

# Growing Up in a Digital World

## An explorative study of toddlers' access to and use of digital technologies at home

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### Abstract

*The present study intends to explore how seven young children (1 1/2–3 1/2 years) living in middle-class families acquire access to and demonstrate a wide range of skills with digital technologies at home. The study is based on the parents' accounts of their observations, and reflections upon their toddler's engagement with digital technologies. A short questionnaire, informal talks and visits together with interviews, are used in order to illustrate how, when, and where the toddlers access and use digital technologies. The focus is on the actual accomplishment and display of digital technologies at home and the findings highlight the content, goal and dynamic of young children's interaction with these technologies. It is argued that toddlers' experiences of digital technologies are mostly fitted into the families' daily practices and do not displace other social and cultural activities. The parents draw on insights into the disadvantages with an excessive and early interaction with digital technologies while admitting that they give in to the actual and practical benefits of them.*

### Introduction

Today it is almost impossible to imagine our everyday lives without digital technologies. Children who neither are from Mars nor live in a social vacuum are living among us and taking part in our social, cultural and material world which is highly saturated with digitalized new technologies.<sup>1</sup>

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<sup>1</sup> New technologies are used by Marsh (2005) to refer technological innovations that have been made possible through digitization. It can also include old technologies such as radio, tape recorders and television which have been transformed through digital signal.

Despite the fact that young children are surrounded by and actively use a wide range of digitized technologies from a very early age in their homes, little research engages with exploring 1 1/2–3 1/2 year old children's dispositions towards the use of these technologies (Zevenbergen 2007, Marsh 2005). This might be partly explained by referring to a traditional discourse in early childhood education where young children are viewed to be natural, pure and vulnerable (Halldén 2009, Rogers 2011) in contrast to technologies which are unnatural, manipulative and dangerous to the children. Not only are technologies in conflict with essentialist discourse of childhood but even the popular culture and media communication – both of which are highly included in the concept of new technologies – are in direct conflict with the traditional images of good parenting, viewing children to be in need of active control and protection by their parents from public media (Rönneberg 2008). These are of course images and rhetoric which bear little relationship to the actual everyday play and practice of a large number of young children aged between 1 1/2–3 1/2 years in Sweden and many other countries in our world (Souza & Cabello 2010, Mediarådet 2010). This article intends to explore toddlers' access to and use of digital technologies as well as enhance the thoughts and reflections of parents on the role of digital technologies in their toddler's play and every day practices at home. The term toddler is here seen as related to age, addressing children between one and a half and three and a half years (Engdahl 2011). Like other young children, even toddlers are eager to be involved and participate in adults' world (Rogoff et al. 2003) and their "fascination for adults' everyday practices as well as their motivation to act more competently can motivate their play at this age" Wood (2009).

## **Current research on digital technology and children**

Children's interaction with and uptake on digital technologies are not limited to the use of computers but extend to all areas of everyday life including white goods (microwaves, ovens) and household goods (television, digital discs (DVDs) as well as personal items (watches, mobile phones, electronic personal digital (PDA's) and computers (Zevenbergen 2007: 20). A number of educational researchers suggest that children's exposure to digital technologies, even if those technologies are not specifically designed to be used by them, creates new and different experiences and

transforms their very nature of play and learning (Gee 2003, Kress 2003, Prensky 2003, Jewitt 2006, Zevenbergen 2007).

Kress (2003), introducing a multimodal theoretical perspective, argues that digital technologies offer simultaneous interplay with different modes present on the screen, not only written words and speech but also shapes, movements, sounds, signals, icons and colors. This is of special importance for young children who are not able to read. Commentators on education are arguing that digital technologies allow young children, to test, make choices, experiment and engage in active meaning making through different modalities (Gee 2003). Their interaction with digital technologies receives immediate responses from various modes which offer new potentials for engagement. For example, pressing buttons on a remote control can produce very different responses such as texts and music on the screen as well as photos on a digital camera or a mechanical movement such as lifting up and open garage doors automatically. In many ways toddlers create understanding and knowledge about what happens when they press a button long before they can read a text, most likely through pictures, movements and sounds.

Prensky (2005) uses these arguments to suggest the rise of a new generation of young learners called “digital natives”. The term refers to the generation who has grown up with and in the digital technologies and thus experiences that as their social and cultural context. To differentiate between children and young people and their parents and teachers, Prensky coins the term “digital immigrants” which is opposite to Tapscott’s (1998) term “net generation” and refers to those who are not born into this technology-rich world but try to learn it as if it were a second language. Some of the capacities and characteristics which are easily taken up by “digital natives”, while they need lots of practice and should be learned by “digital immigrants”, are, according to Prensky (2005):

twitch speed (quick thinking and reaction instead of conventional speed and step by step logic), parallel processing (multitasking, phone, Xbox, television, radio instead of linear processing), random access (hyperlinks, multiliteracies) instead of linear thinking, seeking graphics, pictures, visual representations for information instead of seeking texts first, seeking rewards and pay-offs instead of patience, seeking to be actively engaged in activities instead of passive user or audience.

At the same time, there is a strong argument (Bennett, Maton & Kervin 2008, Helsper & Enynon 2010) that highlights the lack of empirical evidence for the rise of a new and uniform generation with certain particular characteristics shared by all children and young people. Buckingham (2009) criticizes Prensky for decontextualizing the impact of digital technologies on young children's learning and play. Similarly Livingstone (2002) shows how they fail to recognize diversity relating to age, socio-economic situation, ethnicity and gender. Livingstone's empirical and longitudinal research (2002) shows that "new digital technologies have limited consequences in and of itself on children and young people's social and cultural context of living". She suggests that the traditional patterns of socio-economic divide continue to be present in the context of children's everyday living and have impacts on access and use as well as the support and guidance children receive within the context of their families and schools. Buckingham's (2009) research illustrates the same process showing how "On the one hand access to the intellectual and cultural capital is needed to use the technology in effective and creative ways and on the other hand better quality computers and software costs money" (Buckingham 2009). This argument of course should be applied to all digital technologies used within middle-class families and is not limited to computer and software use.

Holloway and Valentine (2003: 3) argue that despite the growing importance of digital technologies in our days, there is a lack of empirical studies which can illustrate how people actually use these technologies in an everyday context. They severely criticize the current debates over digital technologies based on two main assumptions which they summarize as follows:

1. The notion of technological determinism<sup>2</sup> which argues for the rise of a whole new generation which is transformed by new technologies and have distinctive characteristics, regardless of time and place.
2. The notion of on-line and offline worlds being different and unconnected, which is an attempt to decontextualize the research on digital.

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<sup>2</sup> Technological determinism, according to Byrom and Bingham (2001) mean that "the impact of any technology is not modified through particularities of time and place neither by who is using it and their intentions. They draw on metaphors of inevitable change in which people are transformed by technologies".

On the contrary, Holloway and Valentine (2003) draw on a growing body of academic research that views digital technologies and their users to be in a relational process. This means, that they view children to be able to use digital technologies in various ways and for goals other than those thought by designers and manufacturers, depending on their own needs and agendas in the context of their everyday life and play.

### **Digital technologies and play**

Children's capacity to play is acknowledged to be a universal social practice that emerges from the experience of being immersed in daily life and is characterized by spontaneous imitation, reflection and interpretive reproduction (Corssaro 2005, Evaldsson 2009). In this social constructionist approach to play, the most interesting question is not whether children play, but with what and how they play. Kamp (2001) made an inventory of children's play across different cultures and pointed out that in most countries over the world:

Children model substantial aspects of their play on adult activities and in so doing, learn not only the social roles and cultural values and norms typical in the culture but the skills and competencies necessary for survival and productive community membership (Kamp 2001, cited in Marfo and Biersteker 2011).

Re-phrasing this only slightly we are able to view the skills and competencies necessary for survival and productive community membership in our time to be highly influenced by and related to digital technologies. When viewed as processes, children's interactions with digital technologies appear in many respects as play activities, according to the criteria for defining play suggested above (Gee 2003, Kress 2003). Furthermore, studies on how and in what ways the new technologies shape the play experience of young children insist on considerations needed to be given to the role played by parental influences in shaping young children's play (Halloway & Valentine 2003, Göncü et al. 2000). Research on new literacies suggests that children acquire knowledge about the role, nature and purpose of reading and writing long before starting school, in the context of their everyday relationships with their families and peers (Fast 2007). It is most likely that the same processes should occur in relation to interacting with digital technologies and acquiring media literacy (Marsh 2005). Thus children learn about the role, nature and purpose of digital technologies

through play and every day practices at home long before they start in pre-schools.

### **Method and materials**

This study is inspired by the ethnographical oriented qualitative research where the methodology is characterized by the close proximity to the object of study. Attempts have been made to view from the inside by visiting the families in their everyday environment at home and asking those who want, to do some video recording. Parents are asked to illustrate and report their observations of their toddler's access to and use of digital technologies. The study acknowledges these parents as facilitator and mediator in their toddler's access to digital technologies at home and is based on their reports and observations as well as reflections and thoughts about their toddler's interaction with digital technologies as well as their own access and use of new technologies.

The seven families who volunteered to take part in this study all had children aged between 1 and 3 ½ years old. I carried out interviews with these families asking them to share their observations and reflections upon their toddler's typical activities, access and use of digital technologies with me. The interviews were conducted together with parents and their toddler's at home with a focus on each parent's account of the materiality, possibilities and limitations of digital technologies in their everyday life and their toddler's encounters with these artifacts.

Each family received an introduction email two weeks prior to the interviews, including the study's objectives and a short questionnaire. The questionnaire's goal was to investigate their toddler's access and use of digital technologies as well as frequency and amount of time spent on other activities in the toddlers' everyday lives such as watching TV, playing outside, reading books. The questionnaires were answered by the parents of five boys and two girls followed by interviews with six mothers and one father. Only one father answered the questionnaire (six mothers) and one father did some video recording. Otherwise the mothers were those who participated in the interviews, answered my questions about their observations of their toddler's play and learning with digital technologies during the interviews and informal talks. These parents have different ethnic and cultural backgrounds and speak various languages (Swedish, Polish, Persian and German) at home while they all have higher education at university level. All toddlers have been given pseudonyms and parents are referred to by using their toddler's pseudonyms.

Examples from video recordings have been transcribed and analyzed together with the parents while observations and questionnaires were discussed during the interviews. The resulting data were reviewed for common themes in the responses from the parents and analyses proceeds by looking for patterns and relationships (Goodwin & Goodwin 1996: 44). The empirical findings of the entire data material (observation, questionnaire and interview) are discussed in relation to the recent research on the impact of digital technology on toddler's play and learning.

## **Findings and discussion**

The findings from the questionnaire address issues relating to access and use of toddler's use of popular culture, media and new technologies. Questions about ownership of books, videos/DVDs and computer games and other social activities were identical with Marsh' (2005) questions in "digital beginners" project. The overall picture made clear that these toddlers had access to a wide range of digital technologies and various ways to use them in their every day practices and life. Parents give information about the quality and frequency toddlers engage with computers, toys, TV, books and other activities. As in Marsh' study, age had impact on level of access to and use of digital media. Additionally, the questionnaire's findings pictured also the typical activities and the digital resources which constitute the home environment of my informants and were used as a complementary background to interviews and observation.

### **Observations**

The families participating in this study live in media-rich middle-class households, with unlimited access to a wide range of media<sup>3</sup> and technologies which are upgraded continuously in response to technical advances. The parents are between 30 and 50 years of age, have college or university education, own their residences and use computers and other advanced digital technologies both at work and in their homes. Both parents were interested and engaged with purchasing and taking home digital technologies and new media. One of the parents (at least) in each family appeared to have enough technical competencies to cope with the challenges of

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<sup>3</sup>According to Marsh (2005) media is a term used for materials and resources in a range of formats and modes which are used for communication.

making them work in terms of applications and use. I have visited each informant at home, asking them to show me the items they considered to be digital or to be containing partly the new technologies in their homes and to explain when and why it was brought into the home, by whom, and how they use it now in the domestic routines of their everyday life. The informants viewed their households to be media-rich with constant and regular access to and use of information and communication technologies at home as well as having a few digitalized domestic white household machines. Although individuals within these seven households told me of having different levels of technical enthusiasm, interest and competencies, they all agreed that they can save time and increase the quality of their family life through their extensive use of digital technologies.

### **Patterns of access**

Toddlers are most likely to be where their parents are at home and for my informants, digital technologies were ubiquitous. They had their mobile phones and laptops nearby, constantly using them for various activities such as searching for information, communication and entertainment. The location of digital gadgets in shared family rooms followed a similar pattern, where kitchens contained white goods and sitting rooms were the place most families located communication and information technologies, sometimes even bedrooms, bathrooms and inside the cars. According to my informants these objects were incorporated into domestic routines and schedules of everyday life without fixed spatial boundaries.

### **Patterns of use: To play**

My informants reported their toddler's usage for these technologies to be dominated by communication and information technologies. Even though the toddlers are with them and watch how they use digitalized household machines, they are prohibited from using those machines by themselves. When it comes to media communications, the toddlers are sometimes encouraged to talk via mobile phones or Skype to close family members and relatives.

Nevertheless, my informants told me that their kids are interested in playing with these gadgets too. Some toddlers received older versions of the parents' cell phones to play with.



Anna's mother: Both kids use our old empty cell phone shells. They also use other similar pieces like wooden or plastic toy blocks which they hold on their ears and talk through. These cell phones are also used for several other things: doing pictures, cleaning something, eating etc. My daughters play with these cell phones as they do play with any other toy.

Melvin's father: He can sit down and imitate playing piano on an old tangent board like I do on piano. Pressing the buttons one by one and singing!

Merry's mother: She has received my old computer key board and her dad's old cell phone! She carries them around with her, talking in the cell phone and pushing down the keys of the keyboard with it resting on her knees. She tells me then that she is working!

These data lend empirical support to emerging research on children's play with and on digital arenas (Aarsand 2010, Waller 2011, Plowman & Stephen 2005). Parents assured me that digital gadgets are as good as any other toy when their toddlers play!

Anna's mother: Both the girls love to use the mouse and the wheel in the middle. I usually take the mouse off the computer when they are playing with it, they don't care.

- TV remote control is sometimes used instead of cell phone by my little one. Especially the colorful buttons are loved by her.

These toddlers take digital gadgets to their play world; make the remote control be a cell phone, and cell phone to be a vacuum cleaner. The toddlers' fantasy and play is, according to my informants, saturated with digital technologies and so are their everyday practices.

Anna's mother: Nearly every day I get the request from A to send an email to the squirrel (it brings us sometimes gummy bears when they are nice to each other).

Merry's mother: There is another funny App with a cat. The Cat stands in a room and you can talk to it. It replies to what you are saying but an octave higher. It is very funny and interesting to watch how she behaves. She doesn't seem to realize that this cat is not real. She

talks and sings to it like I would do to you on Skype. The cat even got several invitations to visit us!

At the same time some parents expressed anxieties about the kids losing the ability to fantasy and play because of excess engaging with new media.

Merry's mother: I have read somewhere that children's' books and oral narration stimulate children's own fantasy while digital media and TV leaves no place for that! I am so afraid that she won't be able to play, if she engages with these media at this age!

- We used to visit the library and Merry loved to borrow children books about Pippi and Alfons. Last time we were there she was just looking for the computer games in the library. It makes me alarmed. I don't know if it is a kind of snobbish point of view, but I prefer her reading books. Of course the games she borrowed were based on Pippi and Alfons stories!

The parents are ambivalent and a frequent source of anxiety for some is that they have read reports on research that pointed out negative impacts of digital technologies on children's play and fantasy. In spite of the fact that their own experiences did not confirm these reports, they felt uneasy about letting their children play with digital technologies.

### **Patterns of use: To get in touch**

The toddlers were also facilitated and encouraged to use the parents mobile phones and computer screens connected to video cameras and Skype to communicate with the parents (if one of them is working abroad temporarily) or the grandparents and other significant persons in their toddler's life.

Leon's mother: We travel quite often for our jobs both of us. When we are abroad, then we still can get in touch and talk to him by cell phones wherever we are.

Elton's mother: Grandparents live far away. Once a week we talk to them on Skype! He loves to watch and listen to them though he rarely talks to them himself.

These families told me about their mobile career and using digital media to connect within family and with significant relatives. These technologies were used to compensate for the physical distances and helped them to feel close even when they were far away. To get in touch through cell phones, computer screens and Skype refute some claims about digital technologies causing engagement in excessive solitary activities and generated communication in order to intensify family relationship.

### **Children's culture and convergence**

Furthermore, these parents describe the patterns of use for these technologies to be a part of the social and cultural routines of their families, and their toddler's are not excluded by any means.

Leon's mother: We listen to music, watch family albums and children movies with the help of these technologies. We mostly use the laptop to see short films like Pingu, Barbapapa or other age-appropriated children programs.

They use their laptops and iPhones as they used children channels on TV, or children literature in print before. Digital technologies make it easier and cheaper to access children-appropriate literature, music, games and films. The parents' preferences and values along with specific motives and choices related to their various first language used at home, was highlighted as crucial when it comes to choosing activities on digital media.

My informants reported that they often use new technologies in relation to the traditional media, such as children books, TV programs, rhymes and music, construction games (Lego), puzzles and other favorite children's activities. I find the concept of "convergence" to be useful for analyzing this data. Both Buckingham (2009) and Jenkins (2006) dismiss anxieties related to new media causing cultural degradation. According to these researchers historically it is documented that "the new media do not necessarily replace older media but rather add to the range of options that are available through convergence of the old and new media".

The parents in my study commented that together with their toddlers they can do puzzles and games on their computer, watch children TV programs (bollibumpa) on YouTube and listen to children's popular music groups (mamamu and kråkan) on iPhones in the car or on the train. The new media offers them a space for traditional ideas, norms and values related to children's upbringing as well as new entertainment and games.

Jenkins (2006) argues that “new digital technologies are constantly blurring the boundaries between different media and draw together the previously distinct technologies, cultural forms and practices, both at the point of production and reception”. This, according to Buckingham (2009), may change not only the reasons why people use media technologies but also allow different people to use them in different contexts. According to my informants bed time stories read at the bedroom can be used to put the toddlers to sleep in the cars abroad or in the summer cottages in the countryside during their holidays. Different people, such as grandparents or baby sitters, are able then to use the same story in other places than their own residence too.

Elton’s mother: We use to download his favorite goodnight tale on my iPhone and let him listen to it while I drive after a working day towards our holiday residence or if we have a nanny.

These data lend empirical support to emerging conceptual work on convergence (Jenkins 2006). The computers, digital video players and iPhones and e-books open up for new communication facilities and extended concept of space and time where the toddlers can feel at home even when they are not at home and connected to those who are important for them everywhere and anytime. Digital media do not replace children’s music and literature according to my informants, rather they add to the range of options of contents available at home and increase the range of places where they may access their toddlers’ favorite entertainments.

## **The toddler-initiated access**

The toddlers happen to access mobile phones, remote control or other digital gadgets at home beyond the parents’ control, accidentally and in a moment when the parents are busy and unaware of their activities. According to the parents, these interactions are characterized by spontaneity, playfulness and curiosity. The parents explained how they have to interfere quickly and abruptly as the digital gadgets are mostly expensive and sensitive to a toddler’s impulsive activities no matter if they are testing, exploring or imitating the adults or their older siblings.

Leon's mother: He can reach the cell phone, put it on his ear and imitate me talking to his dad. Worse is though when he presses the keys and changes all my installations on my iPhone. It takes him a second to change but plenty of hours for me to restore the gadget.

Viggo's father: If he manages to come upon my laptop then I can never know how it will end. Last time I found new downloaded sites on my laptop which I never knew about it. I am sure I had not downloaded them and there is nobody else who uses my laptop (laughing) I believe he can already surf on the internet!!!

The toddlers' own initiative on and with digital technologies was not appreciated by the parents' although they could sound proud of their kid's abilities and engagement with the gadgets. The practical result was viewed as a serious sabotage and the parents preferred to teach the toddlers how to deal with the gadgets first.

### **What can toddlers do on their own and the need for control**

I asked my informants to tell me about the things their toddlers are able to do on their own:

Anna's mother: She can turn the computer on and off, insert USB, use remote control for both TV and CD player, look at photos on my iPhone.

Merry's mother: She is able to operate a mouse, moving it around the screen to click on items, draw lines and objects on my laptop. Sooner or later she discovers what to push and how to do to reach her desired program too. She can scroll on my iPhone, watch photos and start films on it also.

According to Aarsand (2010) middle-class families are particularly keen to control their children's access and use of digital media by applying rules to restrict and guide them. As in his research, my informants seldom do let their toddlers use any gadget unattended. My informants explain that they have plenty of rules to control their toddler's access and use of digital media. They also talk about having certain goals to achieve for their kids' usage of digital media.

Aboul's mother: In the day care we have decided with other parents to limit our kid's everyday access and use of digital media. We think it is necessary from a very early stage to show that we are in control of the gadgets and do not let them get absorbed by these technologies.

Melvin's father: This is a reality now that we live in a digitalized society. I want my kid to learn to use the new technologies and develop competencies related to them. Of course I control how long and what he engages with but I do not stop him.

Aboul's mother: I think some Apps (those I found) can be quite a good addition to the conventional toys.

The influence of parents' preferences and values, along with the practices, resources and the culture of the home in which they live framed these toddlers' access and activities on digital arenas.

## **The parents' reflections upon their toddler's access and use of digital technologies**

In spite of living in a technology/media-rich environment my informants appeared to have little hesitation in specifying where and why their children have access to or customarily used digital technologies. There was general concern about the amount of time the toddlers engage with screens whilst playing outside, reading books, and social interactions with other children and adults were always to be preferred. A frequent source of anxiety for my informants is the thought that the toddler's use of digital technologies can make them physically inactive or drive them into engagement with excessive solitary activities. They were also worried about the brain deficiencies and other social and physical impacts of an early exposure to digital media as reported regularly on public media. For the parents in my study the toddlers' engagement and fascination with digital technologies was a fact that they tried to control from the very beginning in order to prevent future obsessions with internet and computer games. Nevertheless, all my informants told of using media/ digital technologies when their toddlers are really tired, irritated, impatient or sick and in need of consolation, distractions or entertainments.

Distractions that are viewed to be both legitimate and successful included using cell phones for example when the toddler's showed annoy-

ance during long journeys, waiting for meals to get ready or obligatory unpleasant activities:

Aboul's mother: We are really concerned not to use or encourage his fascination with these kinds of things too much, but when we are traveling in the car, then he needs distraction. He hates long car trips, cries all the way and he really calms down when he is watching videos or listening to music on my iPhone in the car.

Viggo's father: We believe that while they are so young they should engage with other things rather than digital technologies. The only time I let him use my mobile phone is when we want to cut his nails or hairs!

My informants are neither eager nor positive about the toddler's early introduction and engagement with digital media, particularly computer games, but then they often give in to it as well, largely because of the educational claims related to some of these programs and also convenience for having time for doing other things like preparing the food for the family:

Aboul's mother: I believe that in our digital society young children need most of all concrete experiences with real things which they can touch, feel and smell, not merely images and games. I really believe parents should have a great control on their children's media access. But we have two boys and the younger one is inevitably drawn to and engaged in his older brother's activities, watching him playing video games and other stuff in our shared family living room while I am trying to prepare the dinner!

Learning and education also motivate parents to use digital technologies:

Aboul's mother: We have plenty of developmental and pedagogical programs and games for him and he is allowed to use them moderately.

He has been delayed with his speech and we have received good programs which help him a lot!

These families had abundant access to digital technologies but nevertheless determined to limit and control the patterns of their toddler's use of these devices according to ideas, norms and values related to what they

believed as an appropriate childhood and good parenting (Zevenbergen 2007, Waller 2009). Themes and categories drawn from the interviews contained both negative notions of risk, ambivalence and vulnerability as well as positive notions of training, development, play and learning.

Leon's mother: He is really attracted by computers and iPhones and is keen to use them more often than what he is allowed to do. I do not know if it is wise to let him do puzzles and games on the screen at this age. I have been a teacher myself and remember my first graders being totally absorbed by aggressive and violent computers games, at the age of six or seven.

My informants are worried about their toddlers becoming an extreme user of violent games on computers if they start at an early age and enjoy watching YouTube clips!

Melvin's father: I am a great user of computer games myself and I can play profound amounts of time while I am very much concerned about all the risks and negative impacts of games on young children.

Taking a lead from commentaries related to health and education where empirical evidence has a focus on extreme users, these parents claimed to be ambivalent to their toddler's use of and access to digital technologies. There is a discrepancy between these parents' own everyday practices, access to and use of digital technologies and what they perceived as appropriate for their toddlers. The families assert anxieties about computer games and digital media, regarding them as a threat to the toddler's perception and emotional development while at the same time explaining that toddler's play and interaction with digital technologies is an inevitable part of their everyday lives and practices as well as of their children's future.

## **Conclusion**

This study explores the ways in which toddlers, their families, their material environment and their everyday practices together create a context within which children access to and use digital technologies. Holloway and Valentine (2003: 159) insist on "the need for focusing on the routine, mundane and the banal everyday practices in order to provide detailed em-



pirical evidences which demonstrate the complex mutual constitution of children's on line and off line lives". Throughout this study the empirical findings demonstrate how the toddler's early experiences of digital technologies in middle-class homes are embedded in the contexts of their social relationships as well as constitute a highly practical part of their everyday life. The data in this study illustrates how meaning and use of digital technologies are related to entertainment, communication, play and learning as well as providing the toddlers with familiar experiences of everyday practices. The parents illustrate how their toddler's experiences of digital technologies are mostly fitted into the families' daily practices and do not displace other social and cultural activities. They also explain and illustrate how digital technologies have emerged into their children's play. Nevertheless, the parents express their consciousness about the disadvantages of extreme and early use of digital technologies based on a powerful set of discourses about good parenting and appropriate childhood. The parents are anxious about early access to digital technologies viewing their toddlers as fragile and in a state of development. A wish to give the toddlers a wide range of physical and conceptual experiences, combined with fears about becoming physically inactive, excessively solitary or aggressive, has meant that the parents are mostly ambivalent toward letting their toddlers access digital technologies and try to control their access to and use of these digits. The parents facing decisions about when, where and how their toddlers' access and use digital technologies frequently shift between understanding the disadvantages of an excessive and early interaction with digital technologies, and recognizing the children's own initiative and interest as well as the actual and practical benefits of them.

### **Acknowledgement**

The author wishes to thank the families who have contributed to this study by opening their homes, taking their time, and sharing their observations, reflections and thoughts with me about their toddler's and digital technologies.

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