

Opposite Cultures?

Schools' and Children's Practices with Digital Media

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Since 2007, Portugal has witnessed a rapid diffusion in Internet access among children and young people. This diffusion has largely been encouraged by a national policy presenting technology as a dimension of modernity and development. Running in schools from 2008 to 2011, the programmes *e-Escolas* and *e-Escolinbas*, the latter popularized by the laptop *Magalhães*, sought to provide equipment and Internet access to students and schools. Embraced by families with fewer resources and lower levels of education, these policies of digital inclusion meant a democratization in computer ownership among students. By the end of 2010, over 1,600,000 laptops had been purchased at low cost, including 400,000 *Magalhães*¹.

Confirming families' engagement, in 2010 Portuguese data from the *EU Kids Online* survey (Ponte, Jorge, Simões & Cardoso, 2012) showed that two-thirds of respondents aged 9-16 used their personal laptops to go online, placing them ahead of Nordic countries, where Internet penetration is among the highest in Europe. At home, approximately two-thirds of Portuguese interviewees declared accessing the Internet from their bedrooms, more than the European average (49%). With regard to the engagement of parents in shared activities involving the Internet, the numbers fluctuated significantly according to social background. In middle- to high-income families, the values varied between 52% and 62%. However, among families with lower income this proportion was much lower (28%).

The *EU Kids Online* survey also demonstrated that Portuguese children accessed the Internet from school (72%), public libraries or other public spaces with free Internet access (25%) in greater numbers than their European counterparts (European average 63% and 12% respectively). Likewise, the numbers concerning teacher mediation were above the European average, with 70% of children declaring that their teachers spoke to them about the helped them find

materials and complete tasks, in addition to explaining why certain websites are either good or bad. Access to the Internet in public spaces was found to be more pronounced among children and teenagers who did not have Internet access at home, or among those who experienced restrictions on its use at home due to the costs involved. Interviewed children noted that they liked being in these places with friends, and appreciated the opportunity to experience a degree of freedom in internet use they could not enjoy at home or in school (Ponte, 2011).

In an attempt to understand the ways in which digital means challenged educational processes and were incorporated into children's cultures, this text addresses current key features of the digital experience of Portuguese children aged 8 to 12. As seen, these ages benefit from the programme *e-Escolinhas*, which was in place at the time they entered or attended primary school.

Between school and family – Exploring the computer *Magalhães*

Inspired by the *Classmate* PC from Intel, the laptop *Magalhães* had built-in educational software and Internet access for the first grades of school. The computer was expected to circulate between home and school, since it was intended to foster communication between teachers and families. Like in similar projects elsewhere, in Portugal the initiative was presented as a sign of modernity. As noted, this programme was more centred on the notion of technology as a gateway to become the “citizens of tomorrow” than on the actual needs, skills and digital culture of today's children (Pereira, 2013)².

For several lower-income families *Magalhães* was the first computer to enter their household, and it was considered the family computer. By contrast, in households already equipped with computers, *Magalhães* was viewed as the “child's computer”. In addition to educational games and Internet access, *Magalhães* was also equipped with a pre-loaded version of Microsoft Office (Word, Power Point and Photo Story) aimed at facilitating the acquisition of skills in the fields of IT and communication, and at supporting the curricular learning process.

In 2009-2010, the first year of the *e-Escolinha* project, the Ministry of Education interviewed approximately 9,000 thousand teachers who were using *Magalhães* in their classrooms. The national survey showed that more than two-thirds of the teachers agreed that using *Magalhães* improved learning and stimulated the children's creativity. Among the educational activities mentioned, most involved resorting to content available online, such as songs, videos and digital libraries. More than half of the teachers admitted only utilizing these resources once a week or less; this low rate of recurrence would decline even further in 2010-2011 (Vieira, Silva, Coelho & Fernandes, 2012). Only one in ten teachers referred to the possibility of using this mobile technology in educational activities, such as taking pictures or creating short movies. Furthermore, experiences with digital

networks were virtually ignored by teachers (less than 1% mentioning it), in spite of being one of the activities most cited by children in the *EU Kids Online* survey.

In studies conducted at a regional level, teachers acknowledged the potential of *Magalhães* to enhance learning while simultaneously highlighting a number of factors that inhibited its use. In the predominantly rural district of Bragança, teachers listed some of the main constraints they were faced with. These included: unreliable Internet access in the classroom; lack of personal and educational competence to work with the device; and low level of interest or difficulties revealed by rural families in relation to their children's digital activities (Eiras & Meirinhos, 2012; Esteves, 2012). On the other hand, research carried out in urban centres, where most families had Internet access at home, indicated that *Magalhães* was not widely used as a tool of communication between parents and teachers or in the preparation of school activities by teachers (Silva & Diogo, 2011).

Research conducted in different regions of Portugal suggested that the main users of *Magalhães* were children. Contrary to what was expected, the use of the computer at home was significantly superior to its use in school. Either alone or with peers, children explored *Magalhães* far beyond its educational content and on their own initiative (Viana, Silva, Coelho & Fernandes, 2012).

The programme *e-Escolinhas* was discontinued in 2011-2012, as a consequence of a policy change in education. Data on children's activities drawn during the two academic years the programme was in place (2009-2010 and 2010-2011) showed that by the end of the second year, the use of educational games and the number of Google searches had dropped drastically. By contrast, the number of visits to You Tube, commercial game websites, Facebook and other synchronous communication media (e.g. MSN, Skype) as well as the use of email accounts had increased. The activities Portuguese children tended to take up online were therefore consistent with patterns observed internationally: despite the wealth of possibilities available on the Internet, children tend to invest their energies in a handful of websites developed by adults and owned by large corporations (ChildWise, 2011).

Moving between portable computers and mobile phones

As noted by Dafna Lemish (2013), in the current multifunctional convergent media ecology, formerly presumed categories – information, entertainment and advertising; formal and informal learning; studying and playing – are becoming increasingly blurred. By the same token, the ways in which the Internet is accessed have also become more flexible, personalized and mobile.

In Europe, the first comparative results concerning children's access to and use of mobile media are emerging. The *Net Children Go Mobile*³ project highlights that the privatization of Internet access and use has been accompanied by

an increasingly pervasive presence of the Internet in everyday life, and implies the creation of different social conventions of freedom, privacy, sociability and supervision by parents and adults (Mascheroni & Ólafsson, 2014). In this context, school education is a central arena.

While the results from the Portuguese participation in the above-mentioned project are not yet available at the date of this writing, this text can already voice the experiences of nearly 80 children aged 8-12 who own a personal mobile phone with Internet access. Interviews were conducted with children of various social backgrounds, living in the metropolitan area of Lisbon⁴. Although most children continue to refer to *Magalhães* as something belonging to them (“my Magalhães”), the laptop has been put aside. They say the computer is “broken”, or that it has been replaced by other laptops or tablets shared with family members. They claim to have stopped using *Magalhães* because it is “too slow” or “no longer fun”. A laptop designed for children thus appears to have rapidly become obsolete in their eyes, or worse, to constitute an identity constraint (“the kid’s computer”) from which they desire to free themselves.

The interviews about mobile use (either devices bought first-hand or obtained from family members), confirmed that the social functions mobiles play for teenagers are already relevant at these ages. As Ling and Bertel (2013) identified, these functions are: the security link in case of danger, the means to coordinate in space and time; the generator of written messages (texting); expressive communication; Internet and multimedia. While the younger children limit themselves to games and family contacts, by the time they reach 10-11 years, the change in school cycle is often associated with the acquisition of a new mobile device, chosen by the child, sometimes as a learning experience about the management of limited resources:

– When I started to have some money, I started to look around to see what I could do with it. The possibility of a tablet came up. It was a recent thing. Some were affordable, so... (Pedro, 12 years)

Despite having mobile devices with Internet access, the costs involved in using the Internet outside the house restrict its use. For this reason, these devices continue to be used essentially in the domestic setting. Another frequent trait emerging from the interviews is that of the children’s role as the technological leader in their families:

– I have mostly taught my family how to use Bluetooth. As we have a baby in the family, everyone wants to take photos of him... My mother wanted to send a contact to a friend, for instance. Therefore she sends a business card. You insert it in the text and send it. (Maria, 11 years)

–My father is going to have Facebook and I am going to create his profile. (Nuno, 11 years)

For children, the predominant online activities are the exchange of text messages and games, a great deal of which are played on Facebook. Children whose parents have higher levels of education tend to experience greater restrictions in the access to this social network. The non-use of Facebook may be presented by the child as a result of parental restriction, or can arise from the child's personal decision:

- Some of my classmates have it [Facebook] because their parents allow them. At my age, my parents do not allow me to have it yet. (Carlos, 8 years)
- I have already been asked many times whether I want it or not... but it is not something that appeals to me. (Maria, 11 years)

The multimedia potentialities linked to image and music are mostly highlighted by children who set up their own playlists, download, reshuffle and sometimes share content. Contrary to the image of passivity usually associated with children's relationship with screens, in a culture of convergence it is possible to choose to be passive or active on various levels with each screen, depending on interest, context, personality and circumstances (Lemish, 2013):

- Sometimes, when I am making a Power Point, I go on You Tube and add music. (Patricia, 11 years)
- I do translations on Google; Sometimes I put the tunes on and go on Google to translate so that I know what all of that means. (Madelena, 10 years)
- Sometimes, I'm on You Tube and I'm on Facebook at the same time... for instance, I like Tim Burton very much, so I am usually on the website and share pictures and things related to his movies. (Violeta, 12 years)

Apart from searching for songs, pages with drawings, or information about cars, recipes, movies, TV shows or the weather, there are also children who search for something to surprise them, like the opening Google page illustrations:

- Sometimes, when those strange drawings pop up on the Google front page, I click on them to see what it is... (Daniel, 10 years)

Some children view with care and preoccupation issues of privacy concerning the images they capture with their mobiles, one of the most appreciated functionalities of these devices:

- I have already recorded my mother walking up the street and me playing with my cousin. I have also recorded my mother in the garden with me and my cousin.

Interviewer: And have you posted it on the Internet or not?

- No, and I would not like someone else doing it to me. (Lara, 10 years)
- I am going to make a video on my computer but I will not post it on Facebook because I don't want to identify anyone. It's like a video album. I have

photos, I transfer them to my computer, join them together and make a movie with the ones I want, the ones I select. (Leonor, 10 years)

The digital culture of these children is marked by their pleasure in playing, experimenting, communicating and being with others. They want to use “real”, powerful and fast equipment, even if this means sharing it with other members of the family. Their responses confirm that, more than mere technologies, media represent new cultural forms that transport images and fantasies and offer ample opportunities for self-expression and games (Buckingham, 2007). At these ages, children identify the relevance of humour for successful communication with peers:

– This is a special tool for people to be able to communicate well... for when something funny is needed because we can send some funny messages to make people laugh... (Daniel, 12 years).

Two years after the end of the *e-Escolinhas* programme, we found among the *Magalhães* generation only a few references to Internet access in the school context⁵. Mobile phones, the digital technology they usually carry with them and that offers multiple functionalities, are formally banned from the classroom. References to its use in the school context are residual. João (10) says that one day he took a picture of the summary written on the board in the classroom as he did not have enough time to write it down. André (11) once filmed a lab experiment in biology class and gave it to the teacher for her to have a look at. Daniel does not understand why this resource cannot be used in class:

– At the moment in our Maths class we are always using our calculator. The teacher asked us to use the calculator... I could use this [mobile phone] if the teacher allowed it... (Daniel, 10 years).

The use of mobile phones to capture images is most cited in the context of field trips, where it can originate elaborated records. Along with technical ability and revealing the pleasure of the production and remix, this practice may draw attention to the important discussion on copyright issues:

– When I went on that fieldtrip for the herbar project, I took maybe 20, 30 photos. Now my teacher is saying that we could make an album with the photos we took. I am saving my photos to a memory stick and will give it to her, for her to create an album. I am even recording data on a USB card. My grandfather has a device to listen to music in the car and I am recording songs onto that card. As my printer is HP and reads memory cards, I stick the memory card in there and check it out... I will get the songs. (Ruben, 10 years)

Final comments

In 2010, most Portuguese children entering the school system had contact with digital technology, even if under different access and parental or teacher mediations. The *e-Escolinhas* programme led to a democratization in Internet access. It was received with enthusiasm, but also resistance, from schools due to a lack of training and of favourable organizational conditions. It is also important to take heed of the reservations or indifference expressed by families from less privileged economic backgrounds or digitally excluded families, mainly in rural settings. The highest levels of endorsement of the project were registered among families seeking to provide their children with opportunities they themselves had lacked during their childhood. The findings from the *EU Kids Online* survey offered evidence that the programme had an impact on the pedagogical relationship, also showing that teachers were an important source of mediation for children and teenagers.

Assessments of the use of *Magalhães* in the classroom indicate that facilitating the means and infrastructures is by itself insufficient to guarantee that schools incorporate technological resources in their educational practices or take into account children's cultures and interest, making them constitutive parts of the learning process. Schools have the potential to become reflective environments that may promote the critical use of technology and the full exercise of digital citizenship rights and duties. Not every child is able to enjoy such an environment at home, even though households are increasingly well-equipped with technology. For this reason, it is essential to keep up with the changes in schools and households as concerns the use of digital means and in regard to teacher and parental mediation.

The Portuguese data from the *Net Children Go Mobile* survey will improve our understanding of the present context, while simultaneously advancing the discussion of what needs to be done in order to let children exercise their right to better communication and digital citizenship.

Notes

1. <http://www.pte.gov.pt/pte/PT/index.htm>
2. For more information on the history of this programme, please read about the project *Navegando com o Magalhães*, coordinated by Sara Pereira from the University of Minho, available at: <http://www.lasics.uminho.pt/navmag/>
3. Financed by the European Safer Internet Plus programme, it initially involved Denmark, Italy, Romania and the United Kingdom. Portugal, Ireland and Belgium joined the project later, supported by national funding. More information on <http://www.netchildrengomobile.eu/>
4. The interviews were conducted by Karita Gonçalves, in the context of her ongoing PhD dissertation on the access and use of mobile phones among children aged 8-12 in Portugal and Brazil. We also thank Juliana Doretto for the interviews conducted for the project *Net Children Go Mobile Portugal*.

5. This tendency towards low levels of Internet use in schools is consistent with the patterns observed in Italy and Romania. which in turn contrast with the patterns observed in Denmark and the UK, as shown in the first national results of the project *Net Children Go Mobile* (Macheroni & Ólafsson, 2013).

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