Public school and COVID-19: socio-family difficulties of education in confinement

Escuela pública y COVID-19: dificultades sociofamiliares de educación en confinamiento

公立学校和新冠疫情: 隔离期间教育的社会家庭困难

Государственная школа и COVID-19: социально-семейные трудности обучения в заключении

María Jesús Fernández Sánchez
Universidad de Extremadura
mafernandezs@unex.es
https://orcid.org/0000-0003-3891-8872

Lucía Pérez Vera
Universidad de Extremadura
luciapv@unex.es
https://orcid.org/0000-0002-6802-8515

Susana Sánchez Herrera
Universidad de Extremadura
ssanchez@unex.es
https://orcid.org/0000-0001-5466-1435

Abstract

The crisis produced by the COVID-19 pandemic led to the closure of educational centers, shifting teaching from schools to homes. Distance education posed a challenge for families, which, at times, were strained, striving to meet scholastic demands. Therefore, the main objective of this study is to explore the specific factors that made it difficult for the families of Primary Education students to adapt to remote learning.

In order to meet said objective, statistical analyses were carried out of the responses to a questionnaire by 236 relatives of public-school students in our country, created and validated, ad hoc, as a quantitative data collection system. A qualitative analysis of more than 600 comments provided by the 236 relatives to an open-ended question was also conducted.

The results indicate that almost half of the families experienced difficulties adapting to remote teaching, with a lack of resources, knowledge, and organizational problems generating negative feelings. These struggles were even more acute in the homes of students with relative unemployed during the lockdown.

Finally, a need was detected to undertake actions that bolster communications between schools and families, and that close the digital divide due to socio-family conditions.

Keywords: public education, virtual education, family, homework, COVID-19.

Resumen

La crisis derivada de la pandemia por COVID-19 ha provocado el cierre de los centros educativos, trasladando la enseñanza de la escuela a los hogares. La educación a distancia ha supuesto un reto para las familias que, en ocasiones, realizan un sobreesfuerzo para cumplir con las demandas escolares. Por ello, el principal objetivo de este estudio es explorar los factores concretos que dificultan la adaptación a la enseñanza no presencial de las familias del alumnado de Educación Primaria.

Con el propósito de responder al objetivo señalado, se han ejecutado análisis estadísticos a partir de las respuestas de 236 familiares de alumnos de escuelas públicas de nuestro país a un cuestionario, creado y validado *ad hoc*, como sistema cuantitativo de obtención de datos. Por otra parte, se ha llevado a cabo un análisis cualitativo de más de 600 comentarios emitidos por los 236 familiares a una pregunta de tipo abierto.

Los resultados reflejan que casi la mitad de las familias reconocen dificultades de adaptación a la enseñanza no presencial, existiendo falta de recursos, carencia de conocimientos y problemas organizativos que han generado sentimientos negativos. Estas dificultades se agravan en los hogares del alumnado con familiares desempleados durante el confinamiento.

Finalmente, se refleja la necesidad de la activación de actuaciones que fomenten la comunicación, escuela y familia, y que disminuyan la brecha digital por condiciones sociofamiliares.

Palabras clave: Educación pública, educación virtual, familia, deberes, COVID-19.

概要

为了实现这一目标，我们对国内 236 名公立学校学生家长进行了问卷调查，并对该数据进行了量化统计分析，该问卷是针对该项目特别创建并已经过验证的。另一方面，我们对236位家长关于一个开放式问题的600多条评论进行了定性分析。

结果显示，几乎一半的家庭承认难以适应非面对面教学，存在缺乏资源和知识，以及组织方面的问题，这些问题使之产生负面情绪。此外，这些困难在隔离期间有失业亲属的学生家中更为严重。

最后，研究反映了需要采取行动促进交流、学校和家庭，并减少由于社会家庭条件造成的数字鸿沟。

关键词: 公立教育，虚拟教育，家庭，作业，新冠疫情。

Аннотация

Кризис, вызванный пандемией COVID-19, привел к закрытию образовательных центров, переносу образования из школы в дом. Дистанционное образование представляет собой проблему для семей, которые иногда прилагают дополнительные усилия, чтобы соответствовать требованиям школы. Поэтому основной целью данного исследования является изучение конкретных факторов, затрудняющих адаптацию семей учащихся начальной школы к дистанционному обучению.

Для решения вышеупомянутой задачи был проведен статистический анализ на основе ответов 236 семей учащихся государственных школ нашей страны на вопросник, созданный и проверенный ad hoc, как количественная система получения данных. С другой стороны, был проведен качественный анализ более 600 комментариев 236 родственников на открытый вопрос.

Результаты показывают, что почти половина семей признают трудности в адаптации к обучению на дистанции: нехватка ресурсов, недостаток знаний и организационные проблемы, которые вызывают негативные чувства. Эти трудности усугубляются в домах студентов с безработными членами семьи во время локдауна.

Наконец, отражена необходимость активизации действий, способствующих развитию коммуникации, школы и семьи, а также сокращению цифрового разрыва, обусловленного социально-семейными условиями.

Ключевые слова: государственное образование, виртуальное образование, семья, домашнее задание, COVID-19.

Introduction

In March 2020 the Spanish education system began to grapple with a set of exceptional circumstances due to the fallout of COVID-19. The temporary suspension of face-to-face teaching made remote teaching necessary, via computer, revealing disparities in the adaptability of the country's educational centers and teachers (Moreno & Gortázar, 2020). Difficulties providing quality "virtual" teaching, together with a lack of resources in some families (Cabrera, 2020), generated uncertainty in the educational community, which made efforts, but did not know if it would be able to overcome this challenge.

Traditionally, schools have implemented technological resources, and their use has been wanting and infrequent (Chai et al., 2011). More specifically, there are three models for the didactic implementation of ICT (introduction, application and integration), and very few schools boast adequate levels of integration (De Pablos et al., 2010). Despite the numerous programs that have been implemented to promote the provisioning and didactic use of ICT in our country (e.g. Escuela 2.0), there are still barriers in this regard, such as difficulties accessing resources, and a lack of teacher training and support (Bingimlas, 2009).

Access to digital resources and teacher training in ICT

Teaching staff have always called for more access to technological resources in schools (Mosteiro et al., 2019). The presence of digital tools in classrooms forced educators to rethink how to integrate them into their teaching (Area-Moreira et al., 2016). In face-to-face teaching settings, interactive whiteboards were frequently used in classrooms, replacing analogue resources. The use of other tools was also imposed, such as electronic tablets, although there was much room for improvement in their usage (Camacho-Martí & Esteve-Mon, 2017; Shen, 2016). However, the closure of schools due to COVID-19 shifted this need for media in classrooms to the homes of students and teachers. Rogero-García (2020) points out that there is currently a lack of methodologies and platforms adapted to the situation, and even a dearth of material resources on the part of some teachers. As a result, he observes that there are Primary Education content that cannot be covered (because it is too physical), and that the proper monitoring of students has been extremely difficult.

In addition, the effectiveness of digital tools has been contingent upon the ability of teachers to integrate them into the teaching process, their digital "literacy", and their beliefs (Comi et al., 2016). Mosteiro et al. (2019) point out that few trainee teachers believe that their training in digital media is adequate. Moreover, few fully-qualified, active teachers report having participated in ICT training courses (Eurydice, 2011). It could be said that teachers who have the necessary digital media in their classrooms make limited use of them due their ignorance of the pedagogical potential of these resources (Roig-Vila et al., 2015), this explaining some weaknesses documented in actions involving the use of digital tools. Among the main limitations we can point out, firstly, is a commitment to traditional forms of teaching or hybrid models that do not allow for the exploitation of digital media's creative potential, and that do not actively engage students in the production of knowledge (Balanskat et al., 2016; Ertmer & Ottenbreit-Leftwich, 2013; Hew & Brush, 2006). According to Area-Moreira et al. (2016), there are two models for the didactic integration of ICT: one weak and the other, intense. Close to 50% of teachers implement the weak one, using ICT occasionally to explain content and propose activities related to searches for information, or writing on a computer. A lack of teacher training can lead to increases in workloads due to using ICTs, for both the teacher and the students (OECD, 2016). Another limitation has to do with the assumption that students possess digital skills greater than those that they actually do. Current Primary Education students were able to use technologies even before they had literacy skills, due to informal and occasional access to ICT resources like mobile phones, from an early age (Blanco & Römer, 2011). However, this fact does not necessarily entail the development of digital competence (Johnson et al., 2014), as their knowledge evolved outside the school setting, which would have meant more formal digital literacy (Cabero & Marín, 2014). The training provided them at schools accords with the level of digital mastery they are assumed to have. It is, therefore, inadequate (Boyd, 2014; Pereira et al., 2019).

Ultimately, teachers' efforts may be insufficient. Thus, actions are required that endow teachers with adequate material, in addition to sustainable policies aimed at reducing the digital divide in the homes of students, facilitating families' collaboration in their children's educations (Martín & Rogero-García, 2020).

Family involvement in the academic sphere

Parents' participation by monitoring the homework of Primary Education students takes on greater importance in lockdown situations (Feito, 2020). Some studies have shown that, traditionally, cooperation between parents and schools leads to improvements in students' academic performance, motivation, and executive functions, among other aspects (Chirkov & Ryan, 2001; Distefano et al., 2018; Liew et al., 2014). A study by Joussemet et al. (2008) found that training parents to provide academic assistance leads to the development of a motivational style based on cultivating autonomy in students, associated with enhanced academic performance and higher rates of task completion (Cooper et al., 2000). According to Filak & Sheldon (2008), when this motivational style is also adopted by teachers, their students' performance is even better, as is their sense of competence. In fact, autonomy is key during this period, given the need to adopt new models that favor remote learning (Feito, 2020).

Other works stress the difficulties involved in parents' engagement in their children's educations. A first hurdle may be related to the parents' educations, as the children of parents with little academic training will struggle more to follow remote teaching, as the help they are able to provide in the use of digital tools may be of lower quality (Hollingworth et al., 2011). A second difficulty is related to access to digital materials. According to Rogero-García (2020), parents with higher educational levels have more adequate devices at home. According to the Survey on Information and Communication Technologies and Their Use in Homes (INE, 2019), 19.1% of households do not have a computer, and about 10% do not have Internet access. Cabrera (2020) states that this telematic educational system exacerbates the inequality of opportunities, arguing that, although all students are negatively affected by the situation, those who live in disadvantaged homes, and are enrolled in public schools, are even more affected by personal and family conditions. Pérez et al. (2013) add that the deficient assistance in these types of households featuring disadvantaged situations may be due to a lack of influence, motivation or expectations on the part of the parents. Another difficulty is related to parents' struggle to reconcile and balance their jobs, family lives and children's educations (Domínguez, 2010; Pizarro-Laborda et al., 2013). In the lockdown situation, there were parents who did not have time to provide their children with scholastic assistance (Rogero-García, 2020).

In some homes difficult situations, owing to a range of different factors (health-related, financial, etc.) can be aggravated by the stress produced by academic pressure, generating emotional problems for students and their families (Wang et al., 2020). Finally, parental help with homework may be affected by the already-difficult communications between schools and families, despite the applications and resources existing at this time (Navarro et al., 2001). Shamir-Inbal and Blau (2017) observed that digital communication amongst faculty was effective and easy from the beginning, unlike the case with families, which needed more time to adapt. Blau and Hameiri (2016) explain that communication by email or social media may work better than one-way media. Therefore, it is essential to design school policies that bolster school-family communication (Valdés et al., 2009) and programs that enhance parents' digital competence (Bartau-Rojas et al., 2018).

Despite the use of applications that facilitate contact with families, and the implementation of training plans for teachers, the current situation seems to have overwhelmed both groups. In Primary Education there were complaints about the increase in homework, although we do not have precise, quantitative information in this regard. Hence,

this study aims to achieve a dual objective: first, to identify the factors that made it difficult for the families of Primary Education students to adapt to remote teaching; and, second, to explore whether the difficulties identified were a function of families' work situations during lockdown.

Methodology

Participants

236 relatives of Primary Education students at various public schools in Spain participated in the study. The distribution of the sample, based on convenience sampling, reveals a very high percentage of women (91.1%) and mothers (87.3%). We can also observe greater involvement by family members ages 36 to 45 (64.8%), followed by the 26 to 35 (22%) age group.

Instruments

For the data collection, a questionnaire was created *ad hoc*, taking into account previous studies to produce it (Marchesi & Pérez, 2005; Piñeiro & Delgado, 2017). The questionnaire is comprised of 14 questions grouped into the following 4 dimensions: identification information (6 closed-response items), the family's capacity to provide assistance (3 questions formulated on a 4-point Likert-type response scale, with 1 meaning "Strongly disagree" and 4, "Strongly agree"), the burden and importance of homework (4 items identical in nature to those in the previous dimension), and a description of the situation that is making necessary remote learning, from home (1 open question).

A content validity analysis was carried out based on experts' judgment. The relevance and adequacy of the questionnaire's structure and the items that made it up were rated from 0 to 10. Construct validity was later analyzed, using a principal component analysis (previously applying the KMO measure of sampling adequacy and Barlett's sphericity test). In the analysis of the scale's factorial structure, the existence of two factors explaining 58% of the cumulative variance was observed, the first factor being saturated by three items that refer to the families' capacities to help with homework. The second factor is explained by four items that refer to the burden and importance of homework. Therefore, the test exhibits construct validity.

Regarding reliability, the Cronbach's Alpha of the quantitative dimensions (families' capacity to help and the burden and importance of homework) was analyzed. The results obtained are greater than .7 in both dimensions, such that its reliability is acceptable.

Procedure

Data collection

The questionnaire was administered by sharing the link to the Google Forms application, on which it was placed. Responses were received at the end of March 2020.

Procedure for the segmentation and categorization of relatives' responses to the open question

To analyze the open-ended question, an original category system was used, designed through an inductive/deductive procedure. First, various works related to homework help provided by families were reviewed and categories were specified to analyze the family members' messages. Subsequently, after analyzing the sample's more than 600 units of analysis, those that could not be classified precisely were identified, and new categories were added that had not been provided for in the first version.

To create the categories, a number of works were initially considered. For the design of the "autonomy" category, the works of Feito (2020) and Cooper et al. (2000) were taken into close account, due to the importance that the adoption of more autonomy-boosting motivational styles is taking on at this time. Difficulties accessing "educational resources" were transformed into a category, taking into account the fact that about 20% of Spanish households do not have a computer (INE, 2019). Rogero-García (2020) points out the difficulties of some parents when it comes to having time to help their children; therefore, the category "Organization" was created. According to Wang et al. (2020), the lockdown situation is generating emotional problems in parents and children; therefore, the "Emotions" classification was created. To categorize messages that could not be assigned according to these concepts, it was decided to create "Capacity to help", "Assessment of teachers" and "Homework" (see Table 1).

Table 1

System for the categorization of comments by relatives of Primary Education students in relation to difficulties adapting to remote teaching during the lockdown.

Categories	Description
Family's capacity to help	Comment in which the relatives convey their capacity or, on the contrary, lack of strategies and knowledge, to successfully help the students complete homework.
Emotions.	Referring to the feelings and emotions experienced by family members and/or Primary Education students due to the lockdown situation, remote teaching, etc. These emotions may be positive, negative, or have not varied with respect to the situation prior to lockdown.
Educational resources	Message in which a deficiency is identified, or, in contrast, the possession of the educational resources to carry out the tasks proposed.
Assessment of teachers	Comment related to satisfaction or dissatisfaction with the teaching staff's work. Also included are messages containing evaluations of the work that teachers are doing, and their monitoring of students in remote teaching.
Homework	Allusion to the modification or, on the contrary, to the non-alteration of the number of homework assignments with respect to the scholastic situation prior to lockdown. Comments are also included regarding the suitability of the distribution of homework assignments in core, specific or elective subjects.
Organization of support	A message that refers to difficulties in the organization of help due to a lack of time, children in the same home of different educational levels, etc. The nature of the messages can be positive, revealing a great capacity for organization and the provisioning of assistance in homes. Also included are comments related to changes in children's habits.

Categories	Description
Student autonomy	A message related to students' capacities to autonomously complete the tasks they are given in remote learning situations, without supervision and without needing help. These can be positive or negative messages.

The classification of the comments was carried out after training in which the researchers improved the thoroughness of the category system designed. To analyze internal consistency, the level of agreement between 2 researchers on a sample of 38 comments, chosen at random, containing a total of 80 elements, was calculated. The level of agreement obtained was higher than 80%, and the resulting Kappa index was sufficient (Cohen's Kappa index: .8; $p < .01$).

Analysis and results

Presented next are the results obtained in relation to the perceptions of the families of Primary Education students at public schools of remote teaching during lockdown.

Factors that influence the adaptation to remote teaching by the families of Primary Education students enrolled in public schools

Based on the results presented in Table 2, it is observed that, with respect to the dimension identified as "Burden and importance of homework", the vast majority of family members stated that Primary Education teachers assigned homework related to content already explained, hardly covering *new* content remotely (45% agree - A - and 30% strongly agree - SA). Despite being content that had already been covered, almost half of the family members stated that the students were struggling to keep up with the pace of the homework assignments, and could not complete them independently (13% Strongly Disagree - SD - and 37% disagree -D). However, Primary Education students frequently turned in their assignments complete and on time (45% agree and 33% strongly agree). Finally, as to whether the teachers provide feedback related to the completion of homework within one or two days of its submission, the relatives indicated that this was not common (see Table 2).

The results obtained in the "Family's capacity to help" dimension reflect that almost half of family members had to ask for help or seek information to explain or solve an exercise (33% agree and 16% strongly agree). It is also observed that approximately 4 out of 10 reported having experienced technical difficulties and a lack of resources to complete the homework assignments. Consequently, about half of the family members felt overwhelmed and a desire to give up (23% agree and 23% strongly agree). However, these results may be affected by family members' employment situations during lockdown.

Table 2

Frequency and percentage of agreement amongst relatives of Primary school students in relation to the "family's capacity to help" and the "burden and importance of homework" during lockdown.

Dimension	Items	Response			
		SD	D	A	SA
Burden and importance of homework	Teachers assign homework related to content that they have worked on in the classroom	25 (10.6%)	33 (14%)	107 (45.3%)	71 (30.1%)
	The student can keep up with the homework assignments and complete them without the need for help	31 (13.1%)	87 (36.9%)	82 (34.7%)	36 (15.3%)
	The student turns in assignments, complete and on time	14 (6%)	38 (16.1%)	107 (45.3%)	77 (32.6%)
	The teacher corrects the homework assignments in one or two days, and provides feedback on them	42 (17.8%)	54 (22.9%)	92 (39%)	48 (20.3%)
Family's capacity to help	I've had to ask for help or seek information to explain or complete an exercise(s)	53 (22.5%)	65 (27.5%)	79 (33.5%)	39 (16.5%)
	At home we have had technical difficulties and a lack of resources to complete the homework assignments	52 (22%)	89 (37.7%)	63 (26.7%)	32 (13.6%)
	I have felt overwhelmed by the homework assignments, and wanted to give up.	43 (18.2%)	82 (34.8%)	55 (23.3%)	56 (23.7%)

Results of the comparative analysis of the family's capacity to help based on its employment situation during lockdown.

In relation to the employment situations of family members during lockdown, Table 3 shows that those who teleworked sought less help or external information to help complete homework assignments compared to the unemployed (t = 4.2; p < .01) or those who worked outside the home (t = 2.7; p< .01). Family members who were able to work from their homes by telematic means also reported fewer technical or resource difficulties when it came to completing homework, although they only exhibited significant differences with those who were in situations of unemployment during lockdown (t = 3.6; p < .01). Consequently, those who teleworked were those who most seldom reported a desire to give up trying to help with homework, although there were not significant differences as compared to family members in other work situations (see Table 3).

Table 3

Frequency and percentage of agreement amongst relatives of Primary Education students in relation to the "Family's capacity to help" as a function of the family's employment situation during lockdown.

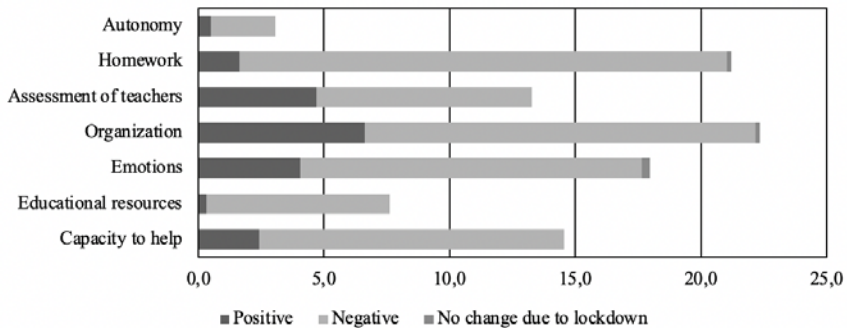| Agreement rate	Work situation during lockdown	Family member asks for help or seeks information	Technical difficulties and lack of resources	Family member overwhelmed and wanting to give up
Strongly disagree	Unemployed	13 (12.6%)	16 (15.5%)	14 (13.6%)
	Teleworking	30 (36.1%)	29 (34.9%)	19 (22.9%)
	Normally works from home	10 (20%)	7 (14%)	10 (20%)
Disagree	Unemployed	29 (28.1%)	33 (32%)	38 (36.9%)
	Teleworking	25 (30.1%)	31 (37.4%)	27 (32.5%)
	Normally works from home	11 (22%)	25 (50%)	17 (34%)
Agree	Unemployed	39 (37.9%)	35 (34%)	24 (23.3%)
	Teleworking	20 (24.1%)	14 (16.9%)	17 (20.5%)
	Normally works from home	20 (40%)	14 (28%)	14 (28%)
Strongly agree	Unemployed	22 (21.4%)	19 (18.5%)	27 (26.2%)
	Teleworking	8 (9.7%)	9 (10.8%)	20 (24.1%)
	Normally works from home	9 (18%)	4 (8%)	9 (18%)

Description of the most notable aspects of the educational situation during lockdown, according to families

In the 236 responses by relatives of Primary Education students, a total of 618 units of analysis were identified in the comments to the open question. Figure 1 presents the results of the classification of these messages according to the different categories considered in the study and the nature of the comment (positive, negative or without any changes due to the lockdown).

The category with the most messages was "Organization" (22.3% of total comments). In relation to the nature of the comments, a great number of negative ones may be observed. For example, family member 47 expressed that it was difficult to organize their time and see to other tasks, in the following statement: "It is difficult to juggle work, the home and food." Some family members also spoke of trouble caring for several children at the same time ("It is difficult to organize the 'school day' at home with several children" [family member 38]).

Percentage of comments regarding the aspects most underscored by families in relation to the educational situation during lockdown.

Autonomy
Homework
Assessment of teachers
Organization
Emotions
Educational resources
Capacity to help

0,0   5,0   10,0   15,0   20,0   25,0

■ Positive   ■ Negative   ■ No change due to lockdown

In relation to "Homework", a vast majority of the messages are negative. There are quite a few comments from family members stating that the children were overloaded with work ("I think the set of assignments that are being given them is excessive" [family member 82]). However, some others, like family member 123, thought that "the volume of assignments is sensible and in accord with the circumstances." Other family members opined that the distribution of assignments should not be the same in different types of subjects. For example, family member 50, stated: "I understand that subjects like Math, Social Sciences, Natural Sciences, Language and English are the main ones, and you have to forge on ... but in Religion, Music and Physical Education, I think it's absurd that they assign exercises".

Regarding "Emotions", almost 3 out of 4 family members had negative comments. Sometimes these are related to the children's feelings ("Students are more disinclined" [family member 159]). Sometimes the messages refer to the parents ("[The situation] generates stress and anguish" [family member 75]) and, other times, to everyone, in general ("It is a tough situation for everyone" [family member 219]). There are also messages reflecting attempts to relativize the problem, and even tackle it with a positive attitude. For example, family member 97 expressed gratitude in the following statement: "Very grateful for this initiative so that my son can continue with his education." Family member 129 also indicated that his son was "highly motivated."

The categories "Capacity to help" and "Assessment of the teacher" do not reach 15% of the total. First, in "capacity to help" we find messages from parents who have forgotten content ("There are things that we no longer remember, so we can't do them with them" [Family member 6]). Others identified difficulties with specific subjects ("in English, I have no idea" [family member 12]) or with explaining new concepts ("sometimes explaining new concepts at home is not easy" [family member 26]). They also reported a lack of pedagogical knowledge ("we don't know the methodology", "we don't know how to correct" or "we're not teachers"). In addition, students' lack of confidence in family members' explanations is observed ("they question the way that parents explain the topic to them" [family member 197]). Secondly, in relation to the "Assessment of the teacher" there are quite a few negative messages, sometimes referring to a lack of follow-up ("They do not ask students for what they have done" [Family member 231]). Nevertheless, it is the category with the second a highest percentage of positive messages ("I am very happy with all the teachers' work" [Family member 261]).

Finally, there were comments related to access to educational resources at home ("In many homes, like mine, we don't even have a computer" [Family member 209]) and to the students' lack of autonomy ("They don't know how to access technologies when they are 6 or 7 years old" [Family member 110]).

Discussion and conclusions

The health emergency produced by COVID-19 caused the temporary suspension of face-to-face teaching and the closure of classrooms in our educational system. The continuation of teaching by telematic means required efforts on the part of the members of the educational community, and some families expressed dissatisfaction with this distance education. In this regard, the first objective of this work is to identify the factors that made it difficult for the families of Primary Education students to adapt to remote learning.

The results suggest that some families are dissatisfied with the performance of Primary Education teachers; in fact, almost 65% of the messages from family members referring to the assessment of teachers were negative. One of the reasons for this discontent was that teachers did not communicate with families to report on students' performance and learning difficulties. We know that there is a lack of material resources in the homes of some teachers, and, as a result, their ability to monitor students was greatly diminished (Rogero-García, 2020). It is also true that, traditionally, family-school communication has never been easy (Navarro et al., 2011). Faced with this new situation, it is necessary to redefine the role that teachers play, both at school and in families.

Another issue that generates discontent in families is the homework load. There are several possible explanations for the difficulties experienced to adapt to the demands entailed by homework and remote learning. It is likely that teachers' lack of methodological training in virtual education is generating an increase in the students' workload (OECD, 2016). Another possible reason is that there are non-core subjects that previously did not entail work at home; this would explain why the family members believe that the workload is not well balanced between core subjects and the new demands of electives. It is also possible that, at this time, following Feito (2020), models that seek autonomous learning are being adopted, but Primary Education students are not yet able to adapt to them without help, causing families to carry out more educational follow-up than usual. In any case, the most immediate consequence of the situation is that, despite the fact that the teachers assigned homework related to content already explained in the classroom, almost half of the Primary Education students struggled to keep up with it, and could not complete the assignments independently.

Meanwhile, Primary Education students' need for help in order to be able to hand in their homework complete and on time (almost 3 out of 4 students managed to), generated organizational problems in homes; among other reasons, due to the presence of several school-age children who needed help at the same time. Some parents had to turn to outside help, explaining that they had forgotten content, or that they lacked the patience and/or pedagogical training to be able to provide efficient assistance. They also suffered from technical difficulties and a lack of materials, not only digital, but also related to the acquisition of content through handling physical objects (very common in lower levels of Primary Education). Other family members reported difficulties balancing work, domestic life, and the scholastic assistance they had to pro-

vide; already lacking enough time to assist their children with their schoolwork under normal circumstances, this got even worse during the lockdown (Domínguez, 2010; Pizarro-Laborda et al., 2013).

Regarding the second objective of this study, to determine whether the difficulties identified are shaped by the family's employment situations during lockdown, we know that the likelihood that families have digital materials and are able to give children high-quality assistance drops when the parents' educational levels are lower (Hollingworth et al., 2011; Rogero-García, 2020). In this regard it should be noted that, according to a recent survey, almost 20% of Spanish households do not have a computer (INE, 2019). In this study we observe that the employment situations of relatives during lockdown had a considerable impact on their capacity to help their children; and that those who teleworked sought less outside help than the unemployed and those who work outside the home. They also suffered fewer technical problems than the latter. Thus, these results coincide with those indicated by Cabrera (2020), and it can be stated that distance education exacerbates the inequality of opportunities; as, although all students were negatively affected by the situation, those who lived in disadvantaged homes and were enrolled in public schools were even more affected by personal and family conditions. Some family members ended up feeling overwhelmed and wanting to quit. In fact, 75% reported experiencing negative emotions at home. And, as Wang et al. (2020) noted, stress due to academic pressure can aggravate difficult emotional situations faced by students and their families owing to other factors (health, finances, etc.).

Conclusions can be drawn from all this that guide educational actions aimed at families and schools. In the first place, it is necessary to forge family-school protocols addressing remote learning in Primary Education. Efforts must be made to empower family members to help students, focusing on their digital competence. The third action has to do with the development of school policies that enhance communications between schools and families. Another action requires the promotion of teaching and joint tutoring, and providing teachers with adequate materials. Finally, sustainable policies are needed to close the digital divide caused by social and family conditions. These conclusions should, however, be viewed with some caution, given the limitations inherent to this study. In future studies, it would be advisable to replicate these analyses with a larger sample of randomly selected relatives.

Funding

Bibliography

Area-Moreira, M., Hernández-Rivero, V., & Sosa-Alonso, J. J. (2016). Models of educational integration of ICTs in the classroom. *Comunicar*, *47*, 79-87. https://doi.org/10.3916/c47-2016-08.

Balanskat, A., Blamire, R., & Kefala, S. (2016). *The ICT impact report: A review of studies of ICT impact on schools in Europe*. Bruselas: European Schoolnet, European Commission.

Bartau-Rojas, I., Aierbe-Barandiara, A., & Oregui-González, E. (2018). Parental mediation of the Internet use of Primary students: Beliefs, strategies and difficulties. *Comunicar*, *54*, 71-79. https://doi.org/10.3916/c54-2018-07.

Bingimlas, K. A. (2009). Barriers to the successful integration of ICT in teaching and learning environments: A review of the literature. *Eurasia Journal of Mathematics. Science & Technology Education*, *5*(3), 235-245. https://doi.org/10.12973/ejmste/75275.

Blanco, I., & Römer, M. (2011). *Los niños frente a las pantallas*. Madrid: Universitas.

Blau, I., & Hameiri, M. (2016). Ubiquitous mobile educational data management by teachers, students and parents: Does technology change school-family communication and parental involvement? *Education and Information Technologies*, *22*(3), 1231-1247. https://doi.org/10.1007/s10639-016-9487-8.

Boyd, D. (2014). *It's complicated: the social lives of networked teens.* New Haven: Yale University Press*.* https://doi.org/10.1177/1461444814554342c.

Cabero, J., & Marín, V. (2014). Miradas sobre la formación del profesorado en tecnologías de información y comunicación (TIC). *Enl@ce Revista venezolana de Información, Tecnología y Conocimiento*, *11* (2), 11-24. https://bit.ly/3deaBC4.

Cabrera, L. (2020). Efectos del coronavirus en el sistema de enseñanza: aumenta la desigualdad de oportunidades educativas en España. *Revista de Sociología de la Educación (RASE)*, *13*(2), 114-139. https://doi.org/10.7203/rase.13.2.17125.

Camacho-Martí, M. M., & Esteve-Mon, F. M. (2018). The use of tablets and their impact on learning: a national research in Primary Education schools. *Revista De Educación, 379*, 170-191. https://doi.org/10.4438/1988-592X-RE-2017-379-366.

Chai, C. S., Koh, J. H. L., Tsai, C. C., & Tan, L. W. L. (2011). Modeling primary school pre-service teachers' Technological Pedagogical Content Knowledge (TPACK) for meaningful learning with information and communication technology (ICT). *Computers & Education*, *57*(1), 1184-1193. https://doi.org/10.1016/j.compedu.2011.01.007

Chirkov, V. I., & Ryan, R. M. (2001). Parent and teacher autonomy-support in Russian and U.S. adolescents: Common effects on well-being and academic motivation. *Journal of Cross-Cultural Psychology*, *32* (5), 618-635. https://doi.org/10.1177/0022022101032005006.

Comi, S., Gui, M., Origo, F., Pagani, L., & Argentin, G., (2016). Is it the way they use it? Teachers, ICT and student achievement. *Economics of Education Review*, *56*, 24-39. https://doi.org/10.2139/ssrn.2795207.

Cooper, H., Lindsey, J. J., & Nye, B. (2000). Homework in the home: How student, family, and parenting-style differences relate to the homework process. *Contemporary Educational Psychology, 25(4),* 464-487. https://doi.org/10.1006/ceps.1999.1036.

De Pablos, J., Colás, P., & González, T. (2010). Factors facilitating ICT innovation in schools. A comparative analysis between different regional educational policies. *Revista de Educación*, *352*, 23-51. https://doi.org/10.4438/1988-592x-0034-8082-RE.

Distefano, R., Galisnsky, E., McClelland, M. M., Zelazo, P. D., & Carlson, S. M. (2018). Autonomy-supportive parenting and associations with child and parent execu-

tive function. *Journal of Applied Developmental Psychology*, *58*, 77-85. https://doi.org/10.1016/j.appdev.2018.04.007.

Domínguez, S. (2010). La Educación, cosa de dos: La escuela y la familia. *Revista Digital para Profesionales de la Enseñanza*, *8*, 1-15. https://bit.ly/3d6qCtu.

Ertmer, P. A., & Ottenbreit-Leftwich, A. (2013). Removing obstacles to the pedagogical changes required by Jonassen's vision of authentic technology-enabled learning. *Computers & Education, 64*(1), 175-182. https://doi.org/10.1016/j.compedu.2012.10.008.

Eurydice. (2011). *Cifras clave sobre el uso de las TIC para el aprendizaje y la innovación en los centros escolares de Europa 2011.* Bruselas: Agencia Ejecutiva en el ámbito educativo, audiovisual y cultural. https://doi.org/10.2797/66466.

Feito, R. (2020). Este es el fin de la escuela tal y como la conocemos. Unas reflexiones en tiempo de confinamiento. *Revista de Sociología de la Educación (RASE)*, *13*(2), 156-163. https://doi.org/10.7203/rase.13.2.17130.

Filak, V. F., & Sheldon, K. M. (2008). Teacher support, student motivation, student need satisfaction, and college teacher course evaluations: Testint a sequential path model. *Educational Psycology, 28*(6), 711-724. https://doi.org/10.1080/01443410802337794.

Hew, K. F., & Brush, T. (2006). Integrating Technology into K-12 Teaching and Learning: Current Knowledge Gaps and Recommen - dations for Future Research. *Educational Technology Research Development, 55*(3), 223-252. https://doi.org/10.1007/s11423-006-9022-5.

Hollingworth, S., Mansaray, A., Allen, A., & Rose, A. (2011). Parents' perspectives on technology and children's learning in the home: Social class and the role of the habitus. *Journal of Computer Assisted Learning, 27*(4), 347-360. https://doi.org/10.1111/j.1365-2729.2011.00431.x.

Instituto Nacional de Estadística. (Ed.). (2019). *Encuesta sobre Equipamiento y Uso de Tecnologías de Información y Comunicación en hogares.* https://bit.ly/2M4JCNm.

Johnson, L., Adams-Becker, S., Estrada, V., Freeman, A., Kam py lis, P., Vuorikari, R., & Punie, Y. (2014). *Horizon Report Europe: 2014 Schools Edition*. Publications Office of the European Union & The New Media Consortium. https://doi.org/10.2791/83258

Joussemet, M., Landry, R., & Koestner, R. (2008). A self-determination theory perspective on parenting. *Canadian Psychology*, *49*(3), 194-200. https://doi.org/10.1037/a0012754.

Liew, J., Kwok, O., Chang, Y., Chang, B. W., & Yeh, Y. C. (2014). Parental autonomy support predicts academic achievement through emotion-related self-regulation and adaptative skills in Chinese American adolescents. *Asian American Journal of Psychology*, *5*(3), 214-222. https://doi.org/10.1037/a0034787.

Marchesi, A., & Pérez, E. M. (2005). *Opinión de las familias sobre la calidad de la educación.* Madrid: Centro de Innovación Educativa (CIE)-FUHEM. https://bit.ly/3eq6kvu

Martín, J. M., & Rogero-García, J. (2020). El coronavirus y la asfixia educativa: el confinamiento deja sin protección a la infancia más vulnerable. *SiNC*. https://bit.ly/3eiVI1c.

Moreno, J. M., & Gortázar, L. (2020, April 8). Schools' readiness for digital learning in the eyes of principals. An analysis from PISA 2018 and its implications for the COVID19 (Coronavirus) crisis response. *Banco Mundial Blogs.* https://bit.ly/2Xyr2SZ

Mosteiro, M. J., Zamora, E. T., Barreiro, F., & Castro, M. D. (2019). El uso de las TIC en las bibliotecas escolares. Valoración desde el punto de vista del profesorado. In M. Larragueta, I. Ceballos-Viro, S. Carrascal (Dir.), *Educación y transformación social y cultural* (pp.283-295). Madrid: Universitas. https://bit.ly/2zDdAoN.

Navarro, G., Vaccari, P., & Canales, T. (2001). El concepto de participación de los padres en el proceso de enseñanza-aprendizaje: la perspectiva de agentes comprometidos. *Revista de Psicología, 10*(1), 35-49. https://doi.org/10.5354/0719-0581.2001.18530.

OECD. (2016). *Walking the tightrope: Background brief on parents' work-life balance across the stages of childhood.* París: OECD Publishing. https://bit.ly/3d9YeGV.

Pereira, S., Fillol, J., & Moura, P. (2019). Young people learning from digital media outside of school: The informal meets the formal. *Comunicar, 58*, 41-50. https://doi.org/10.3916/c58-2019-04.

Pérez, C., Betancort, M., & Cabrera, L. (2013). Inversión pedagógica y éxito escolar del alumnado de clase obrera. *Revista de la Asociación de Sociología de la Educación*, *7*(2), 410-428. https://bit.ly/2ZHkgwY.

Piñeiro, M., & Delgado, A. (2017). *Estudio de campo, deberes escolares. Resultados de los cuestionarios.* Consejería de Educación. Junta de Castilla y León. https://bit.ly/2AhSLz6.

Pizarro-Laborda, P., Santana-López, A., & Vial-Lavín, B. (2013). La participación de la familia y su vinculación en los procesos de aprendizaje de los niños y niñas en contextos escolares. *Diversitas: Perspectivas en Psicología, 9(*2), 271-287. https://doi.org/10.15332/s1794-9998.2013.0002.03.

Rogero-García, J. (2020). La ficción de educar a distancia. *Revista de Sociología de la Educación (RASE)*, *13 (147)*, 174-182. https://doi.org/10.7203/rase.13.2.17126.

Roig-Vila, R., Mengual-Andrés, S., & Quinto-Medrano, P. (2015). Primary teachers' technological, pedagogical and content knowledge. *Comunicar, 45*, 151-159. https://doi.org/10.3916/c45-2015-16.

Shamir-Inbal, T., & Blau, I. (2017). Which pedagogical parameters predit the general quality of ICT integration from the perspective of elementary school leaders? *Computers in the Schools*, *34*(3), 168-191. https://doi.org/10.1080/07380569.2017.1347427.

Shen, Y. W. (2016). An evaluation of the impact of using ipads in teacher education. *The Online Journal of New Horizons in Education*, *6*(4). https://bit.ly/2AfGnQc.

Valdés, Á. A., Martín, M., & Sánchez Escobedo, P. A. (2009). Participación de los padres de alumnos de educación primaria en las actividades académicas de sus hijos. *Revista Electrónica de Investigación Educativa, 11* (1). https://bit.ly/2X7WAjF.

Wang, G., Zhang, Y., Zhao, J., Zhang, J., & Jiang, F. (2020). Mitigate the effects of home confinement on children during the COVID-19 outbreak. *The Lancet*, *395*(10228), 945-947. https://doi.org/10.1016/s0140-6736(20)30547-x.