Online practices of children under 6: a grounded theory study

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Abstract

With this research we intended to know the practices of children with technologies in home environment. We opted for Grounded Theory, because we do not intend to base ourselves on existing theories, but to create new one. Semi-structured interviews and observations to 15 families were carried out in their homes. Families would have to have, at least, one child under 6 and (preferably) an older brother. Through the collect data we verified that children are surrounded by technologies and use it when they want, including children with 1 year old. They prefer the mobile ones, such as the tablet and the smartphone, but also use the computer, the television and game consoles. Gender is decisive in the chosen activities on the devices, which are used mainly alone and independently, leading to children mastering devices better than parents think.

Introduction

As a consequence of rapid technological and scientific development in today's society, a digital society, children grow up with and live immersed in technology. If we listen carefully to the dialogues of 6-year-old children we can hear words like computer, Internet, email, iPad, mouse, smartphone, Facebook or YouTube, which suggests that children have access to digital technologies, using them with ease and familiarity.

Through several research studies (Gutnick, Bernstein & Levine, 2011; Hamel & Rideout, 2006; Holloway, Green & Livingstone, 2013; Livingstone & Haddon,

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2009; Plowman, Stevenson, Stephen & McPake, 2012; Plowman, McPake & Stephen, 2008, 2010) we can see there is an emergent trend of children under 6 years old increasingly accessing the web, mostly in mobile devices such as tablets and smartphones This can result in progressively young people accessing the Web.

In Sweden, and most likely in other Western European countries, parents between the ages of 25 and 45 and experienced in technology (from a user point of view) are providing their children with access to a wide variety of digital media with Web connections (Findahl, 2013).

According to European research by EU Kids Online (Holloway, Green & Livingstone, 2013), most children up to 6 years old are accessing the Web and the majority of infants under 2 years in developed countries already have an online presence, i.e. a digital footprint.

In the last decade, several studies have found that young children are regularly accessing the Web. For example, in Sweden, in 2011, half of all 3-year-old children accessed the Web; in 2013, that was true for 2-year-olds (Findahl, 2013). In the UK, 33% of children aged 3 and 4 access the Web via a desktop or laptop, 6% access the Web on a tablet and 3% on a mobile phone; the number of children between 5 and 7 years who accessed the Web had increased by 68% compared to 2007; 9% of children between the ages of 3 and 4 used a tablet and 6% used it to

access the Web (Ofcom, 2013).

Children using the Web may bring benefits, but along with this exposure are some risks, such as explicit images or inappropriate language (Livingstone & Helsper, 2010; Ólafsson, Livingstone & Haddon, 2014). Therefore, the activities that children perform online and the risks they are exposed are an important issue to be studied, as it is increasingly important to promote online safety and training for parents of young children.

There is limited research on the role of the family regarding the use of technology by children under 6 years of age, most research puts emphasis on surveys that calculate the number of hours children use new technology each day (Plowman et al., 2012). This is because it becomes a challenge to involve children under 6 as active participants in research and gain access to families in their typical environment (i.e. at home) for interviews (Plowman et al., 2012).

Although young children are active Web users, policies usually target older children, especially teenagers. Consequently, little attention has been paid to the subject of online protection for young children, so the purpose of this research is to examine the perceptions of parents and family members with regard to use of the Web by children aged 6 and younger, in order to have a more in-depth perspective and also to get to know more about the digital activities that these children get involved with (via Web access) at home.

Methodology

The methodological approach is qualitative, this being considered most appropriate, because the main objective is to describe and develop an understanding of a particular situation (Burns, 2000; Creswell, 1998). In particular, we rely on grounded theory, because we do not intend to base ourselves on existing theories, but rather to create a new one (Glaser & Strauss, 1967) by searching and conceptualising social patterns. This new theory "will emerge from the data collection and analysis, inductively emerging from the study of the studied phenomenon" (Corbin & Strauss, 2008, p. 23).

We intend to have an in-depth look at a limited number of cases, in order to get as much information on the use of technology by children and families. We want to focus on their online activities, as well as the benefits and risks associated with these activities using technologies. A total of 15 Portuguese families were interviewed, each with at least one child of 6 years of age or younger. The families were selected taking into account criteria such as being at different socioeconomic levels (low, medium and high), having an older brother, their urban and suburban environment, being immigrants or in stepfamilies.

Semi-structured interviews were conducted in their homes, supported by appropriate techniques to facilitate data collection and motivate the participation of young children (e.g. board games, 'digital tour', activity with cards), and also by participant observation.

Findings

The tablet is the most popular device amongst families, especially for children because 'it´s big and you can see better', 'it has more games' and it´s a touch-device, allowing children to use it with their hands and fingers.

> Jb6: The tablet is bigger than the smartphone. We cannot use our fingers on the computer, we must use the mouse. But now the tablet is all about pressing with your fingers on the screen!

The second favourite device is the smartphone, especially for children under the age of 3 years, because it is lighter and smaller, making it easier to handle.

Most children use a 'family tablet' (one for everyone's use) while one third have their own tablet. Families at a low socioeconomic level tend to give children their own tablet. Families with more than one child but a tablet for each one to avoid quarrels amongst themselves, revealing difficulty in sharing.

Smartphones are seen as personal devices by parents and therefore it is mainly the father who places restrictions on their use by children. Nevertheless, children end up using the smartphones of both their parents, who, regardless of their economic level, own at least one. Tablets are primarily used at home, because parents are afraid a device might get broken if taken outdoors. A smartphone is used outdoors as an alternative device, especially in restaurants, 'for entertainment' [Hm].

Mf: While we are waiting for something, usually they use the smartphones, I'll hand them the smartphone so as to quiet them down. Also, when there are two or three of them they start annoying each other and so [it is]to keep them quiet... .

Both types of device are used whenever children wish to, and they use them mainly alone, most parents assume they do not have time to monitor their activities. A tablet is generally used in the evening, when children arrive home from school, up to evening-meal time, while a smartphone is used more sporadically.

Girls prefer casual games [3], where you can adopt a virtual pet or dress up dolls, while boys prefer action/ adventure games or role-playing games (RPG)[4], such as 'Grand Theft Auto' (GTA), games with their favourite characters from movies and cartoons, e.g. Spider-Man or Batman, or sports such as 'FIFA'.

YouTube is a very popular app, it is used to watch cartoons and movies and to listen to pop music and children's music. Girls prefer 'My Little Pony' movies. while boys like to watch 'Spider-Man' or 'Hulk'. Children under 3 years old also like to listen to music and watch cartoons on YouTube on a smartphone and to select content randomly by following suggestions presented by the app.

Gm: She [Gg5] knows how to access YouTube … I'll select a clip and she'll watch it, she's acquainted with the characters she likes the most, and so from there on she'll select those videos that include those characters in the suggested thumbnails. Even with Gb1, if I leave him watching cartoons on Youtube, as soon as the video is over he'll look at the suggestions and choose a new video to watch on his own. It's like kids are born taught already.

Due to unaccompanied use, most children end up watching violent videos on YouTube, especially on a tablet. Hb5 uses his father's YouTube account settings and usually watches mixed martial arts (MMA)[5] videos.

Hf: I have caught him watching most violent videos or that sort of stuff. The tablet is configured with my email settings and whatever I watch stays preselected, and suggestions are given according to the content I have previously watched. Sometimes I watch MMA videos.

Rules set by parents and hardware challenges inadvertently play an important

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[3] Casual games are games that are directed at players who do not want to devote much time and effort to the game. To progress in a game, the requirements are very low; nevertheless, they present the player with a challenge, performing tasks faster brings rewards. Usually these games are characterized by being colourful, with attractive graphics and sounds, and without negative connotations, such as violence or clashes; they reward the player with small, frequent bonuses, thus giving constant motivation. It is possible for the player to quit the game at any time.

[4] Role-playing games are action games involving eye-motor coordination and motor skills. They focus on the player, who is in control of most of the action.

[5] Mixed martial arts is a full contact sport between two people, including striking and grappling techniques.

role in self-taught learning experience. Witness the following examples:

Case 1. Parents limit devices so that only allow free apps can be installed. Gradually, children will learn how to browse an app store, and even without knowing how to read or write, they can distinguish which apps are free or to buy.

Case 2. A device will have a specific amount of storage capability, which means that, eventually, a child will be challenged with that reality when installing a new app. What we witnessed were children operating devices to understand which apps were occupying the most storage, deleting them and then installing new apps and moving them to labelled folders.

> *E: Do you encourage her to explore any kind of didactic games?*
> *Jm: I know of no game that would interest her. Books are didactic.*

Gradually consoles are becoming less popular, though children still enjoy them, especially boys. The most popular consoles are the PlayStation, the PlayStation Portable and the Wii. They have different roles in the family: the PlayStation already belonged to parents before children were born, i.e. it was an adult technology which was later passed on to children. The Wii console is seen as a family device, purchased for family entertainment.

Children who use portable consoles play individually, while children using non-portable consoles play with family members friends.

Since consoles are mostly used by boys, games end up being more related to sports or action/ adventure, like FIFA, where boys play with friends and family. Most games are violent and inappropriate for their age, such as GTA with a PEGI (pan-European game information) rating of 18+ (i.e. recommended for ages 18 and above), while games like 'Batman' and 'Spiderman' have a PEGI rating of 12+ (i.e. recommended for ages 12 and above).

During the interview, Fm shared that sometimes Fb3 shares some activities carried out in the 'GTA' game with his cousins.

> *Fm: He came home telling [what he had been up to in the game], "I went to a club, I saw a lot of guns and I had a car," "it had girls, it had girls mum."*

The personal computer is becoming neglected at home, especially by children. They will fall back to a personal computer when they don't have access to a tablet, a smartphone or an Internet Wi-Fi connection, or when tablet or smartphone games do not load properly; this is an event that usually occurs in grandparents' homes. Most families have a personal computer at home but prefer mobile devices because they seem to be easier to use and work faster.

A personal computer is more complex for children to operate and will require the assistance of an adult, be it for typing or how to interact with the operating system

by using the mouse.

Boys are more enthusiastic about using computers, mostly because they want to play online games like 'Batman' or platform themed games. They play on their own, without any adult supervision.

Television was a digital device less indicated by children and parents; however, it was the only digital device that was always on during the interviews, thus proving to be transversal to all the others. When they arrive home after school, after putting away their backpacks the first thing they do is turn the TV on to a children's channel. They sit on the couch and with the set-top box remote start searching for automatic scheduled recordings to see cartoons they missed during the day. The whole family (parents and grandparents) will end up watching cartoon channels.

Mf: I almost stopped watching TV because cartoons are always on.

Discussion

Children from a very young age live surrounded by digital technologies in their homes (Marsh et al., 2005; Plowman, 2014), even children under 12 months of age are exposed to monitors and screens, living in a 'digitally fluent environment' (Palaiologou, 2014). They are very fond of using technology, especially mobile devices, such as tablets and smartphones.

Children view technology with one goal: to have fun. These devices are used as toys for entertainment and playing games that relate to real-life games they might already play. The important thing is the activity itself, technology is only a means to achieve it.

The knowledge held by children about using digital devices originates mainly from the home, where several digital media are always available. They learn to use them initially through observing close relatives, including older siblings and parents, deepening their knowledge through practice and the use of various devices, until they become independent.

There are gender differences in the games chosen: girls prefer more relaxed games while boys prefer sport or action/ adventure games. Most of the games preferred by boys are recommended for children older than 12 or 18, but that does not stop parents buying them for gaming consoles

In addition to games, watching videos on YouTube it is also a favourite activity, though this is an activity that a child will perform on their own. Parents are a little naive in this area, leaving children on their own with a tablet or smartphone to watch whatever they wish. In the case of the YouTube app, next to a video that is being shown it will present several related suggestions, this is where children are most exposed to potentially inappropriate content for their age. Parents are unaware of their own children's skills, children can search autonomously for videos and games and discover how to play them. They even acquire operating skills, such as installing and uninstalling applications and managing

a device's storage.

Children are consumers, not content producers; older brothers are also mostly consumers. Perhaps this is due perhaps to the lack of monitoring and experience in creating content, although most children have access to new technologies that are suitable for this intention.

Although children are proficient in the use of technology, schools do not capitalize on these skills and parents also do not recognize the educational gains from this use, restricting its use to entertainment purposes only. Educational opportunities are embedded in these digital devices or can be arranged by parents, siblings or other family members. As McManis and Guennewig (2012) report, 'experiences with technologies can open the way for unprecedented learning opportunities' (p. 14).

Information sessions for parents could explore the various applications and online platforms for younger children, focusing on various kinds of educational programs, informative and focused on entertainment, as well as online safety issues. If we provide children with more opportunities to get involved with several types of technologies and experiences, not only they will improve their operational skills, they will also engage in imaginative play in new and innovative ways.

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