Children's use of ICT, family mediation, and social inequalities

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Children have increasing access, and at younger ages, to ICT. This results from state policy measures, or from families having progressively provided ICT access to their children, or both of these influences. As a critical approach to the impact of technology in the construction of social change, this paper seeks to understand how children's relationships are built with ICT, and how family background and mediation affects this relationship, within the context of socialisation and a certain position in social space. From two case studies we present results of a multivariate analysis as well as qualitative data. The data suggest that the democratisation of access to ICT, amplified by the wide distribution of a laptop computer to children in elementary schools, has resulted in distinct profiles of use by children. These profiles appear linked to different (academic and digital) family resources and diverse parental involvement concerning these uses (regulation and support).

Introduction

The purpose of this paper is to understand to what extent the democratisation of access to ICT, resulting from a government policy of wide distribution of laptop computers to school children, contributes to a democratisation of usage, with the analysis focusing on how children in different social groups use the computer at home, and how the family mediates this process. The paper is based on a national research, but assumes that the issues covered are of a broader and international relevance.

The Portuguese government introduced the Magalhães (Magellan) computer for the 1st Cycle of Basic Education [1], under the *e.escolinha* program, a part of Technology Education Plan which consisted of the distribution, free of charge or at a reduced cost, of laptop computers with educational software adapted for 6-10 year-old children. This public policy raised the matter of the extension of the social base using information and communication technologies (ICT), not only in the school context but also in the family setting, since it explicitly assumed that access to this type of resource could contribute to academic learning and reduce inequalities of opportunity in the use of ICT. Analyses of one-to-one programs have focused most frequently on the classroom and teacher practices (Blackley & Walker, 2015; Pereira, 2015); instead, we emphasise the importance of the home context and family support.

Social inequalities, education, family mediation and ICT

We live in an era where the role played by ICT is increasingly prominent and is shaping the type of society (Castells, 2009), with it being acknowledged that technologies are expanding peoples´ forms of interaction, collaboration and activity, and making available new learning possibilities, goals, contexts and opportunities to acquire and exchange knowledge with others (Prensky, 2001; Bennett *et al.*, 2008; Tapscott, 2008; Weigel, James & Gardner, 2009; UNESCO, 2014).

However, one of the biggest challenges facing information societies in the world today is linked to inequality and the power relationships which underlie them (Hendrix, 2005), an issue which has been called ´info-exclusion`, ´the digital divide` or the ´digital gap`. Generally speaking, what is in question is the divide that brings two groups into opposition, the haves and the have-nots in relation to access to information technology. Recent studies have made the outlines of this tension visible by pointing to a complex and multifaceted situation in most technologically developed countries (Cardoso *et al.*, 2015; Bennett *et al.*, 2008; Cruz, 2008; Tapscott, 2008). On one hand, in the case of Portugal itself, Almeida *et al.* (2008) suggested a rapid spread of the use of computers and the Internet, with a slight easing of social inequalities between children and adolescents of school age; on the other hand, Rodrigues and Mata (2003) noted that the use of ICT has a greater correlation with the level of education than with age, seeming to ease the generational effect. In parallel with this, recent data shows that in Portugal the number of children using computers has been increasing although the advantages of this group over adults in the use of the Internet is reduced now almost to parity (Livingstone & Haddon, 2012; Ponte *et al.*, 2012).

Education has been identified as one of the key areas for action in confronting the low levels of digital literacy recorded in Portugal and the associated social inequalities. In this respect, since the 1980s various government programs have been implemented with the purpose of increasing the use of information technology in schools. Among the many possibilities attributed to the use of ICT in a school setting, it is thought that the computer and the Internet are tools for encouraging new practices and new pedagogical relationships. As a result of the increase in public spending in this field, ICT have become more widely available in schools. However, technological renewal in the field of education has still not necessarily resulted in pedagogical innovation and, in that sense, a number of studies have suggested a prudent view in relation to the effects of ICT, stressing that without changing teaching and learning practices, the simple application of ICT does not bring about significant changes to the schooling system (Papert, 1997; Twist & Withers, 2007; Means, 2008; Michael, 2011; OECD, 2012).

Along with increasing presence in schools, ICT are also present in more and more homes in Portugal (INE, 2015), in particular in the case of families with children of school age. In fact, the education of their children seems to be the main reason why families acquire a computer with a connection to the Internet (Rodrigues & Mata, 2003; Almeida *et al.*, 2008). The research shows, however, that not all families have the resources to make the

necessary educational investment (Diogo, 2008), displaying notable inequalities according to the sociological divide which cuts across the school-family relationship (David, 1993; Vincent, 1996; Diogo & Silva, 2010). It has been shown that it is mainly the better-off social groups that make the greatest use of ICT and with a different social use compared with those less well-off (Almeida *et al.*, 2008; Stevenson, 2011).

The use of ICT by children in both school and home settings also raises questions regarding the relationship between school and family when looked upon as a relationship between cultures (Silva et al., 2015). ICT may boost school-family communications, becoming a (material) means which is able to contribute to the (socio-cultural) mediation process (Silva *et al.*, 2015) between the school culture and the local culture. Conversely, it may be that some of the traces marking this relationship persist. The research now emerging into this topic suggests that family settings are configured as distinct social and digital contexts with a notably uneven family mediation in the use of ICT, so that new generations enjoy distinct experiences (Hollingworth *et al.*, 2011; Stevenson, 2011). Families do not constitute a homogenous group, and their relationship with ICT is likely to vary according not only to factors such as social class or ethnicity, but also to generation and gender, two fundamental aspects in intra-family relationships.

Methodological options for research studies

The research generally seeks to respond to a series of questions including the identification of the social actors who are associated with the laptop as well as their social representations on the same; tracing the sociological profile of those acquiring and those not acquiring this laptop; understanding their use and, in particular, by whom, in what setting and the means of its regulation; and understanding the school and social effects of its use, in particular in the classroom, at home and in the school-family interaction (Silva *et al.*, 2015). This paper, in particular, is concerned to understand how children from different social groups use the laptop and how this use is mediated in the family setting.

The research was carried out in two administrative groups of public schools, one based in the town of Leiria, in the central region of Portugal's mainland, and the other based in the city of Ponta Delgada, in the Autonomous Region of the Azores, with 15 1st CBE schools. The social setting included, in both groups of schools, a variety of urban and semi-urban influences, and included families with a varied degree of academic qualifications and occupations and with a socially heterogeneous student body.

The research included a survey administered to the parents, the children and the teachers. Taking into account the number of classes per school and per year, 36 classes were randomly selected. The parents and the children were questioned twice through clusters and stratification sampling procedures. In the first survey 587 families were drawn from a total of 1294 students attending 2nd, 3rd and 4th grades. In the second survey, at the end of the following school year, the same classes were selected with the exception of those who moved into the 5th grade. 369 valid parents' questionnaires were obtained. In total 109 teachers were surveyed on four different occasions.

The research also incorporated an intensive component through an ethnography of classes and interviews with the parents and the teachers, as follows.

- In a selected class of each of the two educational regions the classroom teacher accepted to undertake weekly ethnographical records in accordance to a previously negotiated grid;
- Interviews with seven parents (four fathers, three mothers) with different social standings;
- Interviews with seven teachers, two of them from the selected classes.

This paper reports the results from the second survey of parents, from the ethnography of the class, from the interviews with parents and one of the teachers of the class subjected to ethnographic study. The data from the parents' survey was subjected to a multiple correspondence analysis complemented by a hierarchical cluster analysis with the purpose of discovering the main traits that structure the relationship of the children with the laptop and identifying user profiles. The qualitative data was subject to a thematic content analysis.

General take up and uses of the laptop by children at home

General take up

The laptop was largely taken up (about 90%) by the parents. The data shows that this take-up was translated into a democratisation of access to ICT, with no significant differences being recorded in relation to the academic qualifications of the parents (Silva *et al.*, 2015). We tried, then, to understand to what extent this democratisation of access was translated into the use made by the children in the different social groups. The use of the laptop by children proved to be much more expressive at home compared with school and other settings (Silva *et al.*, 2015). In this article we will focus upon its use in the family context.

Types of use

Analysing the type of use of the laptop by children at home, from the perspective of the parents, it was observed (Table 1) that educational games proved to be the most frequent activity, followed by the composing of texts/sentences and drawing, regardless of the academic qualifications of the parents.

An initial picture emerges from this data, which suggests that the children of the various social groups appear to have generally appropriated the computer of the *e.escolinha* program for activities of several kinds, both for entertainment and for schoolwork, suggesting a certain degree of democratisation of its use. Secondly, certain socially unequal uses were found. *PowerPoint* presentations and accessing the Internet are the uses where the differences are most noticeable according to the academic qualification of the parents. The children of parents with fewer academic qualifications make use of the Internet and

make *PowerPoint* presentations much less frequently than their colleagues with better-educated parents.

Table 1: Type of use of the laptop by children at home
according to parents' academic qualifications

		Writing	Calcul-ation	*Power-Point*	Draw-ing	Encycl-opaedia	Educ. games	Non-ed. games	Internet access
Mother	≤ 4th grade (%)	77.1	56.5	18.2	75.6	64.3	85.1	58.1	41.3
	5th-9th grade (%)	77.7	48.1	28.6	76.0	66.0	88.2	60.6	52.9
	Secondary/ Uni. (%)	76.5	36.7	42.4	71.7	59.8	88.2	65.0	61.6
	Total (%)	77.1	45.2	32.4	74.2	63.2	87.6	61.9	54.2
	N	262	248	241	248	250	259	247	247
	Sig. (Pearson chi-square)	0.978	0.62	0.010*	0.767	0.476	0.843	0.690	0.690
Father	≤ 4th grade (%)	2.0	42.0	9.1	2.5	0.1	80.0	52.2	44.9
	5th-9th grade (%)	76.7	50.0	31.7	74.2	63.0	87.8	58.3	54.0
	Secondary/ Uni. (%)	78.5	35.9	44.6	78.5	72.7	91.0	72.3	67.7
	Total (%)	76.0	44.5	32.8	73.0	63.5	87.1	60.9	55.8
	N	250	238	232	237	241	248	238	240
	Sig. (Pearson chi-square)	0.631	0.170	0.017*	0.153	0.077	0.199	0.067	0.044*

On the other hand, these results do not cover the children who do not use or ceased using the laptop. The survey results showed that the laptop was used by the majority of children, although unevenly according to social groups, noticing that a lesser use of the computer due to damage is associated with the lower academic qualification of the parents (Silva *et al.*, 2015). This indicates other forms of inequality in addition to the ownership of the laptops and relating to the capacity of the family to maintain them, pointing up the limits to any program which is limited to the distribution of laptops to families. The latter results, revealing a differentiated use and non-use on the basis of social groups, contradict the initial notion of democratisation.

Social status and use at home of the laptop and other computers

In order to carry out a more integrated analysis of the data covering all the children and a plurality of variables, a multiple correspondence analysis was undertaken and complemented by an analysis of hierarchical clusters, which made it possible to sort out the main lines which structure the relationship of the children with the laptop while identifying user profiles (using the *SPSS* software, version 17.0).

The multiple correspondence analysis revealed the existence of two main axes structuring use of the laptop. The first axis (Cronbach's alpha = 0.879) runs from full use of the computer (including use which implies access to the Internet and other types of use) to non-use, whereas the second axis (Cronbach's alpha = 0.602) covers the children who make use of the laptop which does not involve access to the Internet (drawing, writing, calculating, using the laptop encyclopedia and playing educational games) to two other situations (non-use of the laptop and use of the Internet through the laptop). On the basis of these two axes an analysis of the hierarchical clusters was made (Ward method), with three groups being identified, which reveal different use profiles (see Figure 1):

- Group 1 matches 38% of cases and is characterised by use of the laptop which does not imply access to the Internet: drawing (90%), writing (85%), using the calculator (55%), using the laptop encyclopedia (71%), playing educational games (93%), non-educational games (64%) and *PowerPoint* presentations (32%). Those who use the computer less than once a week (28%) and those who use it several times a week (53%) stand out. In sum, this group makes regular use of the laptop, although only offline.
- Group 2 (40%) focuses on those who make no use of the laptop.
- Group 3 (22%) is distinguished by the multi-purpose use of the laptop including the access to the Internet: searching for academic work (94%), researching matters of interest to children (73%); watching videos (77%); playing (73%); checking email (35%); chatting (32%); social networking pages (33%); and downloading music, films and games (24%). As with Group 1, the use of the laptop is notable for writing, checking the encyclopedia, games (educational and non-educational) and making *PowerPoint* presentations. Those who use the laptop several times per week or every day are particularly noticeable (62%).

Moving further in our analysis and relating it to the access to other computers (other than the laptop) at home by the children and the academic qualification of their parents, it is possible to characterise their profiles:

- Group 1 (*offline use of the laptop*) has a greater degree of heterogeneity than the other two concerning access to other computers and the educational level of the parents, which is not associated with any of these variables.
- Group 2 (*non-use of the laptop*) is characterised by a significant number of children who do not access the Internet on other computers and where most parents have a low academic qualification. Therefore, this is a group that concentrates in itself several disadvantages, inasmuch as a more difficult access to ICT is associated with social disadvantage.
- Group 3 (*multi-purpose use of the laptop in conjunction with accessing the Internet*) can be characterised by children who use other computers, have access to the Internet on the other computers and belong to families whose parents have higher academic degrees (secondary or university).
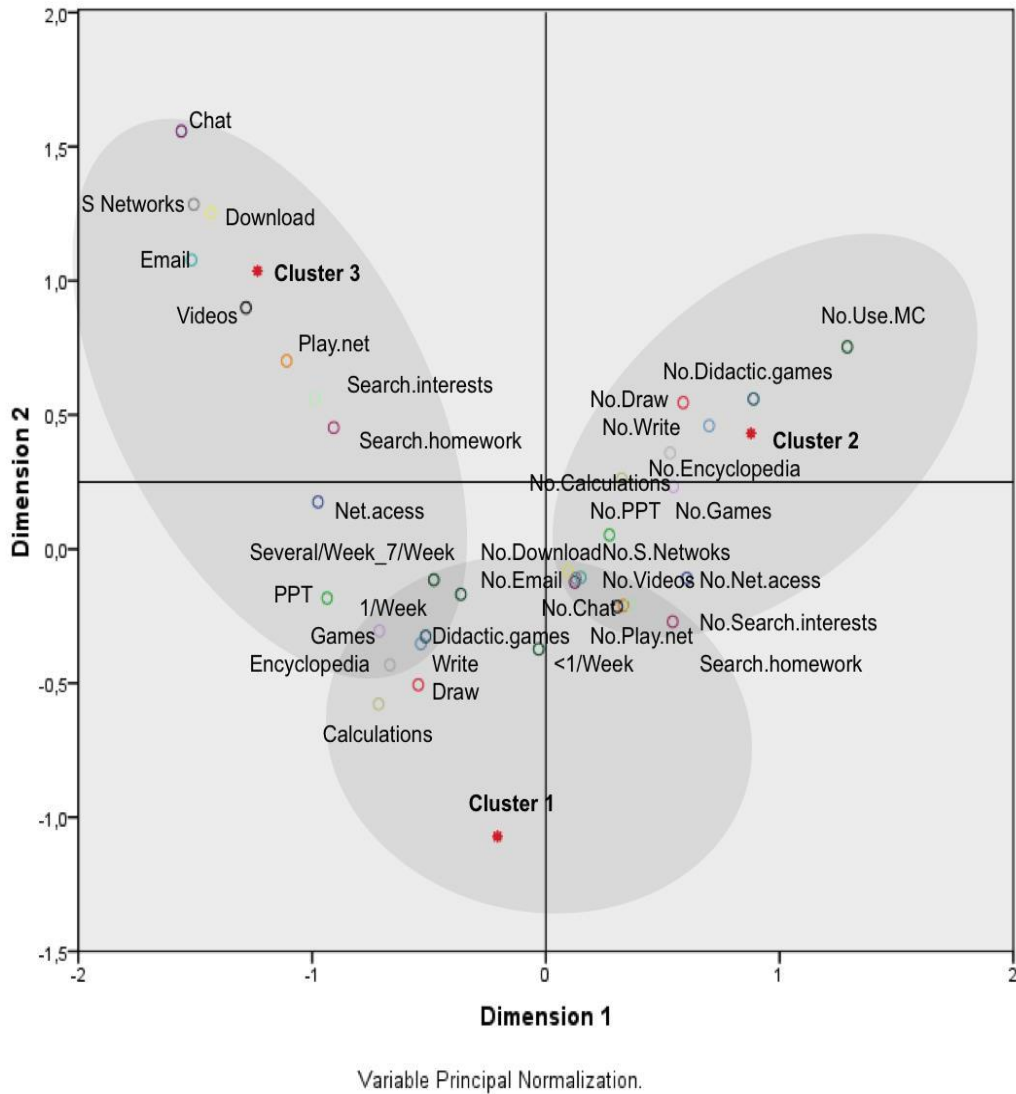
Figure 1: Profiles of the children's use of the laptop (analysis of hierarchical clusters)

In convergence with and complementary to the results referred to above, this study indicates a socially uneven use of the laptop characterised by two important divides: the first refers to their use *versus* non-use (where families with lower academic qualification use them on a less regular basis); the second, in convergence with other studies (Almeida *et al.*, 2008), concerns the use of the Internet *versus* the non-use of the Internet (being used overwhelmingly by children of families with higher academic qualifications and with access to other computers). Considering also that (i) the occurrence and duration of failures of the laptop are more frequent in less well-off families; (ii) the use of the Internet is more frequent on other computers at home as opposed to the laptop (Silva *et al.*, 2015);

and (iii) ownership of these computers (other than the laptop) is notable for the higher educational level of the parents, this public policy does not appear to compensate much for the disadvantage in access to ICT amongst the least well-off children.

In sum, given the very high acceptance and the resulting democratisation of access to ICT which the *e.escolinha* program has made possible by free of charge or at a reduced price distribution of the laptops (Silva *et al.*, 2015), the results suggest, however, that democratisation of access did not translate into a full democratisation of use, with certain forms of disadvantage standing out, which, in addition, tend to be cumulative.

Family mediation in the use of the laptop and other computers

From the above results distinct profiles of use of the laptop associated with different levels of academic/cultural capital stand out. It is important then to explore the processes through which this capital contributes to the establishment of the profiles identified. To this purpose uses of the laptop and other computers in the family were analysed, associating a group of indicators relating to mediation by the family (parents and siblings) in the use of ICT with: (i) academic qualifications of the parents and (ii) the three profiles of use of the laptop previously identified.

Family mediation by gender and by academic qualification

In addition to being the person most involved in homework, in general (Silva *et al.*, 2015), the mother is also the person who spends the most time with the child in the use of the laptop and other computers (Silva *et al.*, 2015). With this backdrop – which appears to confirm the idea that in the 1st CBE there is a 'female relationship' (Silva, 2003), mainly between women teachers (more than 90% of the teaching staff at this educational level) and mothers (at least in regular and informal interaction) – the study sought to determine any variation in these supports on the basis of the level of academic qualification.

Table 2: Support for homework through the use of the laptop
according to the academic qualification of the parents

	Father support	Mother support	Siblings support
≤ 4th grade (%)	7.7	25.0	42.9
5th-9th grade (%)	28.8	49.3	36.2
Secondary/ uni. (%)	71.4	81.4	12.9
Total (%)	34.8	58.7	27.5
N	161	167	167
Sig. (Pearson chi-square)	0.000*	0.000*	0.001*

The parents' support in homework to be carried out with the help of the laptop varies widely on the basis of the educational level of the parents. As a rule, those with higher academic qualification provide more support and vice versa. This finding applies to fathers and mothers. It is noteworthy the overlapping of two types of knowledge: a purely academic one as well as one that points to the mastery of technological skills. The

possession of cultural capital, with probably more academic qualifications, seems to make the difference. On the other hand, there is a tendency for siblings to substitute the parents in homes where the adults are less educated, which dovetails what was found in another study at the level of family involvement in schoolwork in general (Diogo, 2008).

Table 3: Degree of difficulty/ease for the parents to help the child in
the use of the computer according to their academic qualification

	Father				Mother			
	Much difficulty	Diffi-culty	Easily	Very easily	Much difficulty	Diffi-culty	Easily	Very easily
≤ 4th grade (%)	32.7	36.4	23.6	7.3	37.9	41.4	19.0	1.7
5th-9th grade (%)	9.7	23.2	46.5	20.6	7.4	33.3	43.7	15.6
Secondary/ uni. (%)	2.9	0.0	39.1	58.0	0.8	10.7	54.1	34.4
Total (%)	12.5	20.1	40.1	27.2	10.5	26.0	43.2	20.3
N	279				315			
Sig. (Pearson chi-square)	0.000*				0.000*			

The degree of difficulty reported by the parents in supporting their children in using the computers points in the same direction, with major differences between parents with more and with fewer academic qualifications. These contrasts suggest once again that access to ICT by itself will not result automatically in a democratisation of its use.

Profiles of relationship with the laptop and family mediation

In accordance with the bivariate analysis set out above (Tables 2 and 3), families tend to provide the framework and regulate unevenly the use of the laptop and other computers on the basis of their academic capital. A more integrated view of the data was sought, overlapping the three profiles of use of the laptop (previously identified by means of the cluster analysis) with the indicators relative to family mediation in the use of ICT.

- Group 1 (*offline use of the laptop/ social heterogeneity and heterogeneity in access to ICT*) stands out for there being no rules for use of the laptop (time and type of use);
- Group 2 (*non-use of the laptop/ less access to ICT/ families with low academic capital*) is characterised by a) greater difficulty in helping the child in the use of computers and b) fewer cases where the parents support the child in doing homework to be carried out on the laptop;
- Group 3 (*multi-purpose use of the laptop/ greater access to ICT/ families with medium to high levels of academic capital*) stands out, on the contrary, by an over-representation of cases where: (a) there is greater facility for helping children to use computers; (b) the parents support the child in carrying out homework tasks with the laptop.

As a result, it is possible to understand how the three groups with distinct profiles in relation to laptop use, as well as use of other computers, together with their social status, are characterised by the presence of a family mediation which is also distinct and which simultaneously manifests itself in the unequal mobilisation and capacity for the parents to

support their children in the use of computers for schoolwork, as well as in the regulation of the use that children make of them. Above all, there is a tension between the families who display any form of mediation and those families where there is no mediation at all. This tension follows social class lines with a greater mediation in better-off social groups and less in socially marginalised groups.

In summmary, similarly to other studies (Almeida *et al.*, 2008), these results confirm the role of family mediation in the use of ICT by children and how this mediation is influenced by the academic/cultural capital of the parents. The mediation on the part of parents appears as a mechanism whereby their academic/cultural capital acts on the relationship of the children with ICT, alerting to the perverse effects which any public policy program can produce when limited to the distribution of laptops to families and to the democratising of access without also being concerned with home and school settings for regulation of their use, or, in other words, when there is only a concern for democratising access and not for democratising success.

Laptop, general take-up and particular effects: A view 'from inside'

The extensive data allows for regularities to be discovered where they are not immediately visible or expected. It also admits generalisations within the respective universe, although they do not lead to an understanding of the reasons for the phenomena that, to some extent, they identify and/or describe. As a result, an ethnography of a class in each of the two school contexts was undertaken. Not being able to generalise, it was expected, however, that a deeper understanding of the social processes in question would be achieved and, therefore provide theoretical clues. Below are included a series of brief accounts and reflections by a number of parents (from Ponta Delgada) and the female teacher of one of the classes selected (from Leiria). They permit 'confirmation', 'complementation' or even 'questioning' of some of the extensive data previously presented.

The teacher confirmed the take up of the laptop by all her pupils and, aware that this did not take place exclusively in her class, she evaluated the policy from the point of view of the social effects:

> What is most positive for me is that everyone has the chance to access it. Less well-off
> families have the chance to buy computers for their children at lower prices.

However, the teacher indicated that the purchase of the computer was not a straightforward process (something which could not be discovered from the extensive data). The distance of the less well-off parents from academic culture placed them in a situation of partial ignorance concerning the laptop purchasing process (purchased by registration at the school through the respective teacher) and even the possibility of taking it up. Here, the role of the teacher as a socio-cultural mediator in establishing a bridge between the school culture and that of the parents, allowed the parents to purchase the *laptop*, often free of charge:

> There were some pupils who already had a computer but they also had purchasing power so they didn´t hesitate in getting one. Then there were less well-off children whose parents hadn´t realised that they didn´t have to pay for the Magalhães, so I had to inform them because they didn´t take it up to start with, then when I told them that they could get it free of charge as they were on the 'escalão A' [allowance paid to less well-off families], they were no longer so reluctant. (Teacher)

However, although universal access to ICT was viewed as something positive, this teacher had no doubt that there is a difference in their use by her students on the basis of their social background. She goes so far as to note differences in the classroom in their performance and use as well as in the school-family relationship as can be illustrated by the two following quotes:

> (…) the students who, at the beginning, showed greater levels of success were also those who stood out for their facility in the use of the Magalhães. Conversely, the ones who succeeded less had greater difficulty in demonstrating their digital literacy skills. Many of them, in general with a more humble social background, are also the ones who didn´t have a computer at home. (Teacher)

> Also, in what concerns school-family relationships stands the increased use of ICT, in general, and the Magalhães, in particular, by better-off families, those who already had at least one computer at home. Many of these families have revealed considerable skills on ICT. (Teacher)

The teacher also mentioned other aspects that pointed to social differentiation. The survey raised awareness, for example, of the fact that the laptop tended to become a genuinely personal computer for the children who effectively took charge of it and who quickly became autonomous users. The teacher also corroborated the latter aspect as follows:

> In terms of the Magalhães itself, its greatest advantage is that it permits a personalised use. Each child has access to his/her computer, which allows the teacher to share and manage the learning and the time in accordance with the child's needs. This was an enormous advantage… (Teacher)

However, she also drew attention to the fact that the laptop became, complementarily and partially, a family computer in less well-off households, particularly where it became the first computer in the home. This is her testimony:

> It´s also true that in many homes where there was no computer, when it arrived, it was used by the sister, the brother, the father, the uncle. It was used by the whole family (...).

Similarly, the teacher also stressed that homework requiring the use of the Magalhães was supported to a greater extent by middle-class families and that computers in need of repair took longer to be mended in less well-educated families.

If this is the teacher´s view – corroborating previous data – interviews with parents also denoted an unequal capacity in using computers, which varied according to their cultural

capital, with particular reference to academic capital. The following comments from interviews are revealing:

> What did I see in the Magalhães? Look – I looked into it all – to see what the restrictions were going to be made, what weren´t, what the initiative was, I read the various things that could be useful for the school. (Mother, 12th grade, unemployed)

> Yes, the first look at it was mine – no doubt; to begin with we looked at its functionalities, the games and the writing and image programs, then we had to – first let's say, until she´s independent, then she won´t need it, she didn´t need supervision. (Father, higher education, teacher)

> (...) my main objective is to make sure he likes using the computer and uses it well, so, that he uses the computer for… more for research and for doing other work, and so, in this aspect, I can always help, I can help. I think that I can help with almost everything. (Father, higher education, doctor)

As can be seen, these parents with higher educational levels felt at ease in researching how to help their children to use the laptop. These kinds of comments contrasted with those from mothers with fewer academic qualifications who readily admitted to their 'digital gap', and so when their children needed help with the computer they had to turn to an older brother or sister:

> I can´t recall now where she has more difficulty (...) she never calls me to look at anything (...) The one who sorts it out is my daughter. Sometimes she calls her brother for help because he knows about computers but I don´t. (Mother, 6th grade, housemaid)

> Q: Is it difficult to help or doesn´t it matter because...
> A: They can sort it out themselves.
> Q: They can do it themselves?
> A: They can use the computer on their own.
> Q: What about when she has any questions?
> A: She asks her brother. (...) They can use it better than me; I don't know how to use it. (Mother, 4th grade, housemaid)

> I don´t understand much about computers. (...) No, I don´t know much about computers. I´ve never used them. (Mother, 6th grade, housemaid)

However, there does not have to be an unequivocal correspondence between the level of education and digital literacy, for example. At times there are specific situations that require complementary elucidation. That applied to the father below who, being a maintenance technician for swimming pools and with 9th grade demonstrated a willingness to help his son, given that professionally he has to deal with computers, acknowledging that he learnt a lot about their use from work colleagues:

> (...) what I know and what I can teach at home I do without any problem (...) all that I learnt was with (…) also at work with my colleagues, I haven´t done any courses so it´s just experience, knowledge, I get on well with that (...) Perhaps I think I´m good at some things but it´s that there are things that I taught myself and learnt from colleagues who taught me some things. (Father, 9th grade, technical maintenance of pools)

Hollingworth *et al.* (2011) were well aware that this kind of situation where the type of profession practised, particularly where computers are used, can make a difference so that they '(…) would not wish to reproduce a binary picture of middle-class "digital natives" versus working-class "digital immigrants" (…)'. (p. 358).

In summary, this data of a more qualitative nature served to strengthen the notion that generalised take-up of the laptop points towards the success of a public policy that, explicitly, seeks the democratisation of access by reaching all social groups. In parallel, it also confirms that generalised access does not automatically translate into an egalitarian success. In this particular case, it also stresses the important role that the teacher can perform as a mediator in the school-family relationship, in addition to the role played directly with each pupil, and the role played by the family.

Conclusion

As a final assessment, it should be recalled that the data points towards the following: a major take-up of the laptop; the existence in greater proportions of other home computers on the part of more academic qualified families; greater use of the laptop at home by children in better educated families; longer times in a state of disrepair – and without a home computer – on the part of less well-off groups; identical usage of the laptop on the part of different groups on some contents (writing and games) and socially differentiated usage in others (for example, Internet, *PowerPoint* and the consulting of encyclopedias, these being used more frequently by children of better educated parents); significantly different levels of family support, with the quantity and quality of this being greater in the socially better off groups and mostly provided by mothers, with the exception of groups with lower levels of education where it is elder siblings who play a significant role.

The data thus appear to suggest twin tendencies: (a) generalised take-up of the laptop and (b) selective use of the computer on the part of children from distinct social groups accompanied by family mediation which is also socially selective. The first aspect points towards a democratisation of access to ICT through the public policy of distribution of laptops; the second denotes social inequality in their usage by the children and the respective family mediation, which is not automatically cancelled out by access to ICT. This means that with the first political objective of the public policy appearing to have been achieved (in the analysed contexts), a further step needs to be taken, which is to consider the effects of the socially differentiated use of ICT in school and at home. From this perspective, one cannot disregard that, for example, school organisational practices, pedagogical practices on the part of teachers, and family educational practices always constitute a social practice.

Acknowledgment

Endnote

1. 1st CBE: 1st through 4th grades; 2nd CBE: 5th and 6th grades; 3rd CBE: 7th through 9th grades; secondary: 10th through 12th grades.

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