

Article

# Learning in Troubled Times: Parents' Perspectives on Emergency Remote Teaching and Learning

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**Abstract:** The COVID-19 pandemic triggered profound social consequences, affecting all aspects of human activity, including education. The process of remote teaching that was implemented in response to this crisis is known as emergency remote teaching and learning (ERTL). The present study focuses on Portuguese parents' perspectives about this process. Data were gathered through an online questionnaire, answered by 203 parents of preschool, basic, and secondary education students (ages 3–18), focusing on self-perceived digital competence, satisfaction with ERTL, and pedagogical activities developed with their children. Parents were moderately satisfied with ERTL but expressed a marked increase in their workload, particularly those working from home. Parents of children in the second cycle of basic education (ages 10–12) were less satisfied with the process. A variety of activities was promoted, responding to different educational levels' characteristics. Results show the importance of promoting parents' digital competence and directing support policies, particularly to parents of younger children (ages 3–12), and raise concerns about equity.

**Keywords:** COVID-19; emergency remote teaching and learning (ERTL); educational consequences; parents' perspectives; Portugal; preschool education; basic education; secondary education

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## 1. Introduction

Since the turn of the millennium, there was considerable worldwide advancement towards universal access to basic/primary education for all children. Ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all is the fourth sustainable development goal—Quality Education (SDG 4)—included in the 2030 Agenda [1]. The training and empowerment of individuals, based on the principles of human rights and sustainable development, is the core of SDG 4, which aims to expand the opportunities of the most vulnerable people on the path to development.

In this regard, it should be emphasized that Portugal attaches central importance to lifelong education, training, and qualification, seeking to reverse historical delays and exclusions, with direct impacts on people's wellbeing, economic performance, fighting poverty, promoting equality and social cohesion, citizenship, and the environment. Therefore, SDG 4—Quality Education is recognized as a priority goal and a transversal pathway to achieve several other Sustainable Development Goals [2].

However, by the end of 2019, SDG 4 of the 2030 Agenda was far from being achieved worldwide, since, according to UNESCO [3], it was expected that by 2030 one in six citizens between 6 and 17 years old would still be out of school. This situation was worsened by the worldwide dissemination of the COVID-19 virus, which led to the physical closure of schools all over the world (from preschool to higher education) as a

way to mitigate the spread of the COVID-19 pandemic, thus placing SDG4 of the 2030 Agenda further from being achieved. As the COVID-19 pandemic forced schools into lockdown, affecting the majority of children in schooling [4], education was one of the many aspects of social [5] life which had to adapt swiftly to dire and unexpected conditions [6–8]. In the specific case of Portugal, the physical closure of all schools was determined on 13 March 2020, and implemented on 16 March 2020, which led to the rapid transition from education designed entirely for face-to-face delivery to digitally mediated education, in order for Portuguese children and youth to be able to continue their education and training processes, even if confined to their homes [9].

This vast experiment of transition to digitally mediated education is now known as emergency remote teaching and learning [10,11]. We have argued before that the use of the expression “distance education” to refer to these practices [9], which were implemented under very limited conditions, can lead to further stigmatization of quality distance education, which requires appropriate planning, teacher training, curriculum adaptation, among other conditions that were impossible to meet in the situation educational systems met when faced with the lockdowns [9,12]. Instead, in a situation where the priority was simply to maintain some form of continuity of education [13], despite all the challenges and limited resources, governments, schools, and teachers rose to the occasion, quickly implementing ERTL.

A vast number of studies around the globe have considered the emerging educational challenges posed by the COVID-19 pandemic. Even considering the Portuguese reality, several studies have already been produced [9,14–20]. However, those studies have focused mainly on the perspective of teachers and schools, which, albeit fundamental, leaves out the fundamental role played by the other denominator in this complex equation: students and parents’ perspectives. We also consider a contextualized analysis to be valuable, given the fact that not only the pandemic affected different parts of the world at different times and intensities, but also that national and local educational responses to schools’ closings were not universal.

This is also an underexplored point of view in international studies [21–24]. Additionally, there is a lack of research concerning online learning in the early years [25–27]. In the present study, we intend to address some of these limitations by presenting the perspectives of Portuguese parents of children between the ages of 3 and 17 about emergency remote teaching and learning that took place in an initial stage of the response to schools’ closings.

In the face of this situation, our study intended to answer the following question: what are the perspectives of parents of children involved in ERTL during the COVID-19 pandemic regarding this experience? We intended to describe parents’ perspectives of ERTL, including a broad age range of the children in question. In particular, we were interested in understanding parents’ levels of satisfaction with the process of ERTL and in characterizing the types of teaching practices that were taking place with their children during the period in question—an early stage of the implementation of ERTL. We also gathered data concerning parents’ demographic characteristics, work situation, and self-perceived levels of competence, since even at such an early time into this unprecedented educational experience, we understood those aspects might make a difference in how parents perceived and faced this challenge. We believe having a more detailed knowledge of how this process took place and how it was perceived by parents may be useful, not only in understanding the current situation and the challenges the “new normal” still poses to education, but also to better prepare for future periods of school lockdown due to this pandemic, or any other emergency, and how better to support parents through them.

To contextualize our study, we will present a brief analysis of the concept of emergency remote learning and how it has been implemented in Portugal during the COVID-19 pandemic, present a brief literature review of studies focusing on parents’ perspectives concerning emergency remote teaching and learning, and analyze works

focusing on younger children in ERTL, as they present challenges to implementing this methodology, which are particularly demanding to parents.

### *1.1. Emergency Remote Teaching and Learning*

ERTL is fundamentally different from online learning [11], since it is an impromptu response to extraordinary circumstances, rather than a planned decision, taking advantage of all the features online learning has to offer. The choice to avoid applying the expression “online learning” to this experience is also one with political implications, as a tendency to assess these experimental and unprepared approaches as such may cast a detrimental light on online learning practices. Effective online learning requires several complicated and balanced decisions about several aspects, including modality, pacing, student-instructor ratio, pedagogy, the role of online assessment, instructor role online, student role online, online communication synchrony, and source of feedback—all of which require planning. Unlike online learning, ERTL emerged as a hasty and necessary response to a crisis, shifting activities and curricula planned for face-to-face education to distance environments, without the necessary planning or conditions, including infrastructure or teacher training [9].

The Portuguese educational system responded to COVID-19 in a way that is fundamentally similar to other European countries. As a result of the rising concern amongst families and public opinion, the Government decreed the closing down of all educational institutions starting on 16 March 2020. Following that swift decision, several exceptional family support measures were immediately put in place. This support was due in cases of assistance to children or other dependents under 12 years old, or, in the case of assistance to children or dependents with disabilities or chronic illness, without age limit. It should be noted that this support reached as many as 201,000 families in 2020 [28].

At the same time, educational institutions had to undergo a dramatic shift and implement ERTL. From one moment to the next, parents and teachers were confronted with a totally new scenario. Just a few months earlier, many were discussing banning the use of mobile devices in classrooms. Now, they had rapidly moved to ask for more digital devices and broadband Internet connections for their children. In fact, the educational communities were confronted for the first time with the implications of digital exclusion in the networked society.

The literature identifies four phases in the educational response to COVID-19 [29,30]. The first phase can be described as a rapid transition to remote teaching and learning. In Portugal, educational institutions were given only four weeks to ensure that all regular teaching activities planned for being delivered in person would be transferred to an online learning environment.

Aware of the level of unpreparedness of the institutions for this rapid transition and upon the pressure of School Boards, the Ministry of Education created the website “Support for Schools”, providing valuable information and documents, teaching materials, and learning resources to all stakeholders. In addition, the document “Guiding Principles for the Implementation of Distance Education at Schools” [31] was issued. Based on the suggestions and recommendations presented in the official guidelines, schools were asked to design Distance Teaching Plans, implementing the principles according to their learning contexts. As a result, many communities of teachers at the school level emerged, playing a significant role in organizing the process [9].

These efforts, however, could hardly meet the complexity and scope of the transition process. Firstly, institutions and families were confronted with a shortage of digital devices and insufficient access to broadband Internet connection [32]. According to a study conducted by the education’s national council, almost every school manager (92%) agreed with this claim. Most of them (80%) concluded that this factor affected the quality of the work done [19]. Nevertheless, although transversal, this element did not affect the institutions equally, depending on each geographic, social, and economic context. Local

institutions and organizations across the country helped alleviate this situation providing students in need with resources—such as computers and Internet hotspots—which allowed them to participate in ERTL [9].

Secondly, it became clear how the low level of digital competences both of teachers and educators and of students and their parents affected the quality and efficiency of education. For about 41% of school managers and 47% of teachers, emergency remote teaching has been affected by the inadequacy of teachers' digital competences. Likewise, the majority of school managers (79%) and teachers (80%) indicate that remote emergency education was affected by the lack of adequate training of students and families in the use of digital resources [18].

This explains the predominance of synchronous video communication in ERTL [29,30,33], a phenomenon identified globally and referred to as “zoomism” [15]. For most Portuguese teachers, the synchronous sessions were an effective way to deliver content without having the time, the means, or the knowledge to apply a more elaborate learning design. In fact, few teachers used these sessions to promote discussion, interaction, and socialization [18].

The literature describes a second phase in the implementation of ERTL, under the title “(re)adding the basics” [29,30]. This relates to a more mature moment in the process when concerns with quality, such as course design, equity and accessibility, or academic integrity (re)emerge into the ERTL practices already in place [29,30]. In the Portuguese case, this latter phase coincided with several actions taken both at the official level by the Ministry of Education in alliance with other public institutions, and at the unofficial level by the educational communities, professional associations and other non-governmental organizations acting independently. Worth mentioning the joint initiative of the Government and the Universidade Aberta (Open University, Aberta, Portugal) which delivered a massive open-access course (MOOC) to 2300 teachers from the basic and secondary education on distance education [9]. Similarly, the Government together with the public television network provided educational content through television, an initiative dubbed “Study at Home”. This was intended to reach the most isolated student populations which were experiencing difficulties in accessing a computer and broadband Internet.

Even though the reaction to the pandemic was swift [34], the otherwise very centralized educational system responded by adopting decentralized policies that relied on schools' capacity for decision and self-organization and were meant to promote contextual adaptation. Still, this attitude may have led to a lack of coordination and inequality, even if some schools rose to the challenge with creativity and innovation [9]. However, the general feedback about the experience was positive, and stakeholders highlighted how ERTL has reinforced the importance of reflective teacher practice, how it has led to renewed attention to assessment models and practices, and how it has contributed to bringing the relationship between educational institutions, families, and communities closer.

Two subsequent phases of ERTL have been described, namely phase 3—Extended transition during continued turmoil and phase 4—Emerging “new normal” [29,30]. During these phases, activities become increasingly more planned and supported by teacher training and even infrastructure, as more time goes by, enabling schools to not only react to a crisis but respond on the basis of (some level of) acquired experience, training, and reflection. However, at the moment of data gathering, Portugal had not yet reached these levels of consolidated response.

Although ERTL has been described early into the onset of this phenomenon, we believe our paper may add to its discussion by including the perspectives of parents, who, as we will later see are underrepresented in studies of this period, and also because each country has developed different responses, has different populations, educational levels and even levels of access to equipment, and therefore, contextualized studies portraying the reality in different contexts, worldwide, are a valuable contribution to the study of this

educational experience. Previous studies of ERTL in the Portuguese context, to our knowledge, have not taken parents' perspectives into consideration.

### *1.2. Parents and Emergency Remote Teaching and Learning*

Davis and colleagues [35] referred to parents during the COVID-19 pandemic as proxy educators. These proxy educators were placed under tremendous strain, as they had to accumulate their previous responsibilities with teaching and caring for the children's individual needs. This was a USA-based study.

A qualitative study of parents of children previously on face-to-face education carried out one month after schools' closing [23] found that parents agreed with school closures and were satisfied with the support they were given. However, they struggled with balancing responsibilities, keeping their children motivated to learn, learning outcomes, and accessibility. Balance referred to balancing work and parenting demands, but also the demands of different children, personal needs, and feeling overwhelmed. The concerns related to learner motivation were often, but not always specific to the online context in which they occurred. Concerns with access were linked to children with special needs, parents' lack of content specific as well as pedagogical knowledge, technological barriers and need for more communication with teachers as well as resource organization. Lastly, parents' concerns with learning outcomes included academic achievement, socio-emotional development, and concerns with the quality of the curriculum.

Parents were concerned with their children's learning [22,36] and distrustful of the educational institutions' capacity to address the situation with competence [36]. The perceived support and abilities of teachers were acknowledged, through a longitudinal study, to be the main predictors of parents' school satisfaction during the lockdown period [24].

A study of parents' attitudes carried out in Kazakhstan [37] found older parents, parents with a higher educational level, and parents who assessed their children's teachers' competence level more favorably were more satisfied with online learning. In contrast, those with a larger family were less satisfied. The readiness of switching to online learning activities was also associated with greater satisfaction.

A Dutch preliminary study [38] found that despite unanimous concern with children's schoolwork, there were critical social differences in how parents coped with this new "homeschooling" task. Children from advantaged backgrounds receive more significant support and have access to more resources. Parents with higher education feel better equipped to support their children. There were also differences in perceived school support between parents of children in academic track vs. pre-vocational secondary education.

Through a literature review, Lateef and collaborators [39] were able to identify four recurring themes. Namely, (i) the reciprocal influence of each family member's emotions, (ii) the higher level of psychosocial stress during lockdown experienced by parents in comparison with adults without children, (iii) the need to provide parents with formal and informal support, and (iv) the need for further research on the psychosocial consequences of pandemics on children.

Parents' stress levels during lockdown increased [22,35,40,41], and their increase continued throughout the day and during weekdays, once again relating to the need to juggle child-care and work demands [42]. Mothers, younger parents, parents of children in emotional distress, among others, were found to be particularly at risk [41].

Nevertheless, the quality of the parent-child relationship was considered to have increased, particularly for girls' parents [22]. However, parental stress during COVID-19 was found in another study to increase the risk of reduced parent-child relationship closeness [43], which may, in extreme cases, lead to child maltreatment [44].

Charland and colleagues [45] considered curricular impacts of this situation, including how parents were involved. They recognized parents and families are often forgotten in curricular analyses and therefore saw the ERTL as an opportunity to rethink

their roles in curriculum conceptualization. Parents were expected to take on a role as co-educators without any preparation, and often while maintaining their professional duties. Their educational level and need to continue working were considered crucial to understanding their perspectives on this matter. Lastly, the authors highlight the schools' roles in supporting and training parents, recognizing their unique needs and possibilities, and establishing effective school-parent partnerships. In the same line of thought, Iyengar [46] proposes COVID-19 to be an opportunity to rethink the role of the community in education, including parental involvement, thus contributing to enriching the curriculum.

In summary, the studies of parents' perspectives on ERTL thus far have shown this to be a relevant matter, with implications concerning education, mental health, and family. They have also revealed that parents are concerned with this situation and that their perception is influenced by educational variables, such as the type of support given during lockdown, but also by personal characteristics of the parents and children themselves. Concerns about equity are also raised in this context. As no data were found regarding the perspectives of Portuguese parents, our research may contribute to increasing the knowledge of this process in this national context, as well as establishing dialogues with previous research, as we propose in the discussion section.

### *1.3. Emergency Teaching and Learning and Younger Children*

Before the COVID-19 pandemic forced the majority of the world's children to leave brick-and-mortar schools, there were already decades of research and experimenting with distance learning with k-12 children, focusing on effectiveness, student readiness, and description of concrete experiences. Students' motivation, readiness, access, accreditation, and retention were acknowledged as challenges while expanding access and providing opportunities for high-quality education were portrayed as potentials of this modality. However, research on k-12 distance education was still limited [47]. We will now focus on summarizing some previous studies concerning parents' perspectives about the ERTL experience with younger children.

Analyzing Chinese parents' beliefs and attitudes towards online learning, specifically parents of children in early childhood education during the COVID-19 pandemic, ranging between the ages of three and five years, revealed their children were predominantly engaged in online education for short periods—mostly under 30 min, with frequencies ranging from once a week to multiple times a day. These parents were critical of online learning's quality and effectiveness. Difficulties such as lack of contact with peers, lack of self-regulation, lack of a learning atmosphere, and inability to focus were mentioned. This led them to express concerns about the negative consequences online education could have on their children's development. Another critical aspect they uncovered was the high demands this experience placed on the parents themselves, namely in terms of time and of professional knowledge [27].

Similarly, Mangiavacci and collaborators [22] posited the impact of confinement on children disproportionately affected not only those from lower-income and lower educational status but also younger children. Parents' concern about their children's educational attainment differed significantly according to the child's school level and whether the school provided online activities.

Spiteri [25] adds to these concerns by arguing studying at home affects younger children more than their older peers and may have more detrimental consequences for this age group, particularly as early childhood education, which is fundamental for the achievement of the United Nations 2030 goals of sustainable development [48], relies extensively on hands-on activities, direct experiences, and face-to-face interaction and care.

Yi, Lau, and Lee [49] carried out a study with parents of kindergarten and primary school students three weeks after lockdown. They found most children were unable to independently respond to the activities schools asked of them, and experienced difficulties with motivation and related to the home environment. Online learning

activities were appreciated by parents, who valued online interaction and support, as well as flexible work arrangements and government subsidies to help them address their children's needs.

Studies carried out with parents of younger children highlight particular challenges faced by this demographic and encourage their inclusion in our sample. We believe having encompassed a broad range of children's ages is a relevant contribution of the present study.

The studies analyzed in this section help in better understanding one of the critical dimensions of ERTL, as they highlight the mediating role of parents of children and adolescents during the global school closure in the first phase of lockdown. The digital divide in the access and the use of technologies and the Internet in families with lower technological, economic, and educational capital; the overburdening of families with younger children and with special educational needs during the lockdown; as well as the need for further research on the role of families as privileged partners in the educational process in schools, are dimensions of the complex, multi-faceted, and specific reality experienced by parents of younger children in this critical period.

## 2. Materials and Methods

Data were gathered between 13 April and 14 May 2020, approximately one to two months after the schools' closing, through an online questionnaire including closed and open questions. The questions analyzed in the present article are replicated in Appendix A. In the present article, we focus exclusively on the closed questions, which were subject to statistical analysis using SPSS 37. Due to the novelty of the situation, and lack of previous studies at the time of data gathering, the authors opted for an exploratory study, aiming to describe the situation as it was unfolding, rather than testing previous hypotheses.

The respondents were 203 parents or caregivers of children enrolled in preschool, basic, or secondary education (ages 3 through 18) in Portuguese schools. The sample was derived by convenience, by disseminating the questionnaire online on Facebook groups related to parenting and education. The resulting sample includes parents from all the countries' regions, including the archipelagos. However, it seems to include a disproportionate number of mothers and older parents with post-secondary education, which needs to be considered when analyzing data. The characteristics of participants and their children's schools are described in Tables 1 and 2.

**Table 1.** Respondent's descriptive statistics.

		Frequency	Percentage
Gender	Male	27	13.3%
	Female	174	85.7%
	Rather not answer	2	1%
Age	Under 25	14	6.9%
	26 to 35 years old	20	9.9%
	36 to 45 years old	121	59.6%
	46 to 55 years old	42	20.7%
	56 years and older	5	2.5%
Educational level	Secondary or lower	33	16.3%
	Post-secondary	117	57.6%
	Post-graduate	52	25.6%
Work situation	Not working	61	30%
	Working from home	119	58.6%
	Working outside the home	22	10.8%
Another caregiver in the same household	Yes	170	83.7%
	No	33	16.3%

**Table 2.** Schools' and children's descriptive statistics.

		Frequency	Percentage
Type of school	Public	159	78.3%
	Private	36	17.7%
	Both *	8	3.9%
School context	Urban	113	55.7%
	Demi-Urban	50	24.3%
	Rural	40	19.7%
Children in preschool	Yes	71	35%
	No	132	65%
Children in the 1st CBE	Yes	85	41.9%
	No	118	58.1%
Children in the 2nd CBE	Yes	40	19.7%
	No	163	80.3%
Children in the 3rd CBE	Yes	64	31.5%
	No	139	68.5%
Children in secondary school	Yes	42	20.7%
	No	161	79.3%
Total number of children	1	92	45.3%
	2	88	43.3%
	3	15	7.4%
	4 or more	6	3%

\* Selecting the option “both” implies the respondent has one or more children in public school and one or more children in private school, and therefore checked both private and public as type of school. <sup>1</sup> Preschool includes children aged 3–5; 1st Cycle of Basic Education (CBE) 6–10; 2nd CBE 10–12; 3rd CBE 13–15; secondary 16–18.

The questionnaire gathered socio-demographic and education-related indicators, access to the Internet and a personal computer, self-assessed digital competence, satisfaction with educational activities during the lockdown, work methods implemented by the teachers, and pedagogical changes after moving online.

Self-assessed level of competence was assessed by two items on a 4-point scale ranging from no knowledge or experience and high level of knowledge or experience, pertaining to both distance education and the use of information and communication technology (ICT) for education.

Parents' satisfaction was assessed on a five-point scale ranging from not at all to very much. Although the first version of the scale was a four-point scale, like the one used for self-assessment of digital competence, during the instruments' validation, some respondents expressed the need for an intermediate level. A five-point scale was adopted in response to the respondents' expressed need. Items concerned how the parents valued the transition process on the following dimensions: efficiency, simplicity, equitability/fairness, organization, and increase of workload for the parent (negative parameter). The first four dimensions were considered a satisfaction scale, ranging from 4 to 20, and with a Cronbach's Alfa of 0.737. This scale was computed by adding the results of the four positive satisfaction parameters (efficiency, simplicity, equitability/fairness, and organization).

A variety of pedagogical strategies, both synchronous and asynchronous, were assessed on how frequently they were implemented. Answers ranged from never to daily or more than once a day on a 4-point scale.

Finally, parents were asked whether there had been pedagogical changes subsequently to moving education online (dichotomic answer).

The study follows international guidelines for ethics in educational research [50], including voluntary participation, anonymity, and informed consent. Research procedures and instruments were approved by the ethics committee of the Laboratory for



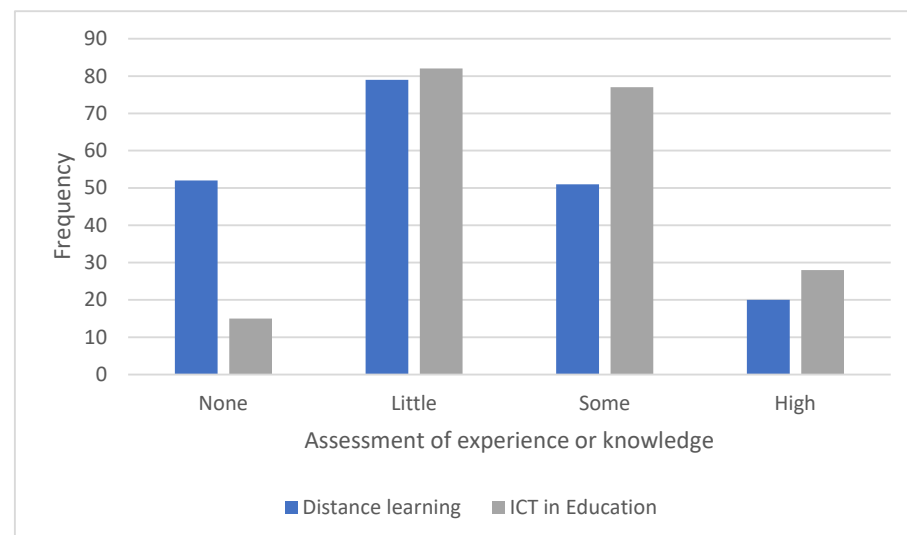
Distance Education and E-Learning (LE@D) of the Open University, Portugal, in April 2020.

### 3. Results

The vast majority of respondents had access to the Internet at home (99.5%). However, a non-negligible percentage (26, 12.8%) only had access to mobile Internet, which is usually limited and can be an impediment to accessing online educational activities, particularly those relying on video.

Concerning access to one device (computer, tablet, or smartphone) per person in the household in education or working, an even more concerning minority of respondents must share a device with another person in the household (37, 18.2%). Only four respondents did not have at least one computer at home, which limits the types of activities the students can perform.

Parents self-assessed their levels of competence more positively concerning the use of information and communication technology for education than concerning distance education, as shown in Figure 1.



**Figure 1.** Self-assessment of competence in distance education and information and communication technology (ICT) for education.

These self-assessed levels of competence correlated with each other ( $r = 0.696$ ,  $p < 0.01$ ) and with the respondent's level of training (distance learning  $0.292$   $p < 0.01$  and information and communication technology for education  $0.320$   $p < 0.01$ ) but did not correlate with any other descriptive variable. Kruskal-Wallis test confirmed significant differences between groups, with significance in the 0.000 range.

Parents' levels of satisfaction with the process ranged from a minimum of 4 points and a maximum of 18 points on a four to 20-point scale ( $M = 11.3$ ,  $SD = 2.98$ ). Given that the scales' mid-point is 8, the results show moderately positive levels of satisfaction, despite considerable dispersion.

The satisfaction scale showed a significant negative correlation with the number of children in the second cycle of basic education (ages 10–12) ( $r = -0.196$ ,  $p < 0.01$ ), and parents' age ( $r = -0.183$ ,  $p < 0.05$ ). There were also significant differences in satisfaction according to the type of school frequented by the children, in favor of private schools (Kruskal-Wallis test shows  $p < 0.05$ ).

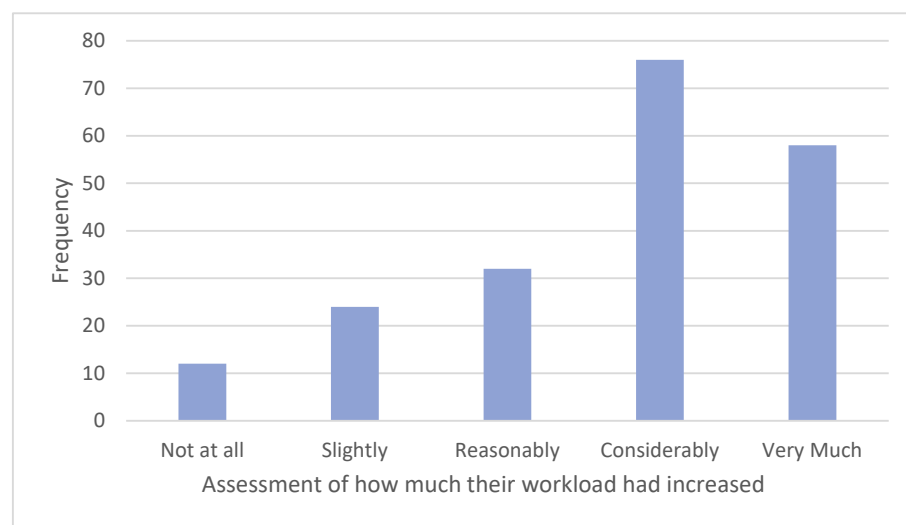
Looking into specific individual aspects within satisfaction, older parents ( $r = -0.257$ ,  $p < 0.01$ ), parents with more children in the third cycle of basic education ( $r = -0.157$ ,  $p < 0.05$ ), and secondary education ( $r = -0.166$ ,  $p < 0.05$ ) tend to find the process was less well-

coordinated, whereas parents of children in the first cycle of basic education ( $r = 0.200$ ,  $p < 0.01$ ) find it better coordinated.

Parents who self-assess their information and communication technology competences for education better also tend to find the process slightly simpler ( $r = 0.174$ ,  $p < 0.05$ ). On the contrary, parents with more children under their care ( $r = -0.157$ ,  $p < 0.05$ ) and especially those with children in the second cycle of basic education ( $r = -0.300$ ,  $p < 0.01$ ) found the process less simple.

Interestingly, parents who were not working considered the process more equitable (Kruskal-Wallis test revealed  $p < 0.05$ ).

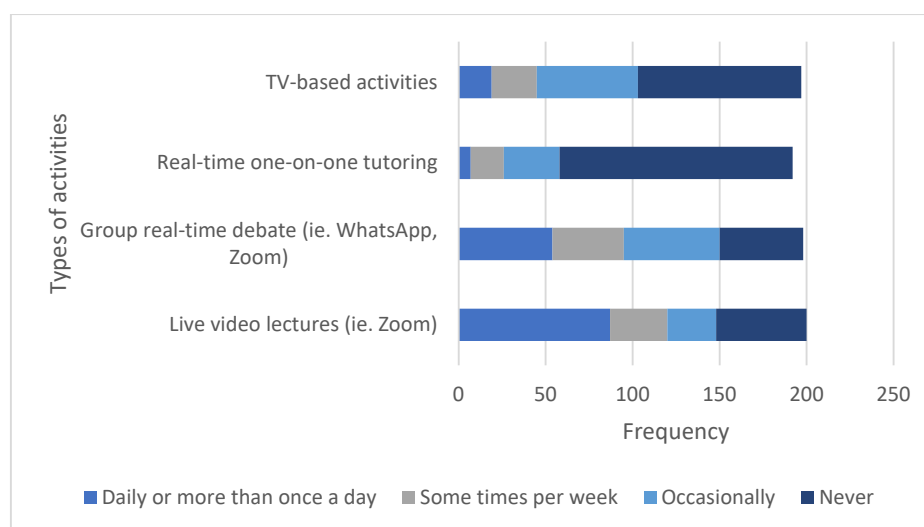
Most parents considered this experience to provoke an increase in their workload, as depicted in Figure 2. Nevertheless, this increase was different according to the parents' work situation, with parents who were working from home during this period considering this increase had been greater (Kruskal-Wallis showed  $p < 0.01$ ).



**Figure 2.** Degree to which the transition to schooling from home increased the parents' workload.

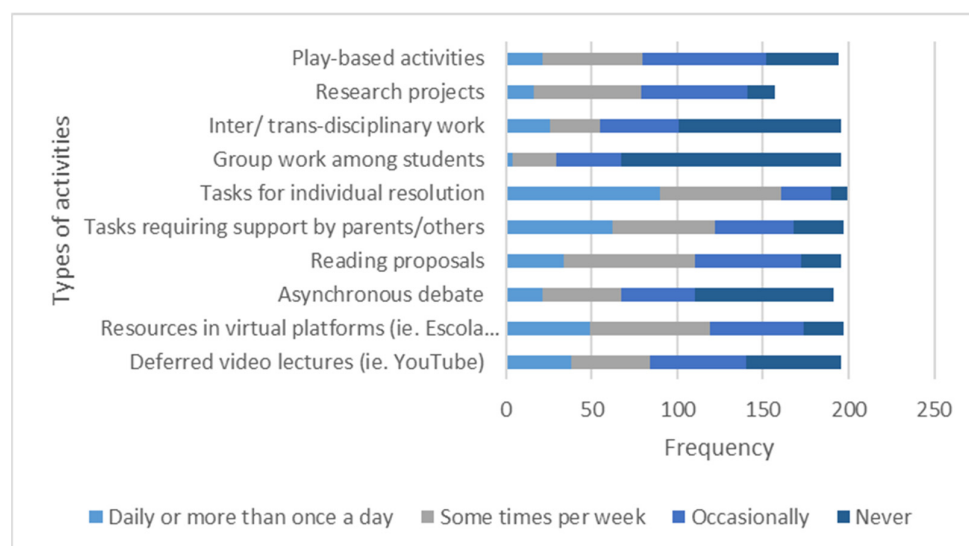
Parents with a higher degree of training ( $r = 0.188$ ,  $p < 0.01$ -Kruskal Wallis confirms differences among groups, with parents with post-secondary but undergraduate education revealing a steeper increase ( $p < 0.05$ )), more children in their care ( $r = 0.273$ ,  $p < 0.01$ ), more children in preschool ( $r = 0.168$ ,  $p < 0.05$ ), more children in the first cycle of basic education ( $r = 0.286$ ,  $p < 0.01$ ), and more children in the second cycle of basic education ( $r = 0.144$ ,  $p < 0.05$ ), expressed having felt a greater increase to their workload.

Concerning the types of synchronous activities more frequently used, live video lectures were the most frequently mentioned, followed by group real-time debate. Real-time one-on-one tutoring was the least used synchronous strategy (Figure 3).



**Figure 3.** Synchronous teaching methods frequency of use.

The tasks for students' individual resolution, tasks requiring parental support, reading proposals, differed video lectures, and use of resources in virtual platforms, such as those provided by some schoolbooks' editorial labels, were the most frequently used. On the contrary, group-work among students and inter or trans-disciplinary work were the most seldom used (Figure 4).



**Figure 4.** Asynchronous teaching methods frequency of use.

Correlational analysis, as presented in Table 3, show significant correlations between the number of children in each of the levels of education and the types of pedagogical activities used by teachers.

**Table 3.** Correlations between the children’s levels of education and pedagogical activities.

	Children in Preschool	1st CBE	2nd CBE	3rd CBE	Secondary
Live video lectures	−0.250 **	0.196 *		0.152 *	
Group real-time debate	−0.162 *			0.154 *	
Deferred video lectures	−0.121 *			0.140 *	
Resources in virtual platform	−0.254 **			0.243 **	
Asynchronous debate	−0.237 **			0.169 *	0.200 **
Tasks requiring parental support	0.205 **	0.235 **			−0.323 **
Group-work		−0.235 **		0.297 **	0.187 **
Research projects		−0.230 **		0.147 *	
Play-based activities	0.278 **		−0.156 *	−0.212 **	

<sup>1</sup> Preschool includes children aged 3–5; 1st Cycle of Basic Education (CBE) 6–10; 2nd CBE 10–12; 3rd CBE 13–15; secondary 16–18. \*  $p < 0.05$ ; \*\*  $p < 0.01$ .

Finally, parents were asked if subsequently to moving pedagogical activities online there had been changes to teaching or evaluation practices. A slight majority considered there had been no changes (52.2%).

#### 4. Discussion

Access to distance education has been a concern historically associated with pre-secondary education mediated by technology [47] and one of the concerns expressed by parents with ERTL in the context of COVID-19 [23]. In our sample of parents, access to the Internet was almost universal but sometimes restricted by internet providers, which poses access concerns for part of the students involved. An expressive minority did not have one device (computer or mobile device) for each person in education or working from home within the household. This can pose added difficulty in managing limited resources and raise issues of equity, which have been acknowledged as a primary concern in the context of ERTL [10,32,51]. Our sample, as we have acknowledged in the methodology section, may be favorably skewed as data were gathered through an online questionnaire, and demographic data indicate relatively older and well-educated participants. This leads us to question whether a representative sample might reveal even more relevant issues with access to ERTL.

Parents’ self-assessed competence with distance learning reveal this was a relatively novel experience for most. They self-assessed more positively concerning their knowledge or experience with technology for education. Self-assessed competence with the use of technology also correlated with how simple they considered the transition to ERTL to have been. Parents’ level of education had been shown in other studies [38,45] to impact how well-prepared to support their children in learning activities they may feel, once again raising the matter of equity to awareness. This may also point to the need to invest not only in children’s and teachers’ digital competences [33,52] but also those of parents, who, as proxy educators [35], had to take on a fundamental role in ERTL.

This is also clearly the case of the parents in our sample, who acknowledge a significant increase in workload, as reflected in other studies [21,23,39], which may result in adverse psychosocial consequences, including parental stress [35,40,41]. Interestingly, parents with a higher degree of training reported a more significant increase in workload, which may reveal a greater involvement in supporting their children through the process [38].

Parents with more children in their care and parents of younger children (preschool, first cycle of basic education, and second cycle of basic education—3 to 12 years old) also felt a greater increase in their workload. This may be the case because of younger children’s lesser autonomy [49] and due to the characteristics of childhood education [22,25,27], which require a high level of support from parents. This idea is reinforced when

we analyze the types of activities more frequently promoted with each level of education—as is understandable, activities that require parental support are more frequent for children in preschool and the first cycle of basic education. Therefore, not only do younger children seem to be disproportionately affected by ERTL [25], but their parents also seem to require more intense support. Similarly, parents who were working from home experienced a differentially high level of increase in their workloads. The policies implemented at the time did not allow parents who were in a home-office situation to apply for the state support to care for children, even if only one of the parents was in that situation, and regardless of the nature or flexibility of the work carried out or of the children's ages. Later in the pandemic response, this would be changed, as working parents expressed their inability to respond to all that was asked of them without support. Our findings recommend that, in future lockdowns, parents who are working from home, particularly those with children under 12 years of age, be given the possibility of benefiting from the family support measures. This is a crucial indication for schools and policymakers and validates the support policies later implemented in Portugal [28].

As had been the case with the study of Garbe and collaborators [23], parents in our study were relatively satisfied with the process. Parents with more children in the second cycle of basic education (ages 10–12) showed less satisfaction with the process. This is a novel result and may point to specific needs of children in that age range, which should merit further investigation. Older parents were slightly less satisfied, which contrasts with what was found in another study [37]. Parents of children in private schools were also more satisfied, which may reflect differences in support [38], as well as issues concerning equity. This too is an area that merits further research.

Parents with more children under their care found the process less simple, as was the case with another study [37]. Once again, parents of children in the second cycle of basic education considered the process particularly complex.

Parents who were not working during this period seem to have been less aware of problems concerning equitability in ERTL, which is also a novel finding.

The analysis of the types of activities which were promoted during the lockdown reflects a wide variety of practices expressing the freedom enabled by the deconcentrated approach based on each school developing their own distance learning plan [31] and contradicting Barbour and collaborators' description of the first phase of ERTL as having a strong reliance on synchronous communication, simply transposing classes to an online platform [29]. Nevertheless, and while asynchronous activities were also prevalent, there seems to be a predominance of "traditional" activities, such as individual work assignments or reading proposals. The diversity of activities also seems to reflect the educational levels being taught.

The lack of changes to pedagogical practices since the implementation of ERTL reported by a significant number of parents helps to situate the data gathering in the transition between the first and second phases of ERTL as described by Barbour and collaborators [29], as it seems the types of activities and processes underway had remained unaltered since the beginning or the ERTL experience. This is in contrast with teachers' perspectives on this matter [9].

## 5. Conclusions

During the 2020 lockdown, parents with school-age children were active ERTL mediators, as they added to their everyday family routines the role of proxy teachers-educators [10,11,35]. Even though the role of parents in the schooling process of children and youth was previously recognized by the educational communities, the value of this partnership was often downplayed in practice contexts. Experiences with ERTL in preschool, basic, and secondary education transformed this state of things and brought this issue into the public space, the educational communities, as well as in the research agendas. Considering a new reality, it was important to know the parents' perceptions about this teaching and learning emergency solution in Portugal.

The empirical study presented here was based on a sample consisting mainly of women between 36 to 45 years old and with a post-secondary educational level. Since it is not a representative sample, the conclusions to be drawn from this research not only cannot be generalized but must also consider the specificity of this group of respondents [38,45].

In line with other studies, this study highlighted how parents with children between 3 and 12 years of age and with children with SEN managed their professional activities and their roles as family caregivers and as proxy educators in the same space-time [35]. Therefore, they lived a greater physical and emotional workload during this period. Our data also reveal that being responsible for more children seems to be associated with a less positive perception of this process [37], and working from home is associated with a higher perception of an increase in their workload.

The uniqueness of parenthood in families with younger children and in a context of crisis seems to highlight the need for differentiated educational and social responses appropriate to the greater physical and emotional investment of parents with children. On the other hand, it gave a voice to parents, particularly mothers, allowing a better understanding of the value of the partnership between parents and teachers in ERTL, with important lessons for the future. Finally, and as this is an exploratory study, there is a need to further explore this issue with larger and more diverse samples so that we can identify more sustained trajectories for the achievement of the SDG-4 goal [2].

## 6. Limitations and Suggestions for Future Research

One of the most important limitations of our study relates to the fact that the sample is relatively small and is overly representative of older and more educated parents. This may be a reflection of the fact that we used an online questionnaire, which at the time was the only way to reach parents since schools were closed. Parents with more difficult access to technology or less familiar with its use may have been less likely to answer the questionnaire. We believe future studies might better represent the perspectives of all parents, now that schools have reopened and therefore data gathering through written forms is again possible, by trying to be more inclusive and therefore representative.

Another limitation derives from the choice not to ask for separate answers in relation to each child in education when the respondents were parents to more than one child. This was a difficult and pondered decision we arrived at because we considered subdividing the questionnaire would make it too lengthy, which might deter parents of multiple children from answering the questionnaire in full, particularly during a time when they were already so overburdened. We risked losing some precision in favor of greater inclusivity and a sample that may resemble the population more closely. As an exploratory study, we believe this was a wiser decision, and consider that the present study now leaves open a possibility of further exploration by more focused studies. Studies directed to families with multiple children, parents who worked from home during the schools' lockdown, parents of children in different school settings, or children with special needs are still needed to help us understand ERTL and better plan for future school closings.

Our questionnaire highlighted the importance of parents throughout this process, as well as a subjective perception of increased workload. Future studies may move forward by gathering more in-depth information about the roles that parents assumed as proxy educators. How much time did they invest in this role? What kinds of support were they called to provide?

The fact that parents with children in the second cycle of basic education (10–12 years of age, in average) seem to be less satisfied should also be researched and eventually verified by other studies. A deeper analysis of the situation of those parents could reveal the reasons behind this lower satisfaction and eventually point to ameliorating actions.

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**Institutional Review Board Statement:** The study was conducted in accordance with the Declaration of Helsinki, and approved by the Ethics Committee of the LE@D, Universidade Aberta, Portugal, April 2020.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** The data are not publicly available due to the confidential information 787 involved, as per the confidentiality agreement established with the participants.

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## Appendix A

Supplementary Material—Excerpt from the questionnaire applied to parents (questions analyzed in the present article)

Characterization:

Your child's school is (check all that apply)

☐ Public

☐ Private

In what context do you reside (check only one box)

☐ Urban

☐ Demi-urban

☐ Rural

In what region of the country do you reside (check only one box)

☐ Autonomous region of the Azores

☐ Autonomous region of Madeira

☐ District of Oporto, Braga or Viana do Castelo

☐ District of Aveiro, Coimbra or Leiria

☐ District of Lisbon, Santarém or Setúbal

☐ District of Évora, Beja or Faro

☐ District of Bragança or Vila Real

☐ District of Viseu, Guarda, Castelo Branco or Portalegre

How many children are under your care, in each of the following levels of education and teaching? (Mark only one box per line.)

	1	2	3	4 or More
Preschool education				
1st Cycle of Basic Education (1st to 4th grades)				
2nd Cycle of Basic Education (5th and 6th grades)				
3rd Cycle of Basic Education (7th to 9th grades)				
Secondary education				

Sex (Check only one box)

☐ Male

☐ Female

☐ Rather not answer

Age (Check only one box)

\_\_ 25 and under

\_\_ 26 to 35

\_\_ 36 to 45

\_\_ 46 to 55

\_\_ 56 or more years

Higher degree of education completed (Check only one box)

\_\_ 1st Cycle of basic education (4th grade)

\_\_ 2nd Cycle of basic education (6th grade)

\_\_ 3rd Cycle of basic education (9th grade)

\_\_ Secondary education (12th grade)

\_\_ Post-secondary education (Non-higher education technological specialization degree)

\_\_ Professional technical higher education

\_\_ Bachelor's degree

\_\_ License degree (Undergraduate degree)

\_\_ Master's degree

\_\_ Doctoral degree

In what situation are you currently? (Check all that apply)

\_\_ At home, supporting my children

\_\_ At home, working from home

\_\_ working outside the home

\_\_ Other

Do you have access, in your home, to (Check all that apply)

\_\_ home broadband Internet

\_\_ mobile broadband Internet

\_\_ I do not have Internet access at home

Do you have access, in your home, to (Check all that apply)

\_\_ Computer

\_\_ Mobile device(s) (tablet or smartphone)

\_\_ Printer

\_\_ Scanner

\_\_ Other \_\_\_\_\_

At your home, is there one device with Internet access (computer, tablet, or mobile phone) per person in education and/or working from home? (check only one box)

\_\_ Yes

\_\_ No

Considering the moment when the transition to exclusively distance-based teaching processes: (Check only one box per line)

	1. No Knowledge or Experience	2. Little Knowledge or Experience	3. Some Knowledge or Experience	4. Much Knowledge or Experience
How do you self-assess your level of knowledge or experience on distance education?				
How do you self-assess your level of knowledge or experience on the use of technology in educational settings?				

Accelerated digital transition at schools

Considering the process of transition to distance-based education you are living, do you consider it: (Check only one box per row.)



	1. Not at All	2. a Little	3. Reasonably	4. Fairly	5. Very Much
Has been efficient					
Has been simple					
Has been equitable/fair for students and children in general					
Has caused an increase in your workload					
Teaching practices are coordinated and coherent among teachers					

What work methods have been used with the children under your care? (Check only one box per row.)

	Never	On Occasion	Some Times a Week	Daily or More than Once a Day
Deferred video lectures (i.e. YouTube)				
Resources in virtual platforms (i.e. “Escola Virtual”)				
Asynchronous debate				
Reading proposals				
Tasks requiring support by parents/others				
Tasks for individual resolution				
Group work among students				
Inter/trans-disciplinary work				
Research projects				
Play-based activities				
Live video lectures (i.e. Zoom)				
Group real-time debate (i.e. WhatsApp, Zoom)				
Real-time one-on-one tutoring				
TV-based activities				

Since the start of the distance-based activities due to school closing motivated by the COVID-19, were there changes in teaching or assessment practices? (Check only one box.)

☐ Yes

☐ No

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