# A Day in the Digital Lives of Children aged 0-3:

# Family perspectives from England, Spain, and Sweden

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## Abstract

Children grow up in homes where digital technology has become part of social practice. From a family perspective, this may be a cause of tensions and contradictions. Parents are known to wish for more guidance as to how to bring technology into their children’s lives in beneficial ways. In this paper, we explore three European cases of family perspectives on tension and contradictions regarding digital technologies (tablets and apps, and digital TV) in respect of a child under three years old. Our participatory methodology involves video-recording, interviewing and compilation of inventories of technologies and skills. We build upon previous research in Australia with an adaption of the TCF (tensions and contradictions for families) framework (Kervin, Verenikina, & Rivera, 2018) to include the areas of practice, selections and monitoring. The three cases are studied from the six factors of the TCF. The family perspectives show some different approaches towards digital activities, but also some common awareness of the need for selections of good quality of tablets and apps as well as TV programmes. They also express some lack of guidance for the selection of children’s media including apps. In addition, the families show contradictions between permitting children’s autonomy and maintaining restrictions for the uses of tablets and apps, while this is usually perceived as less of a problem when it comes to the use of TV.

Key words: Digital literacy practices digital skills, young children, children aged 0-3, tablets, apps, digital TV, tensions, contradictions, home, family perspectives, parental mediation, guidance

## Introduction

It is not a surprise that small children are engaged in digital activities, and this is something that starts very early in their lives. Many toddlers develop preferences for apps on tablets and smart phones, and seem to develop skills for using them easily. Many parents feel conflicting pressures over restricting, permitting and encouraging their children’s engagements with digital technologies. As researchers, we can recognise some of the same concerns arising in the contemporary era as over the use of television many decades ago. However, given the pervasiveness and greater portability of today’s digital technologies, there is a new sense of urgency experienced in society, along with relatively little research with very young children.

## Background and purposes

Recent literature reviews of research conducted on young children’s digital literacy practices in the home (Kumpulainen & Gillen, in press; 2017) have revealed as one theme that parents and carers would welcome more advice. They are faced by conflicting discourses such as the future-orientated emphasis on mastery of a highly technological culture on the one hand and media discourses that sometimes teeter towards media panics particularly in connection with “screen time” on the other hand. Further, many have identified that they would appreciate advice from educators and other professionals they trust. At the same time, research has also demonstrated that there is relatively little knowledge about young children’s digital literacy practices in their homes (Sefton-Green, Marsh, Erstad, & Flewitt, 2016).

The purpose of this paper is to examine family perspectives on very young children’s use of digital technologies, focusing on tensions and contradictions around practices, selections and monitoring.

## Perspectives and theoretical framework

Young children’s interactions with technologies in the home are understood to be complex. We do not claim that this study can best be characterized as posthumanist; rather that a generally sociocultural perspective has benefited from some engagement with the posthuman. Sociocultural perspectives have long been useful in considering use of technologies as social practice, and all facets of human development as cultural (Rogoff 2003). Within educational research Siu & Lam (2005: 357) argue for the importance of sociocultural aspects in technology curricula for young children: ”(…) from issuing policies to planning and implementing a curriculum, we need to consider the social and cultural factors of an education in technology”. From the 1990s at least posthumanism was clearly integrated with the fast development of technology in society, affecting everyday lives (Halberstam & Livingston, 1995; Hayles, 1999; Pepperell, 1995). A particular contribution of the contemporary growing interest in post humanist perspectives has been a richer understanding of technological artefacts than the sociocultural orientation towards them as “tools” (Wertsch, 1998). Tablets and the apps they may include provide diverse environments that can be explored, immersed in, viewed, touched, manipulated and experienced. The relationships between the technology and the people involved in the use of them are complex: “Tablets themselves are always placed resources that get taken up in particular ways as they enter particular kinds of relationships with people and other things” (Burnett & Merchant 2017:239). Thus engagements involving digital technologies can be conceptualised as multiple entanglements, providing the researcher with different “ways in” to the settings they work in.

Young children usually have their first experiences with digital technologies in the home. Children are growing up in media-rich homes (Chaudron, Di Gioia, & Gemo, 2018)) and there is increasing evidence that many are at ease with digital technologies from infancy, “even before learning to speak” (Harrison & McTavish 2018:163). Parents are balancing pressures to position their children towards future educational success with media discourses that sometimes present polarized accounts couched in concern over screen time (Blum-Ross & Livingstone 2016). For example, some research in the medical/pediatric domains seek to investigate correlations between screen time, toddlers’ physical activity and socio-demographic characteristics, e.g. Carson & Kuzik (2017), even if many of us would question both the idea of screen time as a useful construct and the notion that such entanglements necessarily involve the lack of embodied activity.

Nevertheless, we would concur that “the importance of the decisions made by families regarding digital technologies is clear” (Kervin et al. 2018:117). We were particularly attracted by Kervin et al.’s study as its aims were close to ours, it involved multiple research methods and produced a fascinating visualisation of the tensions and contradictions for families (TCF) regarding their young children’s digital play. The TCFs are summarised by Kervin et al. in three areas: practices, selection, and monitoring where “parents seem to reveal tensions and contradictions as they make sense of each area in their own homes for their own children” (Kervin et al. 2018:126). The TCF model includes questions of provision of knowledge from digital technology (practices), the best support from apps (selection), and the apps’ enablers and inhibitors for learning and development (monitoring). Finally, the TCF model includes two factors for tensions and contradictions within each area, in total six factors. We have slightly adapted Kervin et al.’s figure to produce a TCF framework:

Figure 1. Tensions and contradictions for families (TCF) regarding digital technologies adapted from Kervin et al (2018:127).

|  |  |  |  |
| --- | --- | --- | --- |
| Practices | What knowledge do digital technologies provide? | | |
| Expertise with technology as a “new basic” |  | Children also need other educational “basics” e.g. literacy and numeracy skills” |
| Selection | Which apps/TV activities best support children? | | |
| Children need access to good quality products |  | Families need guidance in finding good quality |
| Monitoring | What are the enablers and inhibitors of these for children’s learning and development? | | |
| Independent, creative and self-managed interactions with apps |  | Questions about screen time and interaction patterns |

In the light of the TCF we sought to investigate interactions with tablets and apps, as a relatively new technology. We were also interested to apply the TCF to interactions involving traditional media converged into digital settings like TV. TV is a common form of digital technology in many European homes but one which is receiving less attention currently as an evolving form of a longstanding presence in the home.

With our aim to explore the family perspective on very young children’s use of digital technologies and their role in educational activities, we present the following research questions:

* To what extent are the six factors of the TCF present in respect of the young children aged 0-3 and their families visible in our three cases in respect of tablets and apps?
* To what extent are the six factors of the TCF present in respect of the young children aged 0-3 and their families visible in our three cases in respect of digital TV?

## Methodology

The research design is adapted from “A day in the Life” methodology (Gillen et al., 2007). This design was first implemented in a project studying two-and-a-half-year-old girls in their home settings in six countries (Gillen & Cameron, 2010). It has since been adapted to study young children in transition between Early Years settings and their homes (Gillen & Cameron, 2017).

Researchers and participants put considerable energies in initial contacts about the research, including ethical issues. During a familiarisation visit pilot videoing is conducted. During the main ‘Day in the Life’ visit the child’s activities are video recorded for a minimum of six hours (with the camera off for sleep, bathroom and any requested period). Researchers then separately examine the video, identify approximately six episodes through consensus and return to the family with a compilation. The discussion of this compilation is itself recorded and becomes part of the dataset. Inventories are also taken of digital technologies and operational skills.

Visits took place in 2017/2018. Table 1 presents a brief description of the three participating children and family members, considered in this paper.

Table 1. List of participants (pseudonyms)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Child name** | **Country** | **Child age** | **Family members present for the most of the day** | **Languages used** |
| Lily | England | 14 months | Mother & father | English and Malay (F2F); all technologies and media in English. |
| Roser | Spain | 19 months | Father and younger brother (4 months old) | Catalan; but English and Spanish are also used in some engagement with media |
| Oscar | Sweden | 29 months | Mother, father and two older brothers | Swedish |

We examine all our data in the light of the six factors of the TCF according to tablets and apps, as well as TV. The presentation of the data is structured from the three areas of the TCF.

## Findings

At first, we looked at the area of practice and the tension and contradictions of what knowledge digital technologies provide. All the families, on the whole recognise the use of digital technology as a new basic skill whether at the current stage of development or in the future. But at the same time, the families supported the idea of the need for other educational skills. In particular, the parents of Roser in Spain view clearly that technological skills are complementary to what they call ‘principles of knowledge’ such as how to read and write on paper. They believe that children should learn these basics before learning technological skills.

Figure 2. Tensions and contradictions for families (TCF) regarding the practices of digital technologies as tablets and TV adapted from Kervin et al (2017:127).

|  |  |  |  |
| --- | --- | --- | --- |
| **Practices What knowledge do digital technologies provide?** | | | |
|  | Expertise with technology as a “new basic” |  | Children also need other educational “basics” e.g. literacy and numeracy skills” |
| TABLETS:  Yes. Seen as essential (Lily)  Yes. Seen as necessary for “studying” and “acquiring knowledge”in the future (especially perceived by the father as such) (Roser)  Yes (Oscar) | TABLETS:  Yes, tablets used to support literacy, numeracy, colours, nursey rhymes etc. (Lily)  Yes, but tablets are not yet seen as relevant as technology is considered as ‘complementary to the basis of knowledge, such as how to read and write on paper (Roser)  Yes (Oscar) |
| DIGITAL TV:  Yes. TV on in the background continuously (Lily)  TV on the background continuously, but for adults’ entertainment (Roser)  Yes. TV on in the background continuously (Oscar) | DIGITAL TV:  Yes, TV used to support literacy, numeracy, colours, nursery rhymes etc. (Lily)  Yes, but TV is not used to support the educational basics yet (Roser)  Yes and no, TV used mainly for entertainment but repeatedly watching some of the children’s series encouraged to sing-a-long in songs etc. (Oscar) |

The acceptance of digital media is even more obvious in the way TV was used in the homes. The TV is more or less regarded as a natural ingredient in the home environment, as a wallpaper of images and sounds. For the families except that of Roser it is also clear that the families regarded the TV to support the other educational basics, both at the time of the study and projecting into the future. Entertainment and educational effects were especially shown in the Swedish case, where Oscar did develop his literacy skills through repeated watching of some of the favourite children’s shows.

In the area of selections, we explored the tensions and contradictions of the decisions on choosing good products for the children and the guidance for doing so. The families showed awareness of the need for the children to be able to access quality products, but at the same time they expressed their need for guidance. In the Swedish case, Oscar had just started to use apps and the mother did not show much of a concern for guidance for the time being. She did have an overall concern about the knowledge-gap between herself and her children (Oscar’s two older brothers were already users of different digital technology but not really allowing Oscar to be part of their activities). In the interview, Oscar’s mother expressed the following: “And this is what could be called the new society, and just to accept what they are doing and realise that you are more than one generation older than your children.”

Figure 3. Tensions and contradictions for families (TCF) regarding the selections of digital technologies as tablets and TV adapted from Kervin et al (2017:127).

|  |  |  |  |
| --- | --- | --- | --- |
| **Selection Which apps/TV activities best support children?** | | | |
|  | Children need access to good quality products |  | Families need guidance in finding good quality |
| TABLETS:  Yes, mainly provided for through filtered access to children’s YouTube, CBBC etc. (Lily)  Yes, parents carefully monitor children’s use of all technologies (although there are some difference between parents). (Roser)  Apps are very new to the child; this is not currently perceived as an issue (Oscar) | TABLETS:  Yes, mentioned in interview. (Lily)  Yes, spontaneously mentioned in interview (Roser)  Not much of an issue (Oscar) |
| DIGITAL TV:  Yes, provided for through children’s programming, natural history programmes etc. (Lily)  Yes, but TV is not used for their children yet (Roser)  Subscription to certain provider with children’s programming, as well as the Public Service give better guarantees for quality (Oscar) | DIGITAL TV:  No, parents are confident in their own balancing of children’s programming, educational programmes and presence of adult TV for their own interest. (Lily)  Yes, but TV is not used to support the educational basics yet (Roser)  Not an issue. (Oscar) |

Also, regarding the access to quality products in TV, the families showed great awareness. Television is considered a medium where parents already have good skills in finding good quality ones. Both the English and the Swedish case families mention Public Service as a guarantee of quality.

The third and last area is the monitoring issue, highlighting both enablers and inhibitors. Here the tension and contradiction are about independence for the child to interact with apps and TV as opposed to the restrictions of time and interaction. For the apps, we see different orientations from the parents, from freedom to monitoring. This can be explained by the different ages of the small children. It is also clear that the families have thoughts about screen time and interaction patterns. Parents express concern for a balance between digital and non-digital activities. The Spanish case shows some reluctance to digital activities, especially by the mother. She said, “The later you enter this [technological] world, the better. And when you enter you should know what is there. I think that if you teach [the children] from when they are small, that access is so easy and such, and then to cut it is much more difficult”.

Figure 4. Tensions and contradictions for families (TCF) regarding the monitoring of digital technologies as tablets and TV adapted from Kervin et al (2017:127).

|  |  |  |  |
| --- | --- | --- | --- |
| **Monitoring What are the enablers and inhibitors of these for children’s use learning and development?** | | | |
|  | Independent, creative and self-managed interactions with apps |  | Questions about screen time and interaction patterns |
| TABLETS:  Yes in that she can select apps and videos herself, especially through a passion for colour. She is not yet creating own material or initiating communications. (Lily)  Not yet. Parents choose the cartoons to show the child. She is not yet creating own material or initiating communications, either, but the parents are aware that the child has acquired some skills (how to stop a cartoon, try playing a cartoon herself). (Roser)  Yes, even if the child was introduced to apps recently, he learnt very quickly how to manage the apps and how he could interct with them. (Oscar) | TABLETS:  Yes, parents are concerned to balance tablet use with non-digital activities. (Lily)  Yes, the mother is concerned about the engagement of the child with digital devices. She thinks less is better. (Roser)  Since it was very new to the child, this has not become an issue at the time for the interview. His focus was still very much on the TV. (Oscar) |
| DIGITAL TV:  The child has some interest in supported interaction with children’s programming. However her main interest for most of the day lies in identifying and watching adverts. (Lily)  The focal child is not appearing to take any notice of the TV yet. It is a background to the family’s everyday life. (Roser)  The child is an active TV viewer with focus on favourite programmes. Mainly programmes without advertising. (Oscar) | DIGITAL TV:  No. Parents are observant of their child’s interest in adverts. Also they make connections between children’s and educational programming with the environment and her learning. (Lily)  The parents are concerned about the younger brother (4 months old) staring at TV screens and turn his face away from it (Roser)  No. This is balanced with interaction with family members and other activities during the day. (Oscar) |

In the case of the TV monitoring, the families show a different attitude but with less concern for monitoring screen time and interaction patterns. This aligns with the fact that the TV was continuously on in the three homes.

## Discussion and Conclusions

This paper is limited in that just three cases are studied in the light of the TCF framework and with regard to two technologies. Nevertheless, findings show some common perspectives as well as differences with regards to the family’s practices, selections and monitoring of their children’s digital activities with tablets and TV.

Tablets and apps are perceived by the families of Lily and Oscar to be enhancing their development and learning. Distinctive educational purposes were perceived, such as learning nursery rhymes or exploring colours. The situation was more ambivalent in the home of Roser, whose parents were somewhat divided on the issue as to whether a tablet and apps could ever be educationally useful. Nevertheless, the tablet was perceived as something engaging entertainment, although its use was carefully limited and restricted to viewing of cartoons on YouTube. Potential educational use was seen as lying in the future.

In all three homes studied here, the TV was on continuously. Nevertheless, there were strong differences in its perceived presence in the home. In Roser’s home the TV was on continuously yet perceived as salient only to any adults present, despite the immediate contrary evidence that the four-month-old baby was noticing it. However, decisions as to content belonged to adults and it was not perceived as relevant to the child. In Oscar’s home, the engagement in children’s programming was very active and he interacted in the programmes by repeating dialogues and singing along with characters in the programme. In Lily’s home, time was divided between child-oriented programming, and, for the majority of the time, adult programmes in which she showed no interest. However, she was extremely interested in advertisements, as noticed by the parents.

The TCF framework gives us an idea of some concerns among parents of small children and their upbringing in a digital everyday life. None of the families turn against the digital activities, in terms of the practices. But when it comes to selections, they perceived the need of guidance for the good quality products. It is also clear that there is a tension and contradiction regarding children’s independence and restrictions of digital activities with tablets. We do not see the same pattern for digital TV. It is not considered to be digital in the same aspect as tablets and apps. The TV has been around for a long time in homes, and therefore already part of the social and cultural practices in everyday lives.

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