

Reading and digital media: European perspectives

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Abstract

The on-going discussion between parents, educators, politicians and academics on the consequences of screen reading as compared to reading from paper is filled with controversy. This chapter aims at providing a factual context for these debates. We first focus on early studies concerning children's use of media. We then summarise available data on children's digital media use and media preferences based on national and cross-national surveys conducted in Europe since 2010, including reading in a family context. We also look at evidence related to digital reading in public and school libraries. We conclude by discussing limitations in the available methodologies and possible new approaches to be taken to enhance our understanding of the ways in which reading is changing.

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1. Reading and digital media: Utopian and dystopian perspectives

Discussions on the presence of new media in our lives have usually developed within a field of tension between utopian enthusiasm and elevated hopes about the potential of new technologies and the dystopian rhetoric of fear about the moral and intellectual degradation of society in general, and children and youth in particular. The debate is not new; similar dichotomous approaches accompanied, for example, the widespread introduction of TV into family life. In *The Disappearance of Childhood*, Neil Postman (1982) argued that TV was likely to erode the distinction between childhood and adulthood as the use of the new medium required neither special prior knowledge nor fostered the development of new skills. Andrew Keen (2007), in *The Cult of the Amateur*, deplored the degrading effects of a Web 2.0, favouring user-generated content over “our most valued cultural institutions” like newspapers and the music business, leading to the “destr[uction] of our economy, our culture, and our values”. Without restrictive measures, Keen writes, children will be continuously tempted to spend more time online at the expense of more valuable and important activities. While Keen is right about new media’s power of attraction, he paints a very black-and-white picture when he states that “parents must man the front lines in the battle to protect children from the evils lurking on the Web 2.0” (Keen, 2007, p. 202).

These variations on technological determinism – the conviction that technologies and media have a determining influence on society and affect our lives and culture in uniform ways (Itō, Horst, Bittanti, Boyd, Herr-Stephenson, Lange, Pascoe & Robinson, 2009; Boyd, 2014) – have also emerged in public debates about the effects of the increasingly pronounced use of electronic media and digital devices on the processes and habits of reading. At one extreme, the statistics indicating the decline of literary culture seem to be the most frequently publicised results of studies and surveys concerned with assessing reading in the electronic age. The emphasis on falling literacy standards – such as shorter attention spans or lower reading speed and comprehension level (Greenfield, 2015; Goleman, 2013) – understandably causes anxiety about the digital natives’ academic achievement, job performance, professional competitiveness and general prospects for the future (Sorbring, 2014). On the other hand, while young media users have become “producers” (producers + users) and “prosumers” (producers and consumers) (Lemish, 2015), the overly optimistic depictions of “technologically empowered ‘cyberkids’” (Itō et al., 2009, p. 14) capable of critically interpreting media contents, are equally misleading. The general public in fact often remains uninformed about the complex and uneven impact of screen reading on, for example, reducing the gender and socioeconomic gaps among young people (Livingstone et al., 2005). Both approaches also fail to acknowledge convergent media environments and diverse sociocultural contexts of

media appropriation (Hasebrink, Jensen, Van den Bulck, Hölig, & Maesele, 2015). The haziness of popular perceptions of reading in a digital reality is exacerbated by often too hasty policy decisions concerning the introduction of information and communications technology (ICTs) into schools in some countries and a dearth of sustained systematic efforts to teach new media literacies or “21st century skills” in others (Batorski & Jasiewicz, 2013). Simultaneously, there has been an ongoing debate about which parties involved – parents, educational institutions, the media industry, government agencies – should be responsible for children’s media education and behaviour (Lemish, 2015; Valkenburg, 2014).

This chapter aims at supplying a balanced and empirically grounded factual context for current debates about reading in general, and reading from digital devices in particular. We begin with a discussion of early theory and research on media use and reading. We then go on to an overview of what is known about reading in the context of media use and media preferences as based on cross-national surveys and studies conducted in Europe since 2010. In our overview, we pay attention both to non-reading forms of media use and to reading in multimedia and non-multimedia settings across country populations and specific age groups. We also focus on everyday media use and reading in a family context, including patterns of use, parental guidance and family interactions around new media. As parents have the most crucial influence on their children’s present and future reading habits, we explore in detail the available findings on parents’ involvement in their children’s socialisation into reading. Finally, we are interested in the role of public and school libraries. We base our discussion on examples of national surveys and case studies, which provide culturally contextualised evidence about the use of digital devices for reading in households and educational settings across Europe. We conclude by indicating lacunae in the field of reading research in the context of wider media use as a means of gaining a comprehensive, constructive, and productive perspective on cultural and educational challenges that we face as individuals and societies engaging with digital media. We believe that these gaps can be reduced by research aligning experimental approaches with more traditional methodologies developed for example in literary studies or publishing studies. Finally, we also point out the need for the development of ethnographic approaches and fieldwork investigating children’s and young people’s every day reading practices in print and on screen.

2. Reading in the lives of European children and young adults

Public perceptions of and scientific debates about digital reading, i.e. reading from the screens of electronic digital devices, are unwittingly affected by earlier discussions about the alleged detrimental effect of electronic media for the language

development and reading skills of the young generation. In this paragraph, we give a concise overview of scientific perspectives on the validity of this claim. First, we outline the main assumptions and results of early research on media use, particularly TV viewing, in relation to reading. Next, we present the debate about the relationship between new media (digital, off- and online devices and applications) and reading. We base our discussion on the multi-year, cross-national EU Kids Online project and national studies from several European countries.

2.1 Early theory and research on media use and reading

Paraphrasing Seth Lerer's (2008) contention that ever since there were young audiences, stories have been told and written for children, one could also say that ever since children became readers, their parents, as well as educators, librarians, politicians and other adults preoccupied with the appropriate management of childhood (Foucault & Gordon, 1980) have expressed concerns as to how and what youthful audiences read influences their psyche and body in the context of their family life, schooling and peer interactions. Texts addressed to children still constitute one of the most effective mechanisms for propagating and consolidating dominant ideologies. When books became a mass medium in the first half of the 20th century and when children's literature became a business of its own in the second half of the 20th century, ongoing censoring interventions into school reading lists or library resources and circulation reflect the belief in the exceptional status of reading as a socially and culturally formative activity. *Harry Potter* wars (Jenkins, 2006) concerning the impact of J. K. Rowling's fantasy series on children's imagination, literacy skills, civic engagement and morale, offer especially vivid proof that literature remains a powerful mass medium in the 21st century.

The emergence of TV as a widely accessible mass medium in the 1960s and 1970s caused serious concerns that it would impede children's reading, despite early evidence about the informal learning effects from television (Schramm, Lyle, & Parker, 1961). As Keith Roe (2007) summarises the growing academic effort in the US and Europe to assess "the TV effect", the belief in the negative correlation between TV viewing and children's reading acquisition and reading achievement, as well as the displacement hypothesis, which assumes that because of watching TV children spend less time performing activities fostering their development, including reading and doing homework, soon became the dominant theoretical perspectives shaping the scientific exploration of the social and cultural consequences of (increased) TV use. Hence, television viewing became associated with entertainment, impoverished cognitive stimulation, low concentration and noncreativity. Nevertheless, until the 1980s, there was a lack of solid evidence supporting the existence of any relationship between TV viewing and children's reading. Assessments of the mechanics, intensity, and possible directions of the TV influence were also ambiguous. This was the case

because most research designs failed to take into account the now obvious mediating variables of age, gender, individual differences, or socioeconomic status. Roe (2007) points out that although large-scale longitudinal studies were undertaken to make sense of the dispersed and very often conflicting data gathered earlier, no satisfying consensus had been reached as to the actual complexity of the TV effect on reading. In an extensive review of research in the field, Susan Neuman (1991) concluded that the critical factor shaping the influence of TV exposure on children's academic achievement is not the medium itself but the context of family as a learning environment. On the other hand, Koolstra and van der Voort (1996) argued on the basis of their panel study of Dutch children that despite the ambiguous evidence, the inimical influence of TV viewing on children's early reading achievement should be seen as the most reasonable working hypothesis. They also proposed the reading depreciation hypothesis, according to which television negatively affected older children's attitudes to reading as a less pleasurable and less satisfying form of entertainment than TV. However, research has also revealed that reading print and TV viewing involve mental processes that are to some extent similar (Mackey & Robinson, 2003) and that comprehending film narratives can develop children's reading skills and motivate them to read printed texts (Marsh & Millard, 2000; Kendeou, Bohn-Kettler, White, & van den Broek, 2008). Nevertheless, as Evans Schmidt and Anderson (2007) conclude, whereas research has not yet fully accounted for the relationships between reading and TV viewing, it is plausible that in younger children, too much time spent watching TV inhibits reading acquisition as it may discourage the development of the mental capacities necessary to master new academic skills such as visual imagination and attention span. They also propose another approach to investigating the TV effect: television as a medium is neutral; it is the content that determines its effects. As Lemish (2015) reports, studies indicate that in all age levels the number of viewing hours affects reading competence, that reading in home environments fosters children's engagements with books, and that the presence of a TV set in a child's bedroom has a negative influence on reading levels. Nonetheless, in a more general take on the relationship between watching television and reading books, Lemish stresses that although undoubtedly some children read more than their peers, these trends have nothing to do with television. As she argues, the blockbusting popularity of the Harry Potter and the Twilight Saga series, as well as the burgeoning market of products resulting from adapting children's literature to new media, indicates that screen culture, which includes not only TV but also other audio-visual media and devices, has not usurped the unique status of reading as a leisure activity.

The question of researching what was happening to children's and young people's reading abilities and interests became even more complicated in view of the rise of new media, the development of digital devices, and the increasing dominance of

visual culture. It soon became clear that television was now only one, and not necessarily the most significant, reason why children might neglect reading. It was argued that access to computers reduced the time children spent on other activities, including reading (Subrahmanyam, Greenfield, Kraut & Gross, 2001; Rosén & Gustafsson, 2014). Rosén and Gustafsson (2014) stipulate that one of the most negative effects of children's home computer use on reading is the reduction of time spent on practising reading and hence improving one's ability to comprehend complex continuous texts. Proponents of distraction theory state that the very variety of interactions, contents and formats enabled by the computer inevitably draws user attention away from learning activities including out-of-school reading (Rosén & Gustafsson, 2016). More positive approaches – the activation and content theories – predicted that the influence of computer use may be beneficial for intellectual development as long as the user is cognitively stimulated by appropriate materials and adequate doses of interactivity (Rosén & Gustafsson, 2016). Yet such assumptions do find some reflection in real computer use only when it is motivated by learning tasks and goals (Rosén & Gustafsson, 2016). As Rosén and Gustafsson (2016) suggest, despite a number of empirical studies into computer use, the four theories (the distraction theory, the substitution theory, the activation and content theories) have not been tested systematically enough in relation to one another to warrant definitive conclusions.

An example of European research addressing this challenge is the study conducted by van der Voort, Beentjes, Bovill, Gaskell, Koolstra, Livingstone & Marseille (1998), which tested the differences in how and why children in the Netherlands and in the UK use 'old' media forms (books, comics, magazines and newspapers, television, video) and new forms of interactive media (electronic games and the personal computer). Significantly, the study classified TV as an 'old' medium, although it should be noted that the very division between old and new media is rather unproductive and artificial as the same contents can spread across all kinds of media, and not necessarily only from old to new ones. Moreover, users often engage in multitasking activities, for example surfing the Internet while watching TV, or alternating these activities. Such processes form the basis of transmedia entertainment and convergence culture (Jenkins, 2006). The participants' use of various media in van der Voort et al.'s (1998) study was investigated not only with regard to the variables of age, gender, and socioeconomic status, but also in the context of the availability of these media in young users' rooms. While the study revealed some significant national differences, for example in the percentages and age of children who did read, it showed first and foremost that in both countries, the amount of time spent reading to relieve boredom, for excitement, for relaxation or for learning decreased with age, while the amount of time spent on engaging with visual culture as mediated by computers increased. Simultaneously, the study indicated

that an effective, and very simple, method of counteracting this trend could be providing children with direct access to reading materials in the form of book shelves in their bedrooms, which have become spaces for children's individual use of media and "centers for entertainment and technology" (Thiel, 2007, p. 114). Finally, the study indicated SES-related differences in access to information and new technology as an emerging type of social inequality. A similar relationship was established in the *UK Children Go Online* study (Livingstone & Bober, 2005).

An example of a more recent national study of children's use of television is the investigation of the long-term effects of intergenerational transmission of television tastes and viewing behaviours in the Netherlands, conducted by Notten, Kraaykamp & Konig (2012). The study revealed that, whereas one's own cultural background and educational level outweigh the influence of parental influence, children's imitation of parental practices constitutes the main element of parental media socialisation, which in turn is also affected by parents' socioeconomic background and cultural capital. Other significant, albeit less direct, transmission processes constituting the cultural inheritance model are parents' active media guidance behaviours (predominantly of restrictive and protective nature) and their influence on their children's cognitive competencies (Notten et al., 2012). Parents' socioeconomic status and educational background were shown as substantially relevant to the formation of individual television tastes, and especially to the preference for either highbrow or lowbrow content in later life. Finally, although parental influence plays the key role in the development of children's cultural competence, the study indicated the need for further research into the importance of the influence of other socialisation agents (peers, teachers, librarians).

2.2 Research on new media and reading

As the Internet, online technologies and mobile devices became widespread in the past 25 years, research geared specifically at exploring the domestication and home ecologies (Lemish, 2015) of new media turned out to be of paramount importance. A major concern that needed to be addressed in this new field was children's quick acquiescence of online competences, yet often without awareness of the risks accompanying these new opportunities. The earliest cross-national studies in this field are the *Children and Their Changing Media Environment* study (1987–8); SAFT (Safety Awareness Facts and Tools), conducted in the years 2003–4 and 2006; Eurobarometer (2003, 2004, 2005–6 and 2008); Educaunet (2005); Mediappro (2005–6) and the World Internet Project (WIP) (2007 until now) (Livingstone & Haddon, 2009). Consistent research into children's media use, including reading in digital environments, has been systematically conducted in Germany since 1999 (the KIM series of studies (kids + media, computer internet)) and in the UK since 2005 (National Literacy Trust studies). An important example of such studies is also

“Digital beginnings: Young children’s use of popular culture, media and new technologies” (Marsh, Brooks, Hughes, Ritchie, Roberts, & Wright, 2005), which explored young children’s (aged 0–6) interactions with popular culture, media and new technologies in the home through a survey of 1,852 parents and early-years practitioners. One of the key findings of this study was that young children witness and develop a wide range of practices, skills, and knowledge related to the use of popular culture, media, and new technologies from birth. Children’s use of media was also found to be usually active and conducive to playing, speaking and listening, and reading. This process of gaining new skills was supported and facilitated by their parents and family members, who had concerns about the perceived amount of time children spent with new media and technologies. Nevertheless, they also felt that their offspring benefited a lot from those activities and that media education should be a substantial element of school curricula. Importantly, engagement with new media and technologies was found to be a social activity shared with other family members, as has been found for television viewing in the 1980s (Lull, 1980; Morley, 1986; Morley & Silverstone, 1990). Practitioners reported that the introduction of the use of ICTs into curriculum had increased children’s motivation and engagement in learning. Commenting on the implications of their study for further research, Marsh et al. (2005) stressed the need for longitudinal and observational studies of children’s media use in family contexts and early-years settings, and especially of its influence on communication practices of young children and on their progress in speaking and listening, reading and writing. As the children studied in this research are now between 16 and 26, it would certainly be extremely revealing to explore how their media use has changed as they have grown. There could also be a correlation between these foundations and this cohort’s cognitive skills needed to cope with a transnational, networked and increasingly competitive information society based on immaterial labour and immaterial products, such as knowledge and communication (Hardt & Negri, 2004).

2.3 The EU Kids Online project

A breakthrough in the European academic effort to address children’s use of the Internet was the first EU Kids Online project (2006–9), an international network aimed at setting up, assessing and maintaining a publicly available and searchable database of empirical research on children’s Internet and online activities. Bringing together multidisciplinary researchers from 21 European countries,¹ the project catalogued ca. 400 studies and mapped out key thematic and methodological trends

¹ Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, France, Germany, Greece, Iceland, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden and the United Kingdom.

and gaps in the evidence they provided. These findings in turn served as a basis for policy recommendations on, among others, the provision of safe Internet use for children. One of the most significant outcomes of the project for the purpose of this chapter was the recognition of the considerable overlap of offline and online spheres, and of the resulting embeddedness of the ICT in children's everyday lives (Livingstone & Haddon, 2009). EU Kids Online also established that there was an urgent need for research on children's critical interpretation and evaluation of online content. Typically, quantitative methods were unable to investigate the immediate, and often elusive, contexts of children's everyday online activities, including reading, and their own perceptions of these experiences, which could be achieved by more child-centred, multimethod, contextual, naturalistic, and longitudinal approaches (Livingstone & Haddon, 2009). It should also be pointed out that in examining converging media environments, it is no longer sufficient to focus on only one medium (Hasebrink et al., 2015).

The database created by the EU Kids Online network was further expanded in the EU Kids Online II project. The search for European studies on media use conducted in 2012 yielded more than 800 additional studies, with the total number of research projects exceeding 1,200. The work on the database continued in new searches for studies in 2013. In 2010 the EU Kids Online network conducted a large-scale survey of Internet use among about 25,000 children aged between 9 and 16 and their parents in 25 countries (Livingstone, Haddon, Görzing, & Ólafsson, 2011). A new series of European surveys is being conducted in 2017-2018 as a response to the rapid changes in mobile appliances and the lack of continuity typically characterizing findings in this field. It will also be an attempt at multidisciplinary, multimethod, contextual, longitudinal and comparative research into the complexity of children's everyday use of online technologies (Hasebrink, 2014). Significantly, the 2017-2018 surveys will concern children and parents whose media socialisation has been more intense and diverse than that of the cohorts participating in the 2010 survey, when fewer devices (notably smartphones and tablets) and applications were available.

An important result of this continued effort to track changes in children's Internet experiences, relevant also to the study of reading in the digital age, is the identification of four groups of countries based on two indicators for the state of Internet diffusion these countries had reached in 2010 (Hasebrink, 2014). Countries in Group I (Denmark, Finland, the Netherlands, Norway, Sweden and the UK) are characterised by more than 75 per cent of their population being Internet users in 2009. In contrast, in countries constituting Group IV (Bulgaria, Greece, Romania, and Turkey), only 30–40 per cent of their population used the Internet in 2009. In countries from Group II (Belgium, France, Germany, Estonia, Ireland, Slovenia, Austria), Internet diffusion was between 58% and 71%, while in Group III (Hungary, Lithuania, Poland, the Czech Republic, Cyprus, Spain, Portugal, Italy), it was between 42% and 57%. The differences between the four groups show the

unevenness of Internet diffusion across Europe in 2009, which in turn obviously affected the frequency and nature of children's interactions with online technologies. Yet more importantly, the country classification indicates that phenomena and trends observable in Groups I and II could reoccur later in countries from Groups III and IV, being at the same time inflected by more recent changes in technical innovation and cultural practices concerning new media. In another grouping, based on measures of children's experiences of online opportunities, risks and parental mediation (Helsper et al., 2013), European countries were grouped into the following clusters: countries characterised by 'unprotected networkers' (Austria, Hungary, Lithuania and Slovenia); countries in which users are 'protected by restrictions' (Belgium, France, Germany, Greece, Ireland, Italy, Portugal, Spain, Turkey and the UK); countries with 'semi-supported risky gamers' (Bulgaria, Cyprus, the Czech Republic, Estonia, Poland and Romania); and countries with 'supported risky explorers' (Denmark, Finland, the Netherlands, Norway and Sweden). As reading is one of the many activities in which children engage in digital environments, its contents and intensity depend also on users' opportunities and risks management.

2.4 Insights from national studies

Apart from the multinational comparative EU Kids Online project, a substantial number of studies in Europe have been conducted on the national level, of which only very few highlights can be covered here. What connects these otherwise divergent studies is that they relate reading activity of children and youth to their computer use, mostly (but not exclusively) suggesting a trade-off between the two. In essence, these studies are mimicking research from the pre-Web era exploring the trade-off between watching television and reading time. In general, these studies concluded that as long as television viewing did not exceed moderate levels (up to 4 hours per day), it did not affect reading time and comprehension. Only when parents were allowing their children to spend an unlimited amount of time (over 4 hours per day) in front of the screen, which in fact often reflected their own viewing behaviour as well as the low expectations of their offspring's educational attainment, did reading comprehension deteriorate (Neuman, 1988).

Corresponding conclusions are drawn in research on the displacement effects of computer and Web use in relation to reading in college students (Cai, 2005; Mokhtari, Reichard, & Gardner, 2009) and the general population (e.g., Netherlands: Huysmans, de Haan, & van den Broek, 2004; US: Robinson & Kestnbaum, 1999). Time spent reading for academic and recreational purposes and Internet time appear to correlate positively. The evidence suggests that reading and using Web sources are not functionally equivalent as they appear to serve additional rather than competing functions. However, studies exploring this relationship in children and teens are in short supply. A Dutch national study among 7–15 year olds showed that, with

increasing age, children were turning to digital (including social) media more often and reading books less frequently, thus suggesting evidence for the time displacement hypothesis. However, it also showed that among the 15 year olds, the higher use of TV and digital media did not correlate with a lower level of book reading, which could be expected if time displacement was indeed the case. In sum, the study demonstrated that time displacement as such can be conceived in at least these two different ways, which in turn lead to different conclusions (Huysmans, 2013).

The 2014 Polish comparative study of students in their final year of primary school (12–13 year-olds) and students in their final year of junior high school (15–16 year-olds) revealed some significant aspects of children's reading as one of many forms of their engagement with new media. More than 70% of the respondents from the younger groups were found to use the computer systematically to visit social networks sites, listen to music, watch films, find news and information related to their interests, read texts created by their peers (blogs and fanzines) or communicate with others. 62% of the respondents in this age group also use it to do their homework. Significantly, 37% of these young users actively contribute content by creating their own websites or by blogging. As the study showed, the size of the group of creative young Internet users does not increase with age (Zasacka, 2015). As to reading literature as a leisure activity, very few respondents in both groups (9% of the twelve-year olds and 13% of the fifteen-year-olds) reported this activity. In both cases, girls did so slightly less frequently than boys. Texts read online most frequently are comic books – mostly because they are more easily available on the Internet. It was also established that in both age groups the frequency of turning to e-books is negatively correlated with parents' educational background and the size of the home library. The results obtained through questionnaires were confirmed by interviews conducted with the participants. Students, including those who use the computer every day, declared that, regardless of their family background, they see reading printed books as more convenient, relaxing and healthier. They also like the tactile qualities of printed books (Zasacka, 2015). Hence, students rarely consciously use the resources of electronic libraries which are available for free. Nevertheless, the study also revealed that the Internet had become an environment that fosters interactions *around* reading: it is a source of information about books and a means of sharing this information with others. This is the case especially in the older age group, while young readers still tend to rely on their parents' recommendations (Zasacka, 2015).

These results correspond to some extent to the findings of the German KIM study from 2014. While playing computer games or using the Internet has become a substantial element of children's daily life, they continue to perceive reading paper

books as an important activity. According to the study, every second child reads books regularly, with girls being more regular readers (61%) than boys (41%). Yet children's preference for traditional reading formats and materials has diminished considerably in the UK. As the study "The Reading Lives of 8 to 11-year-olds" 2005–2013 reveals, while in 2010 children aged 8 to 11 usually read books (fiction, non-fiction and poetry) outside class, by 2013 text messages and other technology-based materials had become typical reading material of this age group (Clark, 2014). An interesting finding of the study was that although more boys than girls recognised the connection between reading and future employment prospects, fewer boys than girls saw reading as cool. Moreover, children from higher socioeconomic backgrounds predictably read a greater variety of technology-based materials than their peers from families with fewer cultural and economic resources. Yet, as Clark (2014) points out, this difference is not necessarily a result of better access to technology, as there is no considerable gap in this respect between both groups. Moreover, as the study revealed, while fewer children from the low SES group enjoyed reading outside class, they nevertheless read a greater number of books outside class per month than their peers from the high SES group. According to the author, this may be the case because children from low socioeconomic backgrounds are more likely to associate reading with good future job prospects even if they perceive reading as an "image problem" and feel that their families do not support their reading (Clark, 2014).

The most recent National Literacy Trust's annual survey "Children's and Young People's Reading in 2015" revealed that in that year, children and young people on average spent more minutes reading materials online than they spent reading books (Clark, 2016), with the levels of daily reading increasing only slightly in comparison to 2014 and more substantially in comparison to 2013. According to the study, only 1 child in 7 rarely or never read outside class. Interestingly, significantly more girls than boys said they own an e-reader (38.1% vs. 28.2%). They also had more books at home than boys. These two factors may explain why girls are more likely to read diverse technology-based materials as well as books. Moreover, girls estimated that they were significantly more likely than boys to spend more time reading both something online and in a book, which is in turn reflected in more positive attitudes to reading on the part of girls. Finally, the study shows that the most conspicuous difference between boys and girls concerns the choice of TV over reading, with more boys than girls preferring TV (82.3% vs. 69.8%) (Clark, 2016). Children's attitudes and motivation to reading were explored in another recent UK study (Picton & Clark, 2015), which focused on the impact of e-books on students' reading skills and motivation over the academic year 2014/15. The study was based on a schoolbased e-books project involving children's use of an e-book platform. The research revealed that the implementation of the e-book format in school practice resulted in an

increase in reading performance and significant changes in children's perceptions of reading from negative to positive, which, as Picton and Clark argue, also signalled their growing confidence in their own reading abilities. As the authors conclude, the combination of high level of support and encouragement at school with opportunities to read onscreen, for example in the form of a digital library, may significantly support literacy and learning (Picton & Clark, 2015).

The results of the empirical studies mentioned above indicate that despite concerns about the effects of the growing importance of digital media in children's lives on their reading activities, we need to acknowledge the complexity of this interaction. Using digital devices and content involves textual decoding. Moreover, the time displacement hypothesis, according to which the time hitherto devoted to 'serious' reading is now being spent on more ephemeral content, is supported by the evidence only to a limited extent. Additionally, reading on digital devices such as e-readers and tablets might make reading appear more natural to young readers, thereby enhancing literacy development and learning processes. In short, we should bear in mind the limited validity of the popular criticism too easily equating traditional ways of reading as 'good' and digital reading as potentially damaging individual development and social and cultural well-being.

3. Home literacy: Reading and media socialisation in the family

The importance of the family context for acquiring language and reading skills can hardly be overestimated. A plethora of studies have demonstrated the crucial importance of a supportive environment for acquiring such skills. Factors shown to affect reading skills, motivation and behaviour include parents' reading picture books and reading aloud in early literacy, talking with their children about books and giving a good example by reading themselves. Siblings and peers are – to a lesser extent – also shown to influence children's reading. In this section, we provide an overview of what is known about how parental mediation influences media use, reading in general and digital reading in particular. In broader terms, as Lemish (2015) points out, the emergence of family leisure time and the growing significance of the home as the centre of indoor life is closely connected to the increasing presence of importance of media in family life. Finally, we also examine what is known about the role school and public libraries play in reading practices of the young generation.

3.1 Parental guidance

Studies in many countries have shown that a favourable home environment is a strong predictor of reading achievement and learning outcomes later in life.

Furthermore, the earlier in life parents actively engage in language- and reading-promoting behaviour, the more persistent these positive effects turn out to be (see e.g. Schoon, Parsons, Rush, & Law, 2010). Cultural reproduction theory accounts for differences in educational success between social groups by differences in parental cultural capital. According to this theory, parents raise their children within a specific cultural *habitus*. This set of preferences and competencies acquired during childhood influences educational performance and persists into adult life. Research shows that the quality and quantity of intentional and unintentional parental media socialisation is likely to depend on parents' socioeconomic status, and in particular on their educational and occupational background, and on family size and composition (Notten & Kraaykamp, 2009a). Notten and Kraaykamp (2009a) also point out that parents' investing in home media resources (books, TV, digital technologies) is a significant aspect of family socialisation activities. Many studies confirm that parental media resources and intergenerational transmission of cultural and media behaviour determine an individual's educational achievement and cultural literacy, including both the attainment of reading skills and future adult literary tastes (Bus, IJzendoorn & Pellegrini, 1995; Leseman & de Jong, 1998; Van Peer, 1991; Notten & Kraaykamp, 2009a). Notten and Kraaykamp (2009a) in their cross-national study of 53 countries also established that the "old" medium of books is most effective in improving children's academic performance.

The latest edition of the multinational PIRLS study (2011) provides evidence for this finding (Araújo & Costa, 2015). In their analyses, Araújo and Costa (2015) divide the respondents, 4th graders, in groups according to the extent to which they are read to by their parents (low vs. high level) and parental educational level (where the split is between secondary and tertiary education as highest attained level). Consistently, reading scores are higher for children who experience a more favourable reading climate at home, as measured by the level of book reading with their parents. Moreover, the parents' educational level (either the mother's or the father's, whichever was highest) plays an important role. In all countries, children with at least one highly educated parent score higher on reading ability than kids from low-educated families.

In light of the above, one of the remaining gaps in research concerning children's use of new media, which happens far more intensely in the family home rather than at school or in other cultural institutions, is the exact significance and forms of parental guidance as a means of stimulating cultural competence, including reading preferences. An early study into parental media socialisation conducted in the Netherlands by Notten and Kraaykamp (2009b) revealed that parents from higher social strata both consume highbrow media content and value leisure reading as a socially desirable activity, thereby encouraging their children to develop the same

tastes. Moreover, older mothers engage in more highbrow and less lowbrow media consumption, which also affects the formation of children's preferences and competencies. Children growing up in large families, in which parents' attention is divided among siblings, experience less parental instruction with regard to media use and content. Finally, children living with divorced parents also participate in fewer parent-child interactions over media, do not receive much guidance concerning reading skills, and are less effectively protected from exposure to harmful media content (Notten & Kraaykamp, 2009b). Importantly, the study indicated the necessity of investigating the significance of parents' gender in their media guidance activities, of research into parents' own perceptions of their own role as educators, and of the extension of related research into other European countries. It is also worth considering whether the highbrow/lowbrow categorisation of culture has not become obsolete in light of the emergence of the 'nobrow' trend and 'artertainment', which rely on the fusion of high aesthetics and massive commercial appeal (Swirski, 2005). Finally, while the study provided useful insights into factors affecting the intergenerational transmission of cultural and media behaviour in the family context as well as its long-term effects, it was based, as the authors indicate, on retrospective data coming from adult media users, which may have resulted in over- or underestimation of certain factors (Notten & Kraaykamp, 2009b).

While the above-mentioned studies reveal general mechanisms and characteristics of parental mediation, they do not delve in detail into parents' attitudes and the particular approaches they adopt to manage children's media use. Nor do they ask whether any new strategies are needed especially for the mediation of digital environments, for example because of the personalised and portable nature of new devices (Haddon & Vincent, 2014; Mascheroni & Ólafsson, 2014; Livingstone et al., 2015). The EU Kids Online network has discovered the following types of parental mediation with reference to older children (9–16 years old): *active mediation* (sharing and discussing online activities), *safety mediation* (advising and guiding on managing risks), *restrictions* (rules and bans), *technical mediation* (use of filters, parental controls) and *monitoring* (checking the computer/social media/phones after use) (Livingstone & Helsper, 2008; Dürager & Sonck, 2014; Livingstone et al., 2015). On the one hand, these types of parental mediation reflect general parenting styles, e.g. authoritative, permissive or uninvolved (Baumrind, 1991; Livingstone et al., 2015); on the other, they are influenced by parents' own digital literacy. Parents who believe that their children are more expert media users than themselves are likely to be less confident of mediating their children's interactions with new media and thus less engaged in them and less aware of both risks and opportunities (Livingstone et al., 2015). Measuring parental guidance reliably poses difficulties, as both parents and children may overestimate or underestimate their attitudes and behaviours. Moreover, parental management of media use is often aimed not only at ensuring that the child

benefits from certain activities, but also at meeting parents' needs, the most common being gaining enough time to deal with housework (Livingstone et al., 2015). The character of parental mediation depends on culture and country, with parents from Central and Southern European countries, Ireland and the UK adopting restrictive mediation; parents from Northern European countries preferring active mediation, and parents from Eastern European countries resorting to all types of parental mediation or being passive (Livingstone et al., 2015). The EU Kids Online survey (Livingstone, Haddon, Görzig, & Ólafsson, 2011; Livingstone, Hasebrink & Görzig, 2012) also revealed that parents with higher income are more likely to favour active mediation of Internet use, while restrictive parental strategies were used equally frequently by parents of different socioeconomic backgrounds. Finally, young parents of today belong to the new generation of 'digital parents', who were themselves socialised into the use of digital media and are now engaging in culturally socializing practices in relation to their own children. Therefore, productive complementary research addressing the fast-paced technological development of digital media and their influence on young generations must employ methods enabling immediate access to concrete parent-child interactions over media use and their socializing effects.

3.2 Parents' views on reading in digital environments

The importance of family for the preservation of a reading culture with the aid of new technologies has also surfaced in the German study from 2012 "Digitale Angebote – neue Anreize für das Vorlesen" (Stiftung Lesen, 2012), in which 500 parents of children between 2 and 8 years old were asked about the use of picture books and children's books apps as sources of reading materials. The study found that digital media had become accepted as a welcome expansion, and not a replacement, of traditional printed picture books. The choice between print and screen depends on particular circumstances in which the reading activity is to take place: print is seen as more suitable for bedtime reading, while screen is perceived of as more convenient when traveling. The study also showed that although fathers still read less to their children than mothers, they tended to choose electronic formats, which may be a way to encourage more fatherly engagement in family reading. If parents refrained from using apps, it was because of their lack of experience with new formats, which in turn signals the need to promote new forms of reading materials and advise on how to use them (Stiftung Lesen, 2012).

Parents' views on possible uses of new technologies in activities aimed at supporting their children's language and literacy development, as well as their attitudes to books and touch-screen devices, were also researched in a UK study by Formby (2014). The study found that nearly all children from birth to five years old had access to books in the home and 73% of children had access to a touchscreen device at home. 26% of

all children used a touchscreen at home to look at or read stories in a typical week, while nearly all children looked at or read print based stories in a typical week (95%). It was also established that the more children looked at or read print based stories at home, the better communication and language skills they had developed at age five. Parents were found to engage in diverse activities to support their children, such as visiting the library once a month or having an average of 89 children's books at home. Predictably, the size of the home library, as well as the frequency of parents' own reading activities, could also be linked with children's better communication and language skills at age five. Interestingly, parents were found to project their own enjoyment of reading onto their children. The majority of parents also strongly agreed that their child should learn to use technology from an early age to do better at school. Last but not least, children of lower socioeconomic status who had access to tablets were found to be twice as likely to look at or read stories on a touchscreen daily, which clearly indicates that there are benefits to looking at or sharing stories using a touchscreen device, particularly for children of lower socioeconomic status, especially when they lack support from their parents (Formby, 2014). As Formby concludes, technology may enable disadvantaged three- to five-year-old children to read more and enjoy it. She also stresses the need for further research into parents' communication with children when they are sharing a story in print or on a touchscreen.

A cross-national qualitative project "Young children (0–8) and Digital technology – a qualitative exploratory study" (Chaudron, 2015) applied such methods to address, among other topics, parents' involvement in media socialisation processes. It aimed at examining young children's (0–8 years old) and their families' experiences with digital technologies, such as smartphones, tablets, computers, and games. By means of interviews and observations in the home context with ten families from each participating country (Belgium, the Czech Republic, Finland, Germany, Italy, UK, and Russia), the project generated data on how children between 0 to 8 years use (online) technologies, how parents guide media use, and how to determine potential benefits and risks connected with children's engagement with new technologies. Parents and children provided very insightful information about their use of the technologies. One of the key findings was that although children's reading and writing skills determine the scope of children's media interactions, they acquire digital literacy even before they learn to read and write. They do so by mastering how to identify visual cues, which in turn to a large extent enables them to use the Internet, Skype or social networks without adult intervention. The study also revealed that young media users learn from observing not only their parents but also other family members, i.e. older siblings and grandparents, with adults often remaining unaware of how children imitate their behaviour. Finally, thanks to ensuring direct access to parents, the project yielded information on parents' own

perceptions of their role as educators and mediators. Although parents see digital technologies as challenging, especially in the context of children's media use, they have a sense of control over media devices and their uses, often turning to their offspring as support in their household and parental duties. Nevertheless, parents recognise a number of risks related to their children's interactions with digital technologies: economic consequences, incidental inappropriate content, and health or social impacts. The most frequently used restrictive strategies include establishing a set of rules concerning time and content. Most children participating in the study appeared to understand and follow the rules quite easily. On the other hand, the potential benefits parents acknowledge include the development of creativity, social skills, hand-eye coordination, and better educational prospects (Chaudron, 2015). A rather worrying outcome of the study is the conclusion that parents seem to be little aware of the actual digital activities of their children, and that they do not realise that their offspring are often capable of bypassing the safeguards they have set up. These findings indicate the need for policies aimed at encouraging more active parental involvement in shaping young users' digital literacy (Chaudron, 2015).

An overview of parents' views and activities more specifically in relation to children's leisure reading of print and digital books can be found in the UK Book Trust study "The digital reading habits of children" (Kucirkova & Littleton, 2016). The survey of 1,115 British parents of 0–8 year old children revealed that most parents worry about such negative effects related to children's reading interactive e-books as the increase in screen time (45%), loss of interest in print books (35%), exposure to dangerous content or advertising (31%), reduction of the attention span (26%), decrease in parents' ability to monitor both children's reading and their purchasing behaviours (21%), inhibition of educational attainment (14%), and harm to a child's brain (10%) (Kucirkova & Littleton, 2016). Moreover, 76% of the parents participating in the survey indicated that they prefer print books for reading for pleasure over interactive e-books. Parents typically reported that they read print books with their child more than e-books, with 56% of parents indicating that they read print books with their child (almost) every day. Only 6% of parents reported that they read e-books with their children every day or almost every day. These proportions are reflected to some extent in the parents' own reading practices: 29% of the parents reported that they read print books every day or almost daily themselves, while a mere 11% read e-books. Half of the parents said that they enjoy reading for pleasure very much, whilst 16% reported that they do not like reading very much or at all. Yet almost half of the respondents mentioned that they would welcome advice concerning interactive e-books. Interestingly, the study showed that even in highly digitised households print books are the preferred choice for children's reading. Finally, the survey revealed the significance of the age factor in parents' decisions about children's readings as well as children's own preferences as reported by

parents. Parents indicated that the best time to start reading with their child is at age 0–1 year for print books; 2 years for interactive e-books, and 3 years for simple e-books (Kucirkova & Littleton, 2016). As the authors point out, the survey findings indicate that parents' concerns and doubts around their children's access to and use of digital books need to be addressed through adequate policies, especially given that young readers exploring digital material with their parents are likely to become critical readers capable of assessing and rejecting inappropriate or poor quality content (Kucirkova & Littleton, 2016).²

The above-mentioned evidence indicates that parental guidance and media socialisation efforts shape children's (digital) reading to a considerable extent. These efforts are likely to be guided more by their beliefs about what is beneficial to children's development than actual knowledge of factors exerting positive and negative effects. What is more, parental influence derives not only from conscious guidance efforts, but also from children's observations of their parents' reading and (wider) media behaviour. Finally, the cultural *habitus* connected to the family's socio-economic status is reproduced through media socialisation, resulting in more intensive reading behaviour of children coming from higher SES families.

4. Libraries

An institution not to be ignored in parental efforts to 'properly' socialise their offspring is the library. The provision of public cultural and educational resources has the potential of offering a route into reading for disadvantaged groups and populations (Kleijnen, 2016; Kleijnen, Huysmans, & Elbers 2015; Nielen & Bus, 2015). According to the public resources substitution theory, high quality and appropriate quantity of public resources is likely to reduce the divide caused by SES-related differences in media use practices (Caro & Lenkeit, 2012; Araújo & Costa, 2015). On the basis of 1998 data from a family survey in the Netherlands, Kraaykamp (2003) studied the long-term effects of reading promotion of three stimulating factors: a supportive home environment with parents encouraging their children to read; prolonged library membership during childhood; and cultural education (e.g. classes

² The abovementioned studies by Chaudron and by Kucirkova and Littleton are contributions to DigiLitEY (The digital literacy and multimodal practices of young children), an international network of scholars conducting interdisciplinary collaborative research on young children's diverse aspects of the presence of new media in the lives of children aged from 0–8 both in home and school settings across Europe. The aim of the network is to also generate knowledge on the implications for policies and practice concerning the provision and use of digital technologies in education and the regulation of children's engagement with them.

on history and theory of literature) in secondary school curricula. Persons who as a child were stimulated to read literature by their parents turned out to be more avid readers of literary books and, to a lesser extent, of suspense novels. Moreover, their general reading level was higher in later life. Persons who preferred romantic fiction appeared to have copied this preference from their parents as well. Second, persons who were members of the library for a longer period had a stronger preference for literature and suspense novels. Third, cultural instruction in secondary school turned out to be quite effective in stimulating reading of literary novels in later life.

Many EU countries have developed reading promotion policies and initiatives based on combining e-reading with traditional formats and practices. Public libraries and school libraries in particular have the potential to raise awareness of the importance of reading for societies and to effectively contribute to the provision of equal access to literature and information. Most of the research into the influence of school libraries on children's academic achievement has been carried out outside Europe, mainly in the United States and Australia, where school libraries are staffed by teacher-librarians schooled as both librarians and educational specialists. In such an environment, positive effects of school libraries on academic achievement, reading literacy, and learning in a broader sense have been amply demonstrated (cf. Lance & Hofschire, 2012; Lonsdale, 2003; Todd, 2014). Not much is known to date, however, about the use of e-books (enhanced or not) in schools through school and public libraries.

As indicated in *Promoting Reading in the Digital Environment*, a 2016 report of a group of EU member states' experts, libraries should focus, among other things, on developing e-lending of e-books and digital audiobooks, on using digital channels for public information, and on creating virtual and interactive network services offering educational and cultural contents (European Commission, 2016). While these goals should be realised by public libraries, school libraries also play a crucial role in reaching children, their parents, and educators. Irene Picton and Christina Clark (2015) point out that the benefits of including e-books in the school library, for example, include not only the expansion of the (print) library without the need for more shelf space, but also the creation of a more attractive collection: "An e-book library may reflect children's popular requests and usage levels, as pupils can identify and ask for the titles that they most want to read, and conversely less popular titles identified by usage records simply need not be rented again" (p. 36). Moreover, and perhaps most importantly, offering young readers more agency in their reading choices is one of the most powerful and effective ways to get them to read (Picton & Clark, 2015).

Other studies into the use of e-books by primary school students confirm that the in-built enhancements of e-books (stills as well as short videos) may help students to

comprehend texts, stimulate reading fluency, enhance vocabularies and boost reading motivation (Verhallen & Bus, 2010; Smeets & Bus, 2012). Nevertheless, some studies reveal negative effects of enhanced e-books on reading skills and comprehension, as well as a more passive reading attitude. This is so because interacting with digital reading devices requires young readers to adapt to hard- and software and develop new reading strategies and even literacies. Moving from print to electronic text implies coping with changes to the text itself, to the graphics, to the reader's role, and to the reading process (Felvégi & Matthew, 2012).

Finally, recent trends in e-book purchasing and e-lending in various countries show expectations about e-books supplanting printed books to have been overly optimistic. In the United States and the United Kingdom the market share of e-books published by the largest publishing houses has shrunk, whereas in countries like Germany and the Netherlands it has stabilised on a rather low level (around 6% of the turnover) (Author Earnings, 2016; Börsenverein, 2016; KVB, 2016; Tivnan, 2016). Therefore, it remains to be seen whether the digital revolution in book publishing will indeed turn out to be revolutionary. However, a recent judgement of the Court of Justice of the European Union (CJEU) has put e-lending (i.e. the lending out of e-books by public libraries) on an equal footing with the lending out of physical books. The Public Lending Right (PLR) may be expanded to include e-books as well as e-audiobooks, meaning that their authors can be financially compensated for the loans. Potentially at least, this might give digital reading through libraries a positive impulse.

5. Outlook

In this chapter, we have reviewed representative examples of European research into children's use of new media and reading aimed at investigating various connections between growing up in a technology-saturated world and complex engagements with texts of various contents and formats either for educational purposes or for pleasure. We started out with a return to early theory and research on media (particularly television) use and reading. Subsequently, we examined cross-national surveys and studies conducted in Europe since 2010 to establish what is known about non-reading forms of media use and reading in multimedia and non-multimedia settings across country populations and specific age groups. We focused in particular on everyday media use and reading in a family context and parents' perceptions of reading in digital environments and their awareness of their own role in fostering their children's interest in reading. Finally, we looked at the role of libraries in shaping children's reading experiences in digital environments. Our overview is of necessity fragmentary, as a book chapter cannot do justice to all the

studies done in national and cross-national contexts. Nevertheless, the evidence we have discussed reveals the crucial influence of diverse family composition and education systems on the emergence of distinctive informal home literacies that coexist with learning within formal educational settings (Carrington, 2001). It is also clear that reading is now part of the evolving screen culture, thereby exemplifying both the challenges and the promises it brings.

In our discussion of the studies on reading we also tried to indicate cases that either reveal certain methodological limitations or exemplify exceptionally effective approaches that could be replicated elsewhere in Europe. In general, research efforts undertaken to study media use and reading can be roughly divided into large-scale international studies like PIRLS and PISA, in which reading is treated as a measurable activity only rather than as an often fragmented and irregular process (Maybin, 2013; Cremin, Mottram, Collins, Power & Safford, 2014), and narrower and in-depth explorations of children's reading experiences with relation to their cognitive development and social relations. While the former studies record shifts in trends, e.g. in reading comprehension over time, the latter recognise children's attitudes and everyday behaviours related to reading. Both rely on such methodologies as surveys, formal tests, focus groups, experiments, observations, interviews, and creative methods, and both provide vital data to be used in recommendations for reading policy and advocacy intended to ensure that, as Cremin et al. put it (2014, p. 5), children "develop as readers who not only can, but do choose to read, for pleasure and for life."

Nevertheless, we feel that existing approaches and methodologies should be complemented by more thoroughgoing and in-depth research, yet unprecedented in Europe on a larger scale. The scholarly endeavour undertaken within E-READ and combined with research conducted in DigiLitEY will undoubtedly significantly broaden our understanding of the effects of digitisation on reading (Mangen & van der Weel, 2016). The gradually more and more frequent combination of experiment-based research (e.g. eye-tracking or neuroimaging) with methodologies developed within pedagogy, publishing studies, literary studies or media studies, may facilitate gauging the significance of such factors as text length and layout, haptic affordances, sensori-motoric and ergonomic aspects, perceptual processing, memory, emotional aspects, audio-visual affordances, spatiotemporal circumstances of reading or the development of the e-book market. Such interdisciplinary approaches may reveal a lot about the yet uncovered aspects of digital text reading and guide policies and recommendations related both to paper and screen reading.

Finally, future research will also have to face the challenge of reading as a transmedia phenomenon (Jenkins, 2006) experienced across various platforms and in multifarious contexts beyond schools or children's homes. It also has to take into

account new forms of using media as well as old and new inequalities related to media use, stemming not so much from gaps in access to technology, but from gaps in users' awareness about the educational and cultural potential they offer. We agree with Barbovschi, Green & Vandoninck (2013) and Lemish (2015) that researchers should try to go beyond the traditional medicalisation frame of scholarly inquiry that sees children as having no views or opinions because children do not yet know what is best for them and do not behave responsibly. Lemish mentions the media diet frame, which proposes that there are good and bad mental 'foods' and that adults should socialise children to prefer and choose the former. She further argues that such an approach limits and oversimplifies discussions about children's complex relationships with media, as these interactions should be treated as resulting from the nexus of a child's unique individuality, the particular context of media experience and the social and cultural contexts in which this experience occurs, as 'media use as social action' approaches have demonstrated (Renckstorf, McQuail, & Jankowski, 1996). Hence, as Lemish contends, to account for the multidimensionality of media experiences, scholars cannot generalise about "effects", but need to focus on "roles", "consequences", or "influences" with regard to "'some kinds' of communication, 'some kinds' of content, 'some kinds' of children, [and] 'some' kinds of conditions" (Lemish, 2015, p. 239). Simultaneously, Lemish proposes that this sensitivity to context and cultural situatedness should be combined with methods reconciling traditional research with child-centred methods. Such methods enable children's expression of their views on media-related debates framed by adults' discourses. They guarantee that these worldviews will be recognised as valid sources of knowledge about children as active and well-informed creators and consumers of culture, including reading materials they access in various settings. An example of a pioneering study acknowledging both the cultural situatedness of digital practices and the voices of concrete young users as they engage in the digital world in their everyday lives is Sonia Livingstone and Julian Sefton-Green's *The Class: Living and Learning in the Digital Age* (2016), based on the authors' fieldwork at a school in London. Furthermore, combining traditional ethnography with digital ethnography (Murthy, 2008) into 'multimodal ethnography' (Dicks, Soyinka & Coffey, 2006) may be a useful comprehensive response to the challenge of investigating reading as an increasingly technologically mediated everyday activity in new media environments. Using online questionnaires, e-mail interviews, digital video, social networking websites and blogs not only increases participation in research but also provides access to the often elusive and easily forgettable practices of respondents in natural settings. As a result, these methods achieve greater collection of more personal and intimate qualitative data than face-to-face interviews and standardised questionnaires (Murthy, 2008). Murthy also argues that while digital ethnography may replicate physical ethnography, it nevertheless enables privileging the voice of respondents, which in turn may be especially useful in research on and with

children, as it is likely to shed a new light on adult researchers' conclusions about why some children are reluctant to read while others read avidly both on paper and on screen, for example. Through combining theories and methodologies from various disciplines – notably cognitive and educational psychology, pedagogical and educational science, cultural sociology, and information and communication science – a pluralistic picture of the constantly changing forms and practices of reading might emerge. Such a picture might be just what is needed to better inform public policy and public discourse about the benefits and risks involved in the digitalisation of children's and adults reading.

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