the greater the number of schools, teachers and students, the greater the difficulty in organizing, guiding and monitoring activities, that is, the greater the degree of complexity of the educational system, which, to a certain extent, may have motivated the more centralized initial planning.

Regarding technology, we understand that the lack of access to technology, especially the internet, ended up influencing the way the ERE was planned and implemented in the different municipalities of the micro-region. Small municipalities and/or with larger rural populations and fewer technological resources chose not to use online teaching platforms, while for large municipalities, this was an initial solution to cover the entire network.

According to Malganova, Dokhkilgov and Saralinova (2021, p. 603, our translation), “one must understand the difference in the readiness of the population of large cities with well-developed infrastructure, which is much easier to adapt when moving to online than users from rural areas.”

As for the support networks consulted to obtain information and guidance for ERE planning, the most cited were UNDIME, DE/SEE and SME/DME from other regions. The search for information in common networks, by providing the exchange of knowledge about the same experiences and orientations, can generate similarities in the selection of teaching strategies, for example, among other issues.

Among the teaching strategies most adopted by the municipalities participating in this research for the implementation of the ERE are the distribution of printed materials, used by all municipalities for their inclusive power, since it serves students with and without access to technology, the use of online teaching, used by large municipalities, and the creation of classrooms on WhatsApp and WhatsApp Business. As already discussed, these strategies were selected under the influence of the reality of access to technology by students in each municipality.

The second category of analysis in this study is defined as “difficulties faced”. Although there are specific difficulties in each municipality, we raised the most recurrent ones in this micro-region, according to the manifestations of the interviewees. They are: the lack of



access of students and teachers to technological resources, the lack of digital fluency by the teachers and the inconsistency in the participation and delivery of activities by the students. The first two difficulties raised refer to technology and were felt both in the municipalities that adopted ICT and TDIC tools for the implementation of the ERE, as well as for the ones that did not adopt, in the case of the small municipality II, since the decision of non-adoption itself of these was considered due to the lack of access to technology and digital fluency by their school community.

The third, fourth and fifth categories are, respectively, successful actions and innovations. Among the most recurrent successful actions, we identified the overcoming of difficulties with technology by the pedagogical and teaching staff, the engagement and commitment of education professionals and the proximity of the school to families. Among the innovations, the use of technology for teaching in the first levels of basic education, virtual interaction and online formation.

Regarding successful actions, we observe an interrelationship between them. Overcoming difficulties with technology is a result of the commitment of teachers and education professionals to the implementation of the ERE. The engagement of education professionals and teachers also fostered greater proximity between school/teacher and family/student. This interrelation leads us to infer that “engagement” is one of the determining factors for the development of the other two actions considered successful. Without the development of this action, the promotion of the others would probably be compromised.

The innovations observed during the implementation of the ERE in these municipalities are not new actions in society, but, as they enter public basic education in this context, they were considered as a transforming action that can produce a renewal for education if they are maintained and well used in the post-pandemic period. In many of the interviewees' manifestations, the desire that some type of hybrid teaching or integrated with technologies becomes a reality in this future, accelerating and concretizing what has been rehearsed throughout this beginning of this century without much success in terms of regarding basic education integrated with technology.

We recognize that, even with the technological advances obtained with the ERE, it is not a unanimous solution nor the most appropriate for teaching young children and pre-adolescents, leaving many gaps and inequalities along the way. However, rescuing the position of the NGO *Todos pela Educação* (2020), the ERE is an option to the option of doing nothing. Even with many problems and important issues to be discussed during its

implementation, in the voice of the interviewees of this research, the intention of the ERE is to ensure that the schooling process is not interrupted.

In general, distance learning alone is not a long-term solution. The COVID-19 crisis sheds light on the need for a new education model. Soon we will have a mixed learning experience, a kind of hybrid educational haven, imagined in the combination of the best of both learning formats (MALGANOVA; DOKHKILGOV; SARALINOVA, 2021, p. 603, our translation).

This research is relevant due to the importance of investigations and records on the large-scale experimentation of ERE by SME/DME during the Covid-19 pandemic. This situation brought a conjuncture of exceptionality to education, which demanded original and singular actions, but which imposed a series of problems and gaps to be (re)thought in the coming years, among them, the emergence of a large invisible population within the system of schooling, who did not obtain access to education and/or were excluded from this process.

In this context, it is urgent to think about post-pandemic education using all the necessary resources to fill the gaps that have arisen and rescuing the population excluded from this process. And the experiences with the ERE, which somehow brought a certain integration between technologies and school practices, can be an ally in this new scenario.

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