LSE MEDIA POLICY PROJECT
Promoting media policy communication between academics, civil society & policymakers

MEDIA POLICY BRIEF 17

Families and screen time:
Current advice and emerging research

Alicia Blum-Ross
Sonia Livingstone

The London School of Economics and Political Science
Department of Media and Communications

LSE THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE
LSE MEDIA@LSE Department of Media and Communications
LSE Knowledge Exchange HEIF 5

ACKNOWLEDGEMENTS

The LSE Media Policy Project is funded by the Higher Education Innovation Fund 5, with additional support from the Open Society Foundation.

LSE Media Policy Project Series Editor: Seeta Peña Gangadharan

This report draws on the work of *Parenting for a Digital Future*, conducted as part of the Connected Learning Research Network, led by Mizuko Ito and funded by the MacArthur Foundation. The authors thank Andrea Millwood Hargrave, Julian Sefton-Green and Ellen Wartella for comments on earlier versions of this report, and Zhang Li, Cesar Jiménez, Catherine Speller and Claire Local for editorial support.

Creative Commons Licence, Attribution – Non-Commercial.

The licence lets others remix, tweak and build upon your work non-commercially, and although their new works must also acknowledge you and be non-commercial, they don't have to license their derivative works on the same terms.

July 2016
LSE Media Policy Project
http://blogs.lse.ac.uk/mediapolicyproject/

Suggested citation:

Blum-Ross, A. and S. Livingstone (2016) *Families and screen time: Current advice and emerging research*. Media Policy Brief 17. London: Media Policy Project, London School of Economics and Political Science.

Contents

Key messages **4**

Introduction **5**

Screen time in the press *7*
Methods *8*

How parents manage children's media use **9**

Why do parents mediate? 9

How do parents mediate? 10

Table 1: Forms of parental mediation *10*
What works? 11

What is the current advice? **12**

What is the advice for and what does it recommend? 12

Is the advice underpinned by evidence? 15

Beyond one-size-fits-all: insights from current research **16**

Low-income families 18

Children with special educational needs and disabilities 21

Parents' digital expertise 24

Age and gender 25

Conclusions **27**

Recommendations **29**

For government and NGOs 29

For parents 30

For industry 30

Sources **32**

Appendix: Screen time advice for parents **40**

UK government/regulatory bodies 40

Industry 41

Non-governmental organisations 42

Press and media 45

Notes **49**

Key messages

- **Beyond a sole focus on risk.** Although digital media are increasingly integrated into diverse aspects of family life – from video calls with relatives to homework submitted online – we found that 'screen time' advice for parents remains overwhelmingly focused on risk and harm. Only a small proportion of advice emphasises the opportunities that digital media present to learn, connect and create. We argue that when parents are told that their only role is to police and to monitor, they are left unsupported in helping their children access the unique benefits offered by the digital age.

- **Diverse approaches.** How parents actually approach their children's digital media use varies widely. Some favour time limits or the use of technical filters and software to monitor and restrict, while others prioritise 'enabling' or 'active' strategies including co-use and talking with their children about what they do online. Research shows that parents who use a combination of approaches, modelling positive digital behaviours and involving their children in setting limits, have children who are more able to access the potential of, and manage the challenges presented by, digital media.

- **The emphasis on screen 'time' is misleading.** Past advice for parents focused on the amount of *time* children spent with digital media, referencing evidence of the ill effects on children's physical health. But indicators of wellbeing concerned with social relationships, learning and engagement or self esteem are harder to measure. We argue that this long-held focus on the *quantity* of digital media use is now obsolete, and that parents should instead ask themselves and their children questions about screen *context* (where, when and how digital media are accessed), *content* (what is being watched or used), and *connections* (whether and how relationships are facilitated or impeded).

- **One-size does not fit all.** The current advice addresses parents generically, yet parents make decisions about digital media based on their children's age, special needs and interests, and the resources (time, financial and otherwise) that are available to them. We draw on case studies from Parenting for a Digital Future to reveal how parents assess the requirements of their children and draw on digital skills and values developed in their own working and personal lives to support them. A new generation of parents is emerging who are interested in, and able to, support their children's digital experiences but who are not themselves being supported in this task.

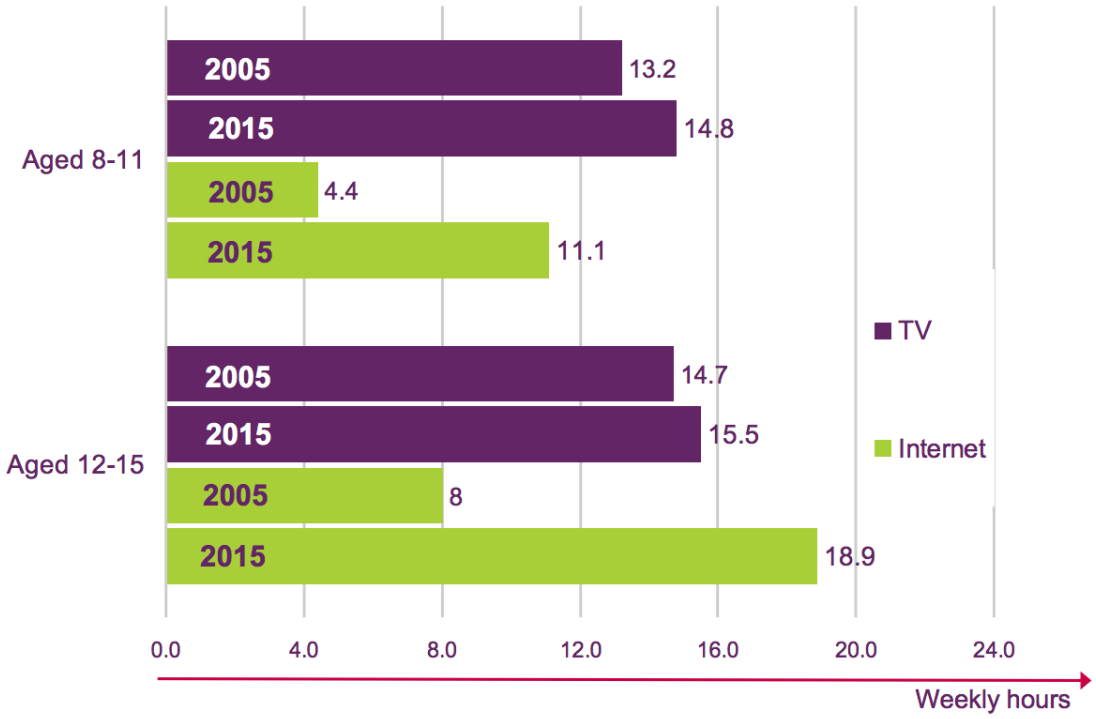
- **Roles for policy-makers and industry.** Parents interact with family and children-focused professionals (teachers, doctors, health professionals and more) throughout their children's lives. At present there are few resources and little training to support these professionals in providing advice to parents, and there remains a shortage of balanced, evidence-based, easy-to-find sources of advice at a policy level. This needs to change. So that parents are not burdened with an overwhelming task, regulatory bodies and industry should continue to work in tandem to ensure that the most inappropriate content is made less accessible to children. We also recommend independent, evidence-based evaluation of products marketed as 'educational,' in order to guide parents in making informed decisions for the benefit of their children.

Introduction

In the past decade, the amount of time that British children spend online has more than doubled: in 2005, 8 to 15 year olds went online 6.2 hours per week; in 2015, the average was 15 hours.[1] How, and at what ages, children go online has also shifted. In 2014, 47% of 3 to 7 year olds used tablets with internet access; in 2015, this rose to 61%.[2] Although some media uses are substituted over time for others, the hours spent by children per week have increased for both television (a little) and the internet (a lot), as shown by Ofcom in Figure 1.

Do parents see this as change for the better or worse? How are parents responding? Are there equally rapid changes in parents' management of their children's media use? What problems are emerging, and how might parents be better supported?[a]

Figure 1: Estimated weekly hours of media consumption, at home or elsewhere among users, 8-11s and 12-15s: 2005 and 2015



QP13A-B/ QP25A-B How many hours would you say you spend [using medium] on a typical school day/ on a weekend day?
Responses are taken from the child aged 8-11 or 12-15 rather than the parent.
Base: Children aged 8-15 who use each medium (variable base).

Source: Ofcom (2015)[3]

[a] We acknowledge that families come in all shapes and sizes. Not all children and young people live in homes with biological parents and 'parenting' takes many forms including, for example, care by older siblings, grandparents and foster carers. We therefore use the term 'parents' and 'parenting' as catch-all terms for personalised caring for children in a domestic environment.

The rise in time spent on 'screen media'[b] has been accompanied by two powerful but opposite parental discourses, each with a long history yet newly intensified by recent developments:

- There are spiralling concerns about children's safety online,[4] along with anxieties about the possible adverse health and developmental effects of increased 'screen time'.[5]

- Families are making increased investments in digital technologies as a means of furthering their children's education,[6] maintaining social and familial connections,[7] or simply facilitating and enjoying daily life.[8]

Debates over 'digital parenting' are thus deeply polarised, as parents attempt to minimise the negative effects of screen time while seizing the unique opportunities afforded by the digital age. As our current research demonstrates,[9] many parents acutely feel the pressure of decisions over digital technologies – worrying, as they describe, not only that their children may become 'addicted' to screens or fall victim to (or perpetrate) 'cyberbullying', but also that if they fail to provide digital opportunities, their children will be 'left behind'. Paradoxically, these anxieties are rising because digital media become ever more taken for granted, evident in the recent American Academy of Pediatrics' (AAP) comment that '"screen time" is becoming simply "time"', and therefore to some extent part of every aspect of daily life.[10]

This Media Policy Project policy brief asks:

1. How do parents manage their children's media use, and which types of parental mediation has research shown to be effective?

2. What is the current advice for parents – is it mainly risk or opportunity-focused? Does it meet their needs? Is it consistent and evidence-based?

3. What can we learn from current research, including from our project *Parenting for a Digital Future*, and how should this guide the next generation of screen time advice?

In answering these questions, we reveal the evolving motivations and norms for managing children's media use. We show how an emergent generation of parents, having grown up with digital technologies, are increasingly able to access and use digital media for themselves and their children, while noting that they do so unevenly, and with very different outcomes. The research also demonstrates that the notion of 'screen time' itself is outmoded.

We argue that parents need to understand their children's use of digital media in terms of its *contexts* (where, how, when and with what effects children are accessing digital media), *content* (what they are watching and using) and *connections* (how digital media are facilitating or undermining relationships) in order to frame their responses. Our contention is that the long-held focus on digital safety, with its message to parents telling them that their main role is to police and restrict, has been at the expense of supporting parents to help their children learn, connect and create through, about and beyond digital media.

Finding ways to empower parents in managing and supporting their children's media use is

[b] We use the term 'screen media' to denote that the new ubiquity of screen-based devices (e.g. smartphones and tablets, alongside 'older' screen-based media like computers, games consoles and television) is precisely what often concerns parents. We also use the term 'digital media' in keeping with the broader social science literature.

surely in the interests of families as well as broader society. However, we note in policy debates over media and industry regulation that much is demanded of parents in the interests of a free market. In other words, it is assumed that the more parents regulate their children's media use, the less governments need to impose top-down regulation on industry.[11] This raises questions of both principle and practice regarding how much parents – especially those stretched in time, resources or capacity – can reasonably be expected to take on. Thus we also suggest that industry and government should be expected to ease parents' responsibilities through regulation, information and provision. This includes putting measures in place to restrict access to the most objectionable content so that parents have less to worry about, providing evidence-based resources and guidance both directly available to parents and through family and children-focused professionals,[c] and providing access to technical tools and high-quality content which is evaluated against 'educational' claims, and child-friendly services.

This report goes beyond the headlines to explore how parents are variously approaching digital media. Informed by empirical findings, it develops practical recommendations for industry, policy-makers and for parents themselves.

Screen time in the press

Reports about screen time in the popular media frequently link screen time to adverse effects on physical and mental health, for example that screen time makes children 'over-stimulated,'[12] 'moody, crazy and lazy,'[13] 'cross-eyed'[14] and 'obese.'[15] One of the recurring themes is the impact of screen media on children's and teenagers' brains, the supposedly 'drug–like effects'[16] of digital media that lead families to take part in 'digital detoxes'[17] or to seek out events like 'screen free' week.[18] Some of these claims are linked to research, although many studies are inconclusive in terms of whether screen use *causes* these outcomes or is simply correlated with them (and therefore there may be other factors at play),[19] or whether a moderate amount of screen use has the same negative impact as is claimed for significant amounts.[20]

Another dominant theme in the reporting on screen time is to castigate parents for using digital media as an electronic 'child minder'[21] or, conversely, to highlight the continuous 'struggle' to get children 'off' devices.[22] There have been a number of recent articles exploring parents' own 'addiction' to digital media,[23] claiming that smartphones in particular are 'bad for parenting'[24] by distracting parents and modelling poor (e.g. screen-centric) behaviour for children.[25] There are a small but seemingly growing number of sources that push back against both of these forms of parent 'shaming',[26] noting the positive transformations that digital media have introduced for working parents,[27] the opportunities that technology presents for family fun and togetherness,[28] and the potential benefits that screens might hold for children's learning and engagement.[29]

[c] Throughout this report we refer to 'family and children-focused professionals' as those with a direct professional responsibility to provide support, education and care for children, families and young people. These professionals interact with parents and with children and young people at different ages of childhood. We include in this category: midwives, doctors, health visitors, early years' professionals, primary, secondary and further education teachers, youth and social workers, mental health practitioners and beyond. We also include in this category policy-makers who determine the responsibilities of 'frontline' professionals.

Methods

- We review the academic literature on 'parental mediation', defining the terms used to account for how parents manage their children's digital media use. We provide links to key studies and highlight findings on 'what is effective' in parental efforts to minimise risk and maximise opportunity.

- We present the results of a mapping exercise of prominent sources of advice for parents, including governmental and non-governmental organisations (NGOs), advocacy groups, commercial providers and a selection of advice from the popular media (full list in the Appendix). Although not comprehensive, the sample encompasses a wide range of advice from diverse organisations. We have favoured British sources, while also including well-known resources from the United States and Europe.

- We draw on our current research, Parenting for a Digital Future, funded as part of the MacArthur Foundation's Connected Learning Research Network.[30]

  This comprises:

  - In-depth interviews lasting from 30 minutes to 2.5 hours with 65 families about their digital media practices. Semi-structured interviews were conducted face-to-face. The families vary by age of children (from birth to 17 years old), socioeconomic status, family composition and ethnicity.

  - We focus on families who have decided to prioritise the potential of digital media for their children's present and imagined future. This includes parent bloggers, parents of children attending digital media and learning sites (e.g. after-school code clubs or weekend digital media production sites), and parents of children with special educational needs and disabilities for whom digital media offer unique promises and challenges.

  - Family interviews combined parent and child interviews and observations, fieldwork visits to digital media sites, schools and other relevant locations, as well as analysis of digital media texts produced by parents or children.

  - Interviews generally concentrated on a single focal child, although touched on issues relevant for other children. In some cases, we were able to interview both partners in the case of couples; in others we were limited to one parent or the child's perspective.

  - This policy brief includes three case studies selected from the interviews with families. Note that in order to preserve the anonymity of the individuals involved, in the case studies all personal and organisational names used are pseudonyms.

How parents manage children's media use

The term 'parental mediation' refers to the different ways in which parents try to influence how and why their children use digital media.

Why do parents mediate?

Research has traditionally focused on how parents try to reduce the potential negative effects of screen media on children and young people, most commonly by restricting time spent on screen media.[31]

The risks generally associated with screen media use, especially in relation to digital and online media, include: [32]

- **Conduct risks** e.g. bullying, 'sexting' or misuse of personal information.
- **Content risks** e.g. pornographic, violent, racist, false or misleading content.
- **Contact risks** e.g. 'stranger danger', stalking, harassment or impersonation.
- **Commercial risks** e.g. advertising, excessive or hidden marketing, in-app purchases or scams.

While these risks, along with possible risks to physical health from being sedentary, looking at lit LED screens or from incorrect posture, are much popularised by the mass media[33] and thus prominent in parents' and the public imagination, less attention is paid to the further finding that risks are not the same thing as harms. Rather, harms refer to the outcomes that *may* result from exposure to risks, depending on the child and the circumstances – including parental mediation.[34] For example, playing violent video games may lead to increased aggression, but it does not do so automatically, or for all children in all circumstances.[35] Nor does a high level of social media exposure inevitably lead to low self-esteem or poor body image, for example. However, they can be related, again, depending on the circumstances.[36]

Less prominent but also important is the recognition that digital media can support positive outcomes for children. Here, too, research shows that parental mediation can play a constructive role, benefiting children through their media engagement. Such opportunities include:

- **Learning and creating** e.g. support for literacy and numeracy, informational needs, academic achievement, hard and soft skills learned about or through digital media including creativity and personal expression.[37]
- **Connecting with others** e.g. communicating with distant family and friends, participating in like-minded communities of support online.[38]
- **Civic action and engagement** e.g. joining community or activist groups, connecting personal expression to wider social justice movements.[39]

However, as with the potential harms of digital media use, the possible benefits are not inevitable. Despite previous efforts, it remains that only a small minority of children are fully able to access the full range of opportunities presented by digital media, and overall inequalities in gender and socioeconomic status remain influential in determining who uses digital and online media to learn, create, communicate and participate.[40]

How do parents mediate?

Although the parental mediation literature was historically developed in relation to television viewing, recent research recognises that the adoption of digital and online technologies at home, school and work is changing how families interact in and around media. For example, a child using a tablet with access to infinite content necessitates a different approach than when children tuned in to a favourite show according to a set schedule.[41] The interactions between parents and children vary by device; for example, if a device can be carried into a private bedroom or used outside the home.[42]

Researchers of parental mediation in the digital age have found that parents vary especially in how and whether they balance social and/or technical forms of mediation, and in whether their aim is primarily to enable certain practices and/or to restrict them.[43] The main types of parental mediation are summarised in Table 1. Note that the evidence shows that parents combine these in different ways, depending on their child, their values and their circumstances.[44]

Table 1: Forms of parental mediation

	Social	**Technical**
	Active mediation	*Monitoring*
Enabling	Active mediation includes direct and indirect conversations about how and why media have been produced, how to interpret and evaluate different forms of representation, what parents and children each enjoy and why, and how to recognise and respond to problems of privacy, risk and safety. As digital media become more complex and interactive, parents are often involved in children's media use, especially for younger children, through downloading apps, playing games together, 'friending' or 'following' which may be read either as active mediation strategies or as monitoring.	These are surveillance practices aimed at monitoring children's uses of digital media as well as uses of digital media to monitor children's physical movement offline. This can include, for example, installing apps or using in-built geo-location software (e.g. Find My Phone) to find out where children go outside school hours, or to give reports on websites and networks accessed. Some parents require their children to share their passwords, or (sometimes secretly) follow them on social media in order to monitor their usage. We have classified this as 'enabling' because for many parents such monitoring means they feel able to allow their child more freedom.
	Rules	*Parental controls*
Restrictive	These are rules in relation to media, just as families have rules for mealtimes, bedtime or homework. They may be time-based rules – how much media, or at which times of the day. Sometimes they are conditional (e.g. only when done with homework). Some rules are place-based (e.g. not at meal times). Some are content or activity-based (e.g. no Instagram).	These include a range of technologically enabled restrictions ranging from filtering software provided in broadband packages or on specific sites (e.g. 'child-safe modes'), to turning off routers at set times or using apps and software packages to restrict either the content that can be accessed from particular devices or the times of day they can be used.

What works?

The parental mediation literature struggles with evaluating which of these strategies are effective, for several reasons. Parents have different goals and they tend to pursue them inconsistently, and so it is difficult to *prove* a direct causal link between use of any particular strategy and outcome, whether harm reduction[45] or indeed positive outcomes, since there are so many influences in children's lives. There is a wide gap between parents identifying an action they want to take, whether encouraging or limiting media, and actually doing so, so the practice may be very different from the stated aim. Finally, parental mediation strategies frequently intersect – e.g. following a child on Instagram might involve active mediation (co-use) and monitoring, making it difficult to distinguish their effects.

However, there are some conclusions we can draw from the available research.

- Parents who heavily restrict their children's access to the internet tend to have children who experience reduced exposure to risk,[46] but also fewer opportunities for learning and engagement.[47]

- Parents who heavily restrict do not often involve their children in making decisions. This can be a missed opportunity to build a sense of trust and ownership over media use within the family.[48]

- Both children and parents find the pervasiveness of digital media hard to manage, but context-specific rules (e.g. 'no phones at the table') are harder to enforce than activity-constraints (e.g. no Snapchat).[49]

- Outright bans of activities such as using social media or playing video games can have consequences for young people, who may feel cut off from their peers[50] or unable to access information and support.[51]

- Reducing risk and reducing harm are not the same thing. Parents often focus on avoiding risk, but might accept some risk as a basis for boosting coping strategies[52] and *resilience* against future risks.[53]

- There is little evidence that the use of technical restrictions, on their own, is effective in reducing children's risk of harm online, possibly because children find ways around the restrictions or because the software can be clumsy, leading families to turn it off.[54]

- Most significantly, insofar as parental restrictions mean that children use digital media less, and less deeply, children may not get the chance to explore the media's possibilities or to develop the skills needed to benefit.[55]

Therefore, active mediation is associated with increased positive outcomes, but does not reduce exposure to risk on its own.[56]

- Monitoring children's digital whereabouts, and talking with them about who they are interacting with, is more effective than time or content restrictions in reducing bullying and harassment.[57]

- Parents' own digital skills and interests matter,[58] as digitally skilled parents are more likely to be confident mediating children's internet use, whichever tactic they adopt.

- Parents are role models for children and young people's internet use, so parents who are heavy media users or who balance media use with other activities are more likely to have children who do the same.[59] Parents who view media positively are also likely to have children who embrace those values.[60]

- Although many parents use digital media as a way of keeping children busy, when parents jointly engage with media, their children enjoy and learn more.[61]

- However, parents may overestimate their own skill and knowledge levels and miss opportunities to learn and engage with their children, assuming they already know what their children are doing online.[62]

- In some cases co-use can be misconstrued; for example, if parents play or watch violent content with their children and don't engage them in discussion, they may be unintentionally sending a message of approval.[63]

- Parents can be resources in helping young people learn through and about digital media and are frequently interested in doing so. However they often face barriers to supporting learning through or about digital media, both in schools and in non-formal learning settings, because they are constrained in terms of time, they lack the cultural capital to offer themselves as resources, or they are not invited to participate by educators.[64]

Ultimately, to reduce risk and maximise opportunity, parents must engage in a combination of approaches.[65] Strategies that involve children and young people directly in discussion about rules and family norms[66] and that feel fair to all family members tend to have the most buy-in from children and are thus easier for all to follow.[67] However, research also demonstrates that parental mediation is most effective when it is in conjunction with other forms of safeguarding built into content and platforms themselves.[68]

What is the current advice?

Parents are inundated with guidance about screen time – in the popular media, from celebrities[69] and politicians,[70] and through informal chats at the school gates. But what does the advice hope to achieve? What does it recommend that parents actually *do*? And is it grounded in evidence? We mapped current screen time advice for parents from 23 different organisations and outlets (including multiple sources per outlet in some cases) in order to see what types of recommendations parents are offered. While these are far from comprehensive, we have included prominent sources of advice from a wide range of formal and informal organisations accessed by parents (see Appendix).

What is the advice for and what does it recommend?

Advice, by its very nature, responds to some kind of dilemma. As discussed, these dilemmas can be framed as: how to minimise risk, how to maximise opportunity, or how to achieve both.

Of the sources we considered (full list available in the Appendix), about the same number focused solely on risk or were relatively balanced, whereas only one source could be described as *solely* opportunity-focused. Overall, advice to parents is oriented far more towards risk than opportunities. Yet which particular risks are seen as a cause for concern varies a lot – parents may be advised to restrict their children's digital media use because of the risk of obesity[71] or sleep problems or because of problematic content (usually advertising, violence or sexual content) or because of adverse consequences for social interaction and play.[72]

Advice focused on risk mainly advocates that parents employ restrictive mediation strategies whereas opportunity-focused advice mainly emphasises active mediation. This is not to say that risk-focused advice never includes active mediation strategies, but the active strategies are often framed within a wider orientation towards safety and limitation.

- **'Official' sources, including governmental advice, are the *least* likely to be positive about digital media.** Government and regulatory organisations are still overwhelmingly focused on risks and harms. For example, the National Institute for Care and Health Excellence (NICE) in the UK only says of screen time, 'Any strategy that reduces TV viewing and other leisure screen time is likely to be helpful [in preventing obesity].'[73] ParentPort, the UK media regulators' parent-facing website, tells parents that 'keeping [children] safe can sometimes be a challenge', and helps parents 'protect children from inappropriate material.'[74] MindEd, a training portal for parents, gives parents detailed information about the range of risks their children are likely to encounter online, and what to do about them.[75]

- **Sources of advice that represent the direct voices of parents (either crowd-sourced advice or advice based in part on personal experience) tend to be the most balanced in acknowledging the potential benefits of digital media.** For example, Mumsnet advises parents to 'Keep a family screen time diary for a week. Talk together about what it reveals about your family and individual screen habits.'[76]

There is a considerable overlap in the advice. Of the sources of advice:

- **All (bar one) advocate some form of social restriction**, including:
  - Setting screen time limits
  - Establishing 'screen-free' times of day (e.g. during family meals)
  - Creating rules about which sites can be accessed or when

- **Most advocate some form of active or social mediation**, including:
  - Talking with children about what they encounter online
  - Being a positive role model
  - Using digital media together
  - Showing children that you understand why digital media are important to them
  - Discussing values collectively and making a family media contract

- **Over half advocate some form of monitoring**, including:
  - Sitting with children when they use the internet
  - Installing apps or using software to track what content is being accessed online or where children physically are
  - Requiring children to share passwords

- Keeping computers in a public area so online activities can be overseen
- Checking internet browser histories

- **Just under half advocate some form of technical restrictions**, including:
  - Using parental control software and filters
  - Setting time limits for Wi-Fi access

But only a small minority of sources of advice (five out of 23, see Appendix) emphasise to parents that children's use of digital media need not be all negative, that the role of parents extends beyond limiting and restricting, and that the difficult task is to therefore to judge, and to balance, media-related opportunities and risks.

The American Academy of Pediatrics (AAP)[77]

The AAP is an advocacy and support organisation for American paediatricians and paediatric specialists, and is dedicated to the health and wellbeing of children from infancy through to adolescence. It has taken a position on 'screen time' as digital media influence the physical and emotional health of children, and because paediatricians are often one of the first 'ports of call' for American parents seeking advice about their children.

- In 1999, the AAP issued its first policy statement on screen time, which was re-issued (and largely re-affirmed) in 2011. This guidance discouraged parents from using screen media for children under the age of two, noting that there was no evidence of educational benefits for infants, and limiting screen time to two hours a day at the upper limit for children over the age of two.[78] These '2x2' guidelines have become an international screen time benchmark and are widely cited by other organisations (see Appendix). Yet many studies (including our own) suggest that few families actually follow these restrictions to the letter.[79]

In 2015, the AAP announced that it was revising its guidelines on screen time, noting that 'media is everywhere. TV, Internet, computer and video games all vie for our children's attention', and that the AAP aims to help parents 'understand the impact media has in our children's lives, while offering tips on managing time spent with various media.'[80]

- The AAP will issue new guidelines in 2016, but the initial announcement indicates a move away from advocating only for social restrictions (time limits) and towards a constellation of active and restrictive approaches.

There is, at present, no British or European equivalent to the AAP which provides centralised support and guidance for parents and those working directly with parents on how to consider the benefits and risks of screen time. The MindEd platform, funded by the Department for Education, provides some guidance, but as a new resource it is not yet widely known and focuses almost exclusively on risks (see Appendix). However, as the AAP guidelines have an intrinsic focus on the negative physical health-related effects of digital media, for which there is arguably more evidence than for positive interpersonal or individual outcomes (in part because these are less well studied), we suggest that if an equivalent centralised resource is developed in Britain, a multi-sectoral approach involving health, education and creative industries would be best placed to address both the opportunities and risks presented by digital media.

Common Sense Media (US) and Parent Zone (UK)
Common Sense Media (CSM) and Parent Zone are two prominent organisations dedicated to providing screen time advice and support for parents. Both directly address parents and also provide information and advocacy for family and children-focused professionals.

- Of the two, CSM is explicitly opportunity-focused, whereas Parent Zone prioritises addressing concerns about risk and safety (although each organisation addresses both opportunities and risks).

- CSM aims to 'harness the power of media and technology as a positive force in all kids' lives.'[81] Parent Zone, in contrast, aims to improve 'outcomes for children in a digital world' including being 'safer online', 'resilient enough to cope with the challenges of the online world' and 'educated for a digital future.'[82]

- Both organisations review apps, games, shows, software and devices for children. CSM reviews are more easily searchable by age or special interest (and with their more extensive site, they make specific recommendations, e.g. the best games for children with special needs), and they include extended comments from parents. Parent Zone offers fewer reviews, but these sometimes include children's perspectives and give more details about how to enable safety devices, prevent in-app purchases, or avoid unwanted contact (compare CSM's versus Parent Zone's reviews of the popular game *Clash of Clans*, for example).

- Both organisations advocate a mix of mediation styles, although Parent Zone gives more information on restrictive mediation (especially parental controls) than CSM.

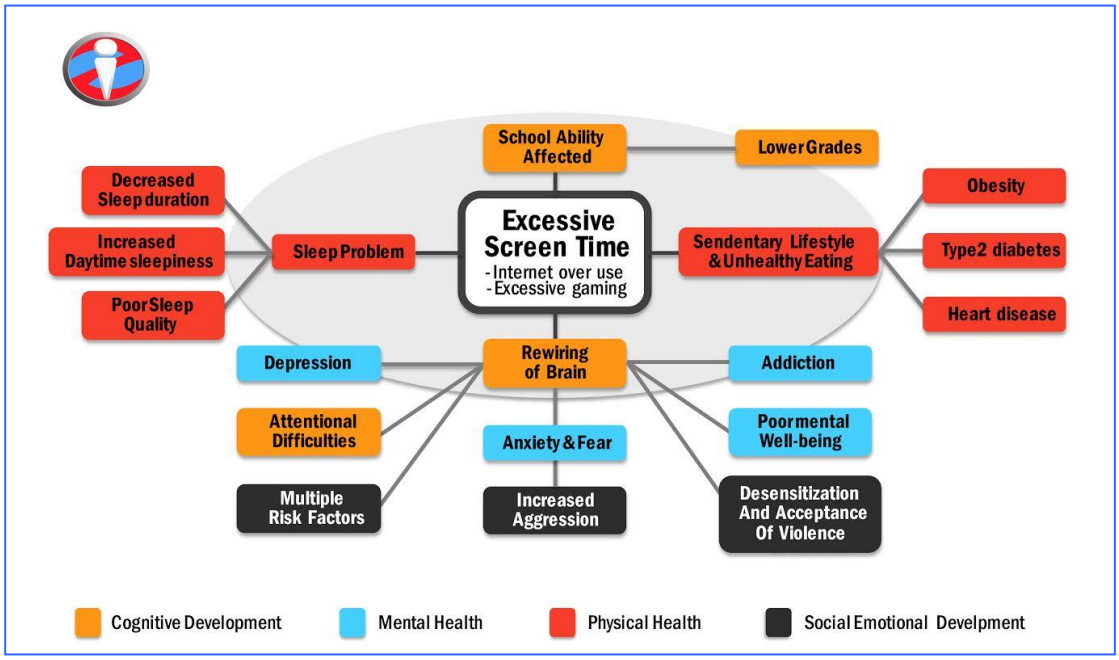
Is the advice underpinned by evidence?

The majority of advice for parents is linked to some kind of evidence, although what type of evidence this is, and how it is used, varies.

Out of the sources, nearly all cite some kind of research, including academic studies and studies commissioned by organisations themselves. The majority of evidence is recent (from 2013 onwards). However, when research is cited it is often only briefly, and the link between the media risk (e.g. excessive screen time or violent content), the evidence of harm (e.g. obesity or aggressive behaviour) and the recommendation (e.g. more physical activity or family discussion of the meaning of media representations) is rarely made clear.

- **The organisations with the closest links between evidence and recommendations are those that commission their own research.** Common Sense Media (CSM) in the US and Parent Zone in the UK have each commissioned studies of parents that directly link to the advice they offer (with industry sponsorship). In the UK, some evidence-based organisations (e.g. the UK Council for Child Internet Safety, UKCCIS) do offer advice to parents, but their reach is unknown.[83]

- **Overall, the evidence cited is overwhelmingly from quantitative sources, especially for risk-focused advice,** with only a few qualitative studies cited. For example, the World Economic Forum recently published a post noting that digital media use can 'lead to developmental issues, such as obesity, sleep disorders and attention problems'. The post was accompanied by this graphic, which demonstrates the continued life of the 'media effects' tradition that takes harm reduction as a starting point:[84]



Source: iZ HERO LAB Pte Ltd[85]

- Advice reflecting a positive vision of screen time tends to be crowd-sourced (i.e. the 'evidence' is the self-reported experiences of parents), advocated by industry (e.g. Vodafone), or claimed as 'common sense' with no links to evidence.

Beyond one-size-fits-all: insights from current research

Our review of current parenting advice suggests that providers seek to address the widest array of families. Thus the available advice addresses parents generically, rarely differentiating by the child's age, household circumstances or parental familiarity with digital media. Research, by contrast, usually attends to the particularities of demographics and contexts, with family media practices shown to vary considerably with specific resources, needs, skills and values of parents and children.[86] So, to the extent that parental advice draws on an evidence base, its 'one-size-fits-all' approach strips away research findings about the importance of parent and child characteristics.

This section highlights current research alongside illustrative case studies from our project Parenting for a Digital Future. Our aim is to go beyond the current gaps in screen time guidance by illustrating how the circumstances of diverse families influence their approaches to media use. Bearing in mind what is at stake for real families, we identify key issues raised in these cases and in recent research.[87] To target attention on those who stand to benefit the most, we focus especially on low-income households, on children with special needs, and on age and gender differences.

The Apau family

Single mother Cecilia Apau and her three children live in subsidised housing in South London. Cecilia migrated to the UK from West Africa 13 years ago; her three children were born in England. Despite living on a household income of less than £15,000 per year from her work as a cashier in a low-cost grocery store, in the past four years Cecilia has purchased a desktop computer, a laptop, two tablets and two smartphones for her family's use, alongside a flat screen TV with a cable box. Both the desktop and laptop were visible in the lounge, but not working. Cecilia described why she had decided to buy the computer:

Cecilia	Because my daughter [Esi, 12] needed to use the computer for homework and things like that.
Interviewer	So did she use it for her homework?
Cecilia	Because it's not working, she doesn't usually. They use one of the Kindles, the tablets, to do it.
Interviewer	Okay, so how long has it been broken for?
Cecilia	Almost a year now.

The tablets had been purchased so that her children could practice "maths, spelling, reading, anything… I want them to learn every day, to improve their reading." She has downloaded around 20-30 apps that she deems 'educational', but could not say what she thought the children were learning from them. Most of the apps were free ones that she had found herself, but one was specifically designed to prep for the SATs (the standardised test for Year 6 children), as recommended by a teacher at Esi's former primary school.

Cecilia encourages her youngest son Eric (4) to "read books" on YouTube by typing in the name of a favourite book (e.g. *Jack and the Beanstalk*) and watching a video of the pages of an illustrated book being flipped while a voice-over reads the story. Cecilia reports, "it helps him, because I've got three [children] and I'm working as well, I don't have time to read. So … it's like I'm reading it to him." When we asked Cecilia if she told her children's teachers about what she was using at home, she said "it hasn't occurred to me", and that she was too busy to linger at school, but neither do the teachers ask. Cecilia does not really worry about her children's safety online, even for Esi, who has her own smartphone, as she trusts her not to look at anything "inappropriate". Cecilia has a basic level of digital literacy: she can download apps and use WhatsApp and Facebook to keep in touch with friends and family, but the first email she ever sent was to us responding to the request for an interview.

In contrast, Eugene (8) is especially enthusiastic about digital media and signed up for his school's volunteer-run after-school coding club. At the club Eugene quietly got on with his coding using Scratch (a basic coding platform), although he was not the most advanced. Cecilia said she would like to see Eugene's creations, but couldn't because "this one [desktop] is not working… I don't know what he is doing really… He tries to explain to me but I don't really understand what he's trying to tell me … he really wants to show me what he did … he keeps pressing me to fix it but there's nothing I can do." Ultimately Eugene left code club, describing it as "boring". His mum wondered if this was "because he can't practice it at home."

Some advice assumes only a moderate level of parental understanding of digital media, repeating the mantra of children as 'digital natives' and parents as 'digital immigrants',[88] notwithstanding critiques of this vision of children[89] (since media literacy and digital citizenship must be learned over time) and of parents who, after all, have themselves grown up in the digital age.[90] Surely parents with a growing familiarity with digital media need a new generation of parental advice? This is a key consideration for the present report.

Low-income families

Advice to parents makes few brief references to the cost of purchasing, updating and maintaining digital media at home, with little acknowledgement of how access to high-quality – or even adequately functioning – resources might influence expectations and use. This is despite the fact that 28% of children in the UK live in households that are defined, like the Apau family, as living in poverty.[91] As in the Apau family's case, studies of lower-income families reveal some key findings.

Parents in lower-income families frequently invest disproportionate resources into digital media, making considerable sacrifices to purchase equipment that middle-class families take for granted:[92]

- Lower-income households are, like the Apau family, often surprisingly media-rich. Certain ethnic groups, often migrants (e.g. Latinos in the US), invest especially heavily in digital media.[93]

- However, having purchased low-cost digital media, or with little time or financial resources to troubleshoot if things go wrong, many lower-income families find themselves unable to use their equipment when faced with viruses, hardware or connectivity problems. Some families cannot pay for internet connections or maintain data plans on mobile devices.[94] Digital media access is not simply a 'yes' or 'no' issue. Families connect at all points along the 'access rainbow'.[95]

- In the US, 94% of families in one study[96] had some form of internet access, although 33% of lower-income families accessed the internet only via mobile devices which, as we see in Eugene's case, impacts on the type of interests that can be pursued.

Lower-income parents often have deeply held beliefs in the educational potential of digital media,[97] but these do not always match what their children are doing in school, and nor are they acknowledged by policy-makers.

- Of higher-income parents, only 30% say they are 'very' or 'somewhat' likely to use digital media (including computers, tablets and TV) for educational purposes, but this number rises to 52% for lower-income parents.[98]

- Families with fewer resources, both time and financial, are more likely to view free or low-cost education via digital media as helpful, whereas higher-income families are more likely to see digital media as a 'distraction'.[99]

- Lower-income parents may invest significantly in educational technologies, or additional tuition and learning supports, but without an opportunity to share their experiences with teachers there may be 'missed connections' in supporting children's learning.[100]

- Lower-income parents are often interested in supporting their children's participation in digital media and learning sites, but experience barriers to doing so, including lack of time, cultural or linguistic barriers, and a lack of invitation from educators to participate.[101]

Lower-income parents often experience pressures that limit them from active involvement in their children's digital lives.

- As a single mother of three, Cecilia Apau has little time to sit and read with her children, though she acknowledges this is important. She therefore uses digital media as a learning support, and sometimes as a 'babysitter'.[102] This is in keeping with the finding that lower-income parents spend proportionately less time than higher-income parents in 'media socialisation' activities, defined as active mediation including giving children guidance for and suggestions about their digital activities.[103]

- Some lower-income parents are characterised as practising an 'ethic of respectful connectedness' in which they prioritise unstructured time and parental authority in relationship to digital media (leading to restrictive or hands-off approaches to parental mediation) rather than an 'ethic of expressive empowerment' (characterised by more active mediation) in which they play a central role in encouraging individual expression and academic achievement.[104]

Despite their hopes, parental income and education affect the risks children face online:

- Children from lower-income, less well-educated households spend proportionally more time online, have parents who practice fewer active mediation strategies, and are less able to ask their parents for support.[105]

- The education level of parents matters more than their income, with more well-educated parents (even those with low incomes) more active in mediating their children's internet access.[106]

It is clear that lower-income families may be 'learning assets' that are not being capitalised on in educational interventions.[107] The 'deficit' narrative, in which low-income families are a problem to be overcome, has long characterised digital interventions, whereas we suggest that the case of the Apau family illustrates the need for support and inclusion for lower-income parents in a 'two generation' or 'whole family' approach.[108]

The Kostas family

Jake Kostas (15) was enrolled in a technology and arts programme for young people with moderate special needs in North London when we met him. His father Robert described him as having Asperger's syndrome, which he also called 'high-functioning autism'. Robert, the child of Greek Cypriot parents, was raised in London and owns a cleaning business. The family is reasonably financially secure (household income £40,000-£60,000/pa), despite the fact that Jake's mother Constance does not work in order to care full-time for Jake and his younger brother Dominic (12), who is 'typically developing'. Robert is competent with technology at work, using specialised software to run his business. He traded services with one of his customers (an IT professional) to come to the house to set up filtering and monitoring software to keep track of the boys' activities online.

Jake and Dominic are both keen gamers (they love *MarioCart*), and fans of YouTube celebrity parodies. Robert appreciates Jake's use of media as a form of 'solace', saying "because of the type of the child he is, he's not comfortable in social situations, finds it difficult to make friends… For an Asperger's child, I think an iPad is the perfect toy." Yet he worries constantly that Jake has become "too addicted to it" and frequently has conflicts with Jake and with Constance, who he sees as being too lenient. Robert feels his wife introduced the iPad as a "sort of babysitter, so she could get some peace and quiet because it's difficult being a parent of an Asperger's child … [but now] the horse has bolted and we're trying to close the stable door." Like many children on the autism spectrum, Jake has trouble sleeping, something that Robert feels the iPad exacerbates.

Robert acknowledges that Jake's prowess with video games has put him on an equal footing with his younger brother and made him more able to share an activity with 'normal' peers. It was actually Dominic who pushed the boundaries of Robert and Constance's rules more than Jake, playing games like *Call of Duty* even though his parents had prohibited it. Robert described Jake in contrast as "very honest, he's really a good boy". Robert was also trying to channel Jake's interest in technology into something Robert felt was productive by enrolling him in a media arts organisation. Jake loved going every week to the apps development class because, in Robert's view, as it is "technology based, he really, really enjoys it." Robert didn't really understand what Jake did in his class, but in a sense was happy with that, glad that Jake had something independent from his life at home. Robert wondered about Jake's future, hoping that there might be a "career path that he could choose and his condition probably would be an asset … because he thinks outside the box … he's got brilliant attention to detail. So there must be instances in terms of jobs where that is a really good requirement."

Unlike Constance, who is active in mothers' groups (including on WhatsApp, with mum-friends whose children also have special needs) and closely communicates with the teachers at school, Robert is isolated and unsure of where to turn for advice. When asked where he seeks support for his dilemmas about how to help Jake, he mentioned that he had looked at online forums for parents of children with autism, but that when you try to find answers, "it's like you feel like a fisherman trawling for a specific fish … how are you going to find the one fish that you're looking for in an entire ocean?"

Children with special educational needs and disabilities

Although almost entirely absent in the landscape of current advice for parents,[109] whether a child has special educational support needs or disabilities is highly influential in how families approach screen time.[110] The category of 'special needs' is broad and can range from young people with profound and multiple disabilities, through to those with mild learning difficulties, physical disabilities or communication support needs.[111] In the UK, 15.4% of children are defined as having special educational needs and disabilities,[112] although the statistics are somewhat controversial.[113]

Our study included families with mild ADHD (attention deficit hyperactivity disorder) or dyslexia through to families with children with moderate to severe impairments, some of whom are non-communicative and enrolled in special schools.[114] There is little research about the digital practices of these children and families, although their needs are considerable.[115] One reason we prioritised them in our research is that these parents often have acutely felt hopes that digital media can offer specific help to support or offset their children's learning and/or social difficulties.

As with the Kostas family, parents of children with special educational needs and disabilities often have high hopes about what digital media and other technologies can offer.

- Families with children with difficulty communicating may come to rely on technology as a means of interacting with their children, for example using specialised software and apps (sometimes called 'assistive technology') such as voice output communication aids or picture exchange communication systems.[116]

- For those with sensory impairments, digital media may play an important role in helping to navigate the world around them, for example when those with visual or auditory impairments use geo-location apps.[117]

- As Jake has found, using popular media and games may help young people with special educational needs and disabilities gain currency with peers and siblings and 'feel normal'.

- The asynchronous nature of some online communication may relieve the emotional and time-related pressures of face-to-face communication, especially for those with autism.[118] There are a number of blogs written by teens and adults with special needs, including autism, to communicate their experience.[119]

- Some parents hope that digital media might make it easier for their children to find employment in the future, echoing the image of technology 'geeks' as being 'on the spectrum' – for example, one parent referred to Microsoft's plan to proactively hire employees with autism.[120]

- Many homes with children with special educational needs are media-centred, using digital media as a way for both parents and children to find needed respite. In one family in our study, a five-year-old girl with autism uses her iPad to create a calm space away from her younger siblings that does not make her feel she is being punished.

- Some parents with children with special educational needs and disabilities find significant sources of support online,[121] for example, through blogging or even in Constance's case, through her WhatsApp group. For parents whose children's needs make them unable to participate in daily face-to-face parenting rituals, digital media can fill an important gap.[122]

Yet parents with children with special needs are keenly aware of their children's vulnerabilities online,[123] and worry how their special needs might impact on their digital media use.

- Young people with autism, like Jake, are more likely to spend the bulk of their leisure time with digital media than typically developing peers.[124] One study has shown that boys with autism may spend twice as much time per week playing video games.[125]

- However, as in Jake and Dominic's case, Jake was far less likely to play 'first person shooter' games, preferring games that seemed to us somewhat 'childish' for his age. Several other families in our study mentioned preferences for Pokémon, and wondered if this is because the creator is also rumoured to have autism.[126]

Although many young people with autism spend significant amounts of time with digital media, they make less use proportionally of social networking sites.[127] Although digital media may enable young people with autism to foster 'supportive relationships', they also introduce issues of determining who to trust, how to assess information and what to disclose that may be more difficult for young people with autism to navigate.[128]

Our research shows that while families with children with special educational needs and disabilities are often very enthusiastic about digital media, they are also very concerned about its use. We also note that digital media alone cannot address wider forms of marginalisation.[129] Insofar as children and young people with special educational needs and disabilities are benefiting from digital technologies, this is the result of significant resources and support from families, siblings, friends and their wider communities – support only some young people have.

The Heston-Williams family

Dani Heston was separated from her partner Natalie Williams, but has weekend custody of her two boys, Josh (12) and Michael (9), in an outer London suburb. Dani works in IT sales and shares with Josh an intense love of all things digital. While Dani described herself as having learned basic coding on a Commodore 64, she and Josh excitedly discussed her recent purchase of a high-spec 16GB RAM desktop from which she runs four virtual computers, including one that she had set up to be 'safe' for her boys.

Josh excels in ICT courses in school but described himself as getting easily 'bored' since the rest of the class can't keep up with him. Josh and Dani share an easy banter around all things tech-related, proudly calling themselves 'geeks' and gaming together and with friends at home. Dani appreciates the learning potential of games like *Minecraft* and sets Josh and Michael challenges, for example instructing them to build a castle using *Redstone* (a specialised building material within Minecraft). Dani likes the sociability when Josh and Michael's friends are over and the friends sit together comparing *Minecraft* constructions and egging each other on. For Dani it is important to "understand what they are doing. I'm a gamer myself; I love playing games."

Dani's enthusiasm for technology has its limits; she does not like the boys to use screens in their bedrooms, and sets limits to 'force' them to go outside periodically. She has some concerns about social media. Josh had set up a YouTube channel to broadcast gaming videos that Dani and Natalie allowed, but Dani ensures he does not show his face or use any location-specific information in his profile. She had previously set passwords on his accounts so that he had to ask her permission before adding friends, but recently decided to remove some of these restrictions as Josh is old enough and he now understands what kind of information he needs to protect. While Dani and Natalie are mostly in agreement about the rules for the boys' tech use, Dani finds them easier to enforce, as Natalie is less digitally confident. Josh described how once Natalie "got a virus on her computer and then turned it off for, like, five months."

Describing herself as "excited about the digital future", Dani sees herself as preparing Josh and Michael for a world in which "work's probably going to become a lot more fluid", where children are going to "have to do it for themselves" and where her boys will ultimately "be responsible for [their] own careers." She wants to enable Josh and Michael to use technology so they have the "choice to do whatever [they] want." She had paid for and transported Josh to a week-long summer technology camp where he was learning to programme using Java. Dani is supporting and pushing Josh, helping him understand the tenets of 'object-oriented' programming languages and what they are useful for. Because she can understand the nature of Josh's interests, she finds it easy both to police and to encourage with skill and nuance.

Parents' digital expertise

The example of the Heston-Williams family, and to an extent the Apau and Kostas families, demonstrates that parents have diverse relationships to digital media in their own lives. These parents represent a range of practices and skills, and hold very different values around digital media. Cecilia Apau has only a basic level of digital literacy, but nonetheless is interested in assessing the learning potential of the media her children use. Robert Kostas has an average level of digital literacy, and seeks out additional support, but his media values are oriented towards protection and restriction. Dani Heston, on the other hand, is highly skilled and motivated, and uses her skills to both encourage and manage her sons' digital experiences.

Parents' own digital skill level determines how, and with what results, they mediate their children's digital media use.[130]

- Parents who are less digitally skilled, often correlated with (although not caused by) lower levels of education and income, are more likely to use restrictive rather than active mediation strategies.[131]

- Parents with fewer digital skills and lower confidence managing digital media set inconsistent rules that are often less effective and are associated with children who are exposed to greater risk online.[132]

- Parents with higher levels of digital literacy, regardless of income but often correlated with education level, are more able to combine restrictive and active approaches, which are associated with more positive outcomes.[133]

- Digitally literate parents practice many nuanced forms of active mediation and co-use, which can range from teaching their children about digital media to commissioning them to produce work for the family (e.g. document a family trip) to collaborating with them on creative or academic outputs and beyond.[134]

- Children who are more digitally literate and/or have access to cultural resources (e.g. English language in the case of migrant parents in the UK) often play a key role managing their family's lives via media. Although this can place pressure on children, it can also provide an opportunity for sharing expertise.[135]

Yet parental *values* around digital media can be as influential as parents' skill levels in how they approach media in the home and in their children's lives.

- Parents set the tone in terms of how 'media-centric' a home is, measured in terms of devices themselves, and also how omnipresent different forms of media are (e.g. how often the TV is on or the smartphone is accessed).[136]

- Digital technologies often catalyse dramatic hopes and fears that parents have for their children, leading to extreme positions either restricting or encouraging digital media use. Thus understanding parental mediation is often about much more than digital media itself.[137]

- Digital media use offers opportunities for parents and children to share expertise and to learn from one another, if both are open to doing so.[138]

- Parents can come to understand the importance of digital media in their children's lives and can help to navigate the social and emotional landscape enabled by digital interactions, even if they have low levels of digital literacy in using digital media in and of itself.[139]

- Parents who are aware of the possibilities presented by screen media, generally those with greater digital skills themselves, are able to support their children towards accessing opportunities but may also, like Dani Heston, choose flexible restrictive strategies to safeguard against problems they may have faced themselves.

Age and gender

Although each of the three families saw their children's ages, interests, developmental abilities and gender as an intrinsic part of how they viewed their media use, very few of the sources of advice we mapped acknowledge these differences. While just over half of the sources of advice differentiate children by age, in general these categories are wide (e.g. 'teens'), and in half of the cases the advice does not specify age at all. With mobile media gaining increasing popularity among under 8s, even among under 3s,[140] families with children of different ages will mediate in very different ways. Similarly, gender can sometimes play a determinative factor in parental concerns and mediation styles.

As children grow up, parental mediation strategies change, in general becoming less restrictive over time as children take greater responsibility for their own media use.[141] For many families, mediation strategies are fluid, adapting to the stage and need of the particular child, or changing in response to a presenting 'problem'.

- Parents of young children are more likely to engage in all forms of parental mediation, including technical restrictions, social restrictions, active mediation and monitoring.[142]

- Especially for very young children, parents are the main media providers, selecting the devices, apps and games that the children will access. In the Apau family's case, Cecilia makes continual judgements about what is educational, with little to no support.[143]

- Parents often proactively use media with very young children as a nominally educational 'electronic babysitter' so that a parent may rest, work or engage in household tasks. Single working parents like Cecilia Apau, or parents with additional pressures in their home like Constance Kostas, view media as a much-needed respite.[144]

- For parents of older children, the comparison with peers and peers' parents can become influential, but trying to assess and adhere to the 'norms' of a community can be challenging. Robert Kostas liked the fact that Jake could take part in gaming with his peers, but worried that this would expose him to violent or unwanted content.[145]

- As children grow up, many parents feel less able to keep track of their online activities, in part because their children are spending more time online, and so the task of monitoring naturally expands, with children less amenable to complying with restrictions.[146]

- Arguably, parents have less control of children's media use as they grow up, and older children may oppose parental control more vocally while they grow more sophisticated in their ability to 'work around' parental restrictions, as in the case of both Dominic Kostas and Michael Heston-Williams.[147]

- Digital media play a growing role in how parents communicate with their children, and how they communicate with their co-parent, if they have one. In addition to using mobile and social media (including text messages) to keep in touch with distant relatives,[148] digital media offer vital support within the same home, especially as children grow into adolescents with greater independence.[149]

- Children of all ages may fixate on devices, not necessarily ones they own but perhaps ones they wish to own. Digital media may be imbued both by parents and children as having 'magical' value.[150] This can lead to conflicts between parents and children about what is the appropriate age to purchase or to access new content.

- Children become increasingly sophisticated in their assessments of privacy and what is 'real' or 'fake' online over time, while their relationships with parents and peers change alongside their perceptions of risk and harm.[151]

- Many young people have a sense of what is 'too much' in their own use of digital media, and will at some point begin to 'self-regulate' regardless of parental mediation strategy.[152]

The gender of both parent and child influences parental mediation.

There is evidence that boys and girls use media differently, which necessitates different parental mediation approaches. Girls are more likely, for example, to use visually-based media like Instagram, Snapchat, Pinterest or Tumblr, whereas boys are more likely to play video games (although all of the above are used by both).[153] How parents understand these different platforms and what they see as the benefits and risks of each also vary, with video games often being seen by parents as riskier in terms of concerns about health and wellbeing.[154]

- Studies have shown that girls tend to be monitored and restricted more than boys, even when they are the same age.[155]

- Parents have different concerns depending on age and gender. For younger boys, parents often focus on health-related concerns (e.g. ADHD or obesity) whereas for older girls, parents focus on social concerns and self esteem.[156]

- Parents often describe their children's 'addiction' to or 'obsession' with digital media, especially in relationship to social media for girls and gaming for boys, but are generally unaware of the criteria by which to differentiate normal from problematic use.[157]

- Parents may be influenced by 'social desirability' or the wish to present themselves as mediating in the ways that they believe a 'good parent' should.[158] Many parents in our

study (especially mothers) described restrictive mediation as being optimal, and expressed guilt at their own inconsistencies in enforcing rules.

- Mothers are described in the literature as having 'warmer' and more responsive mediation styles, whereas fathers may be stricter,[159] a dichotomy we observed in the Kostas family. However, in our study many fathers engaged in physically affectionate and emotionally engaged active co-use of digital media with their children as a central part of their fathering, sometimes more so than mothers who were sometimes more invested in monitoring and policing screen time.

In many families, the device belonging to the parent – especially the smartphones of mothers and particularly in lower income families – becomes the locus for joint media engagement from looking up information to playing games.[160] Therefore it is important to recognise that digital media use is not necessarily the solitary activity that is often imagined, but one that is often shared, being negotiated through social relationships.

Conclusions

This brief has examined how, and with what consequences, parents manage their children's use of digital media, what advice is available for them, and what we can learn from current research to shape the next generation of support for parents.

We have argued that it is time to:

- **Recognise that media use is no longer an optional extra, something that can be bracketed off from daily life, and that 'screen time' cannot be homogenised as a uniform or inevitably problematic activity.**

- **Move beyond a heavy focus on risk with little exploration or recognition of opportunities, and thus to move beyond the dominant message to parents that their main responsibility is to limit and control.**

- **Acknowledge that a heavy focus on restrictions leaves parents unsupported in finding opportunities for children and parents to learn, connect and create together using digital media.**

Instead, screen time now includes time for learning, entertainment, a conduit to relationships and information, a place for creativity and even civic action, as well as a source of problems and risk. The historical focus on screen *time* has been at the expense of supporting parents to assess the ***contexts*** in which their children use screens (where, when, why and with what effects), the ***content*** they are accessing (a minority of content is objectionable while the majority is innocuous or indeed positive), and the ***connections*** they are fostering through screens. Instead, a focus on time, restriction and monitoring leads many parents to assume that problems exist when in fact their children may simply be doing things differently from how they remember their own childhoods.

What matters most is that parents and children can evaluate and discriminate among different types of media contents and activities according to what they can offer, for better or for worse. Fortunately, in meeting this challenge, parents are themselves gaining digital expertise, albeit very unevenly and unequally, that can be a resource for their children if appropriately harnessed.

This report has shown that parents make decisions about what and how to mediate based on their children's particular age, needs and interests, their own skills and values, and the resources (time, financial and otherwise) that are available to them. To support the development and use of this expertise, resources are needed for parents to learn how to collaborate with, and mentor, children around and through digital media. Many parents are interested in doing this, but such resources need to be more visible and integrated into all screen time advice for parents.

However, when resources are offered generically, history shows that the already privileged will take them up disproportionately compared with those who are more disadvantaged. Thus we have also argued that it is vital to recognise and address this diversity, and to acknowledge the particular hopes and aspirations, and indeed challenges and vulnerabilities, that some parents and children face when navigating the digital world.

Specifically, we have argued that it is important to:

- **Tailor parental advice and support according to diversity in family interests and values, including rapid changes in levels of parental digital expertise and resources.**

- **Address the particular challenges faced by low-income families and those with special educational needs and disabilities, among other possible sources of disadvantage.**

- **Move beyond screen 'time' as a basis for guidance and help families recognise the difference between problematic and normal use.**

Empowering and enabling parents to build on their own expertise, acknowledging their specific circumstances, and optimising their children's opportunities while minimising the risk of harm in a digital age will surely be of widespread benefit.

Recommendations

Debates around digital media and 'screen time' preoccupy parents and policy-makers. Commercial providers approach parents as a market, but are also invested in efforts to help parents and children access opportunities. This report has shown that the current advice for parents does not address the range of parental concerns, nor does it support parents to draw confidently on their own digital and non-digital expertise to positively engage with their children.

We therefore recommend:

For government and NGOs

1. There needs to be a highly visible **'one-stop shop'** that British parents and family and children-focused professionals can access for up-to-date, evidence-based advice and recommendations. This needs to be a coordinated multi-sectoral effort involving not only physical and mental health professionals but also education and the creative industries.

2. Advice and resources for parents need to acknowledge the **diversity of families,** rather than assuming equal or consistent access to digital and other resources and opportunities.

3. Parents need concrete suggestions for how to use their digital expertise to **engage with their children, not only to police them.** This should include curated recommendations for high-quality content, differentiated by age, interest and special need.

4. Digital literacy interventions aimed at children should adopt two or three generation approaches, **to involve parents or even grandparents as learning partners.**

5. **Safeguarding initiatives should concentrate resources on those who need them the most.** The majority of children use digital media safely, but a minority are vulnerable at one time or another. Family and children-focused professionals supporting at-risk children (e.g. youth offending teams, foster carers) need greater resources to support the most vulnerable children and young people. Interventions also need to acknowledge that such children rely on digital media for connections and support.

6. To guide the above and ensure they remain up to date, **funding is needed** to ensure a robust, multidisciplinary evidence base for understanding the benefits as well as the risks of digital media and to underpin policy interventions and recommendations.

7. Efforts to support parents need to start from a policy level, with **more training and resources available for family and children-focused professionals** to support parents in determining what activities are problematic and how to support their children's positive engagement with media.

8. **Regulatory bodies should continue to limit access to the most objectionable content,** so that parents do not so acutely feel the need to police any and all content for potential harms.

For parents

1. **The experiences, values and expertise of parents** – digital and non-digital – **are a resource for children.** Parents can help their children by not being intimidated by new technologies, as well as modelling constructive and balanced digital habits themselves.

2. There is no one-size-fits-all approach – parents should **adjust their strategies** to the age, interests and needs of their children, remembering that children need support and encouragement across the full age range, from infants to older teenagers.

3. Parents should understand that taking a restrictive approach may avoid risks in the short term, but doing so is likely to **limit children's opportunities.** It is generally preferable to try instead to **build children's resilience so risk does not become harm.**

4. Parents should be aware of and provided with **high-quality age-appropriate media** that can support their children to learn, create and participate, and that families can enjoy both individually and together.

5. **Parents need not feel pressure to 'keep up' with others** since there are as many approaches to digital media as there are families.

6. **Parents should not automatically assume their child's digital media use is problematic.** Rather than limiting screen time according to an arbitrary figure, we recommend that parents consider screen *context, content* and *connections* by asking themselves:
    a. Is my child physically healthy and sleeping enough?
    b. Is my child connecting socially with family and friends (in any form)?
    c. Is my child engaged with and achieving in school?
    d. Is my child pursuing interests and hobbies (in any form)?
    e. Is my child having fun and learning in their use of digital media?

    If the answer to the above questions is more or less 'yes', then it may be that parents could consider whether their fears over digital media use are well-founded. If the answer to these questions is more or less 'no', then these particular parents and children may need to put in place regulations and restrictions in order to address problematic use.

For industry

1. **Commissioners, funders and producers should develop good practice in evaluation,** illustrating what is 'educational' or otherwise beneficial about their products and avoiding labelling content as 'educational' simply as a marketing tool. The criteria by which 'educational' or other value is judged, and the evidence to support such judgements, should be transparent to parents.

2. **Media producers and content providers play a pivotal role in teaching children about the world.** It is vital that they ensure that children have access to diverse high-quality pro-social content[161] that challenges stereotypes and is inclusive of different kinds of families and representations of society.

3. As the format and context of digital media changes – with the Internet of Things, wearables or smart toys – industry and manufacturers need to ensure that best practices are developed so that children's rights to privacy and protection from inadvertent commerce are ensured, and that **parents have clear avenues for feedback and concern.**

4. While there are many reasons why family members can enjoy media individually, parents are also looking for content to share with children – and indeed, with the extended family, including grandparents and others. **So it is vital to support shared family activities through media in ways that stimulate children's development and strengthen their relationships.** Isolating children's programming on child-focused platforms makes it harder for parents and children to enjoy quality content together.

5. The creative industries can help increase children and parents' digital literacy through **public–private partnerships.** Industry expertise in developing creative, imaginative, age-appropriate content can help make programmes more appealing, engaging and personalised to the needs of individuals and families. To support this, industry should ensure it is informed by up-to-date research, and that it complies with codes of conduct and regulation designed to protect children's rights.

Sources

Alper, M. (2014) *Digital youth with disabilities*. Cambridge, MA: MIT Press.

Alper, M. (2016: forthcoming) *Giving voice: Mobile communication, disability, and inequality*. Cambridge, MA: MIT Press.

Alper, M., Katz, V.S. and Clark, L.S. (2016) 'Researching children, intersectionality, and diversity in the digital age.' *Journal of Children and Media, 10*(1), 107-14. doi:10.1080/17482798.2015.1121886.

American Academy of Pediatrics (n.d.) 'Media and children.'

American Academy of Pediatrics (2011) 'Policy statement: media use by children younger than 2 years' *Pediatrics* 128(5), 1-6. doi:10.1542/peds.2011-1753.

Ascend (2016) 'The two generation approach.' Washington, DC: Aspen Institute.

Autism Blogs Directory (2015). http://autismblogsdirectory.blogspot.co.uk/.

Barron, B., Martin, C.K., Takeuchi, L. and Fithian, R. (2009) 'Parents as learning partners in the development of technological fluency.' *International Journal of Learning and Media, 1*(2), 55-77. doi:10.1162/ijlm.2009.0021.

Benford, P. and Standen, P. (2009) 'The internet: A comfortable communication medium for people with Asperger syndrome (AS) and high functioning autism (HFA)?' *Journal of Assistive Technologies, 3*(2), 44-53. doi:http://dx.doi.org/10.1108/17549450200900015.

Beyens, I. and Eggermont, S. (2014) 'Putting young children in front of the television: Antecedents and outcomes of parents' use of television as a babysitter.' *Communication Quarterly, 62*(1), 57-74. doi:10.1080/01463373.2013.860904.

Beyens, I. and Eggermont, S. (2015) 'Understanding children's television exposure from a life logistics perspective: A longitudinal study of the association between mothers' working hours and young children's television time.' *Communication Research*. doi:10.1177/0093650215607600.

Bilton, N. (2014) 'Steve Jobs was a low-tech parent.' *The New York Times*. 10 September.

Blum-Ross, A. and Livingstone, S. (2016: forthcoming) 'From voice to entrepreneurship: The individualization of digital media and learning.' *Journal of Digital Media Literacy*.

boyd, d. (2008) 'Why youth ♥ social network sites: The role of networked publics in teenage social life.' In D. Buckingham (ed.) *Youth, identity, and digital media* (Vol. 6, pp. 119-42). Cambridge, MA: MIT Press.

Brody, J. (2015) 'How to cut children's screen time? Say no to yourself first.' *NYTimes.com*. 13 July.

Brough, M. (2016) *Game on! Connected learning and parental support in the CyberPatriot program*. Connected Learning Working Papers. Irvine, CA.

Brown, A., Shifrin, D.L. and Hill, D.L.H. (2015) 'Beyond "turn it off": How to advise families on media use. *AAP News*, October.

Browning, D. (2012). 'Why cell phones are bad for parenting.' *Time*. 17 May.

Burke, M., Kraut, R. and Williams, D. (2010) 'Social use of computer-mediated communication by adults on the autism spectrum.' Paper presented at the proceedings of the 2010 ACM conference on computer-supported cooperative work, Savannah, GA. doi:10.1145/1718918.1718991.

Campaign for a Commercial-Free Childhood (2016). 'Celebrate screen-free week!.'

Carey, T. and Hoyle, A. (2015) 'Worrying rise of the iPad childminder: More and more parents admit using tablets to keep their children quiet.' *The Daily Mail*. 8 January.

Center for Science in the Public Interest (2013) 'Nickelodeon "WANTED" for impersonating responsible media company. Washington, DC.
Chaudron, S., Beutel, M.E., Černikova, M., Donoso Navarette, V., Dreier, M., Fletcher-Watson, B. et al. (2015) *Young children (0-8) and digital technology: A qualitative exploratory study across seven countries.* Brussels: European Commission, Joint Research Centre.
Chen, V.H.H. and Chng, G.S. (2006) 'Active and restrictive parental mediation over time: Effects on youths' self-regulatory competencies and impulsivity.' *Computers & Education*, 206-12. doi:10.1016/j.compedu.2016.03.012.
CPAG (Child Poverty Action Group) (2016) *Child poverty facts and figures*. London: CPAG.
Choi, K. and Kirkorian, H.L. (2016) 'Touch or watch to learn? Toddlers' object retrieval using contingent and noncontingent video.' *Psychological Science.* Published online before print. 6 April 2016. doi:10.1177/0956797616636110.
Christensen, J. (2015) 'Hour of TV daily may lead to weight gain in kindergarteners, study says.' CNN.com 29 April.
Clark, L.S. (2011) 'Parental mediation theory for the digital age.' *Communication Theory, 21*(4), 323-43. doi:10.1111/j.1468-2885.2011.01391.x.
Clark, L.S. (2013) *The parent app: Understanding families in the digital age*. Oxford: Oxford University Press.
Clark, L.S., Demont-Heinrich, C. and Webber, S. (2005) 'Parents, ICTs, and children's prospects for success: Interviews along the digital "access rainbow".' *Critical Studies in Media Communication, 22*(5). doi:10.1080/07393180500342985.
Common Sense Media (n.d.) 'Our mission.' https://www.commonsensemedia.org/about-us/our-mission#about-us
Cranmer, S. (2015) *Tablets for visually impaired students: Early findings from a UK study.* Brussels: European Schoolnet.
Davies, C. (2011) 'Digitally strategic: How young people respond to parental views about the use of technology for learning in the home.' *Journal of Computer Assisted Learning, 27*(4), 324-35. doi:10.1111/j.1365-2729.2011.00427.x.
Davis, A. (2013) 'Over-stimulated children find no quiet times to enjoy reading'. *The Evening Standard*. 31 October.
DeHaan, S., Kuper, L.E., Magee, J.C., Bigelow, L. and Mustanski, B.S. (2013) 'The interplay between online and offline explorations of identity, relationships, and sex: a mixed-methods study with LGBT youth.' *The Journal of Sex Research, 50*(5), 421-34. doi:10.1080/00224499.2012.661489.
Dell'Antonia, K.J. (2015) 'Four moments when video games are good for kids (and how to make them even better.' *NYTimes.com*. 10 December.
DfE (Department for Education) (2015) *Special educational needs in England: January 2015*.
DfE (2016) *Children with special educational needs and disabilities (SEND)*. London: DfE.
DfE and Morgan, N. (2015) 'New measures to keep children safe online at school and at home' [Press release].
Draper, J. (2016) 'Children risk becoming cross-eyed if they over-use smartphones and hold devices too close to their face' *Daily Mail.* 21 April.
Duerager, A. and Livingstone, S. (2012) *How can parents support children's internet safety?* London: EU Kids Online.
Dunckley, V.L. (2015) 'Screentime is making kids moody, crazy and lazy.' *Psychology Today.* 18 August.
Eastin, M.S., Greenberg, B.S. and Hofschire, L. (2006) 'Parenting the internet.' *Journal of Communication, 56*(3), 486-504. doi:10.1111/j.1460-2466.2006.00297.x.

Egenfeldt-Nielson, S., Heide Smith, J. and Pajares Tosca, S. (2016) *Understanding video games: The essential introduction* (3rd edn). New York: Routledge.

Evans, C.A., Jordan, A.B. and Horner, J. (2011) 'Only two hours?: A qualitative study of the challenges parents perceive in restricting child television time.' *Journal of Family Issues, 32*(9), 1223-44. doi:10.1177/0192513x11400558.

Filucci, S. (2013) 'I use my iPhone to be a better parent'. Commonsensemedia.org. 10 June.

Fisch, S.M. (2008) *Children's learning from educational television: Sesame Street and beyond* (2nd edn). New York and Abingdon: Routledge.

Fletcher, A.C. and Blair, B.L. (2014) 'Implications of the family expert role for parental rules regarding adolescent use of social technologies.' *New Media & Society, 18*(2), 239-56. doi:10.1177/1461444814538922.

Flores, M., Musgrove, K., Renner, S., Hinton, V., Strozier, S., Franklin, S. and Hil, D. (2012) 'A comparison of communication using the Apple iPad and a picture-based system.' *Augmentative and Alternative Communication,, 28*(2), 74-84. doi:10.3109/07434618.2011.644579.

FOSI (Family Online Safety Institute) (2015) *Parents, privacy and technology use*. Policy & Research. Washington, DC and London: FOSI.

Fujioka, Y. and Austin, E.W. (2002) 'The relationship of family communication patterns to parental mediation styles.' *Communication Research, 29*(6), 642-65. doi:10.1177/009365002237830.

Garmendia, M., Garitaonandia, C., Martinez, G. and Casado, M.Á. (2012) 'The effectiveness of parental mediation.' In S. Livingstone, L. Haddon and A. Görzig (eds) *Children, risk and safety on the internet: Research and policy challenges in comparative perspective* (pp. 231-44). Bristol: Policy Press.

Gentile, D.A., Lynch, P.J., Linder, J.R. and Walsh, D.A. (2004) 'The effects of violent video game habits on adolescent hostility, aggressive behaviors, and school performance.' *Journal of Adolescence, 27*(1), 5-22. doi:10.1016/j.adolescence.2003.10.002.

Gentile, D.A., Nathanson, A.I., Rasmussen, E.E., Reimer, R.A. and Walsh, D.A. (2012) 'Do you see what I see? Parent and child reports of parental monitoring of media.' *Family Relations, 61*(3), 470-87. doi:10.1111/j.1741-3729.2012.00709.x.

Glenn, J and E.F. Larsen (2013). 'Not left to their own devices.' Slate.com. 17 April.

Graham, G. (2014) 'David Cameron: Parents must learn to use the "off switch" and limit their children's screen time.' *The Daily Telegraph*. 18 August.

Guernsey, L. and Levine, M.H. (2015) *Tap, click, read: Growing readers in a world of screens*. San Francisco, CA: Jossey-Bass.

Guernsey, L., Levine, M., Chiong, C. and Severns, M. (2014) *Pioneering literacy in the digital wild west: Empowering parents and educators*. Campaign for Grade-Level Reading.

Hale, M. (2015) 'My iPhone addiction was making me a terrible mom.' *The Washington Post.* 9 March.

Hashish, Y., Bunt, A. and Young, J.E. (2014) 'Involving children in content control.' Paper presented at the CHI 2014, Ontario, Canada. doi:10.1145/2556288.2557128.

Helsper, E. and Eynon, R. (2010) 'Digital natives: Where is the evidence?' *British Educational Research Journal, 36*(3), 502-20. doi:10.1080/01411920902989227.

Hiniker, A., Schoenebeck, S.Y. and Kientz, J.A. (2016) 'Not at the dinner table: Parents' and children's perspectives on family technology rules.' Paper presented at the CSCW 2016, San Francisco, California.

Ito, M., Gutiérrez, K., Livingstone, S., Penuel, B., Rhodes, J., Salen, K. et al. (2013) *Connected learning: An agenda for research and design*. Irvine, CA: Digital Media and Learning Research Hub.

iZ Hero (2016) 'Excessive screen time.' http://www.izheroalliance.org/.
Jenkins, H., Shresthova, S., Gamber-Thompson , L., Kligler-Vilenchik, N. and Zimmerman, A. (2016) *By any media necessary: The new youth activism*. New York: New York University Press.
Jigsaw Research (2012) *Parents' views on parental controls: Findings of qualitative research*. London: Ofcom.
Jordan, L.S. (2016) 'Writing for the Mighty, for my son and with my son.' *The Washington Post*. 6 January.
Kaplan, M. (2015) 'Celebrity parents make good screen sense a priority.' *The Huffington Post*. 7 July.
Katz, V.S. (2014) *Kids in the middle: How children of immigrants negotiate community interactions for their families*. New Brunswick, NJ: Rutgers University Press.
Katz, V.S. and Levine, M.H. (2015) *Connecting to learn: Promoting digital equity for America's Hispanic families*. New York: The Joan Ganz Cooney Center at Sesame Workshop.
Khurana, A., Bleakley, A., Jordan, A.B. and Romer, D. (2015) 'The protective effects of parental monitoring and internet restriction on adolescents risk of online harassment.' *Youth Adolescence, 44*(5), 1039-47. doi:10.1007/s10964-014-0242-4.
Kirwil, L. (2009) 'Parental mediation of children's internet use in different European countries.' *Journal of Children and Media, 3*(4), 394-409. doi:10.1080/17482790903233440.
Kuss, D. and M. Griffiths (2012) 'Internet Gaming Addiction: A Systematic Review of Empirical Research' in *International Journal of Mental Health and Addiction*. April 2012, Volume 10, Issue 2, pp 278-296.
Latzer, Y., Spivak-Lavi, Z. and Katz, R. (2015) 'Disordered eating and media exposure among adolescent girls: The role of parental involvement and sense of empowerment.' *International Journal of Adolescence and Youth, 20*(3), 375-91. doi:10.1080/02673843.2015.1014925.
Lee, S.J. (2012) 'Parental restrictive mediation of children's internet use: Effective for what and for whom?' *New Media & Society, 15*(4), 466-81. doi:10.1177/1461444812452412.
Lenhart, A. (2015) *Teens, social media and technology overview 2015*. Washington, DC: Pew Research Centre.
Livingstone, S. (2016) 'If we can't prove the internet makes children unhappy, we shouldn't lay the blame at its door' *TheConversation.com*. 17 March.
Livingstone, S. (2014) 'Developing social media literacy: How children learn to interpret risky opportunities on social network sites.' *Communications: The European Journal of Communication Research, 39*(3), 283-303. doi: 10.1515/commun-2014-0113.
Livingstone, S. and Helsper, E.J. (2007) 'Gradations in digital inclusion: Children, young people and the digital divide.' *New Media & Society, 9*(4), 671-96. doi:10.1177/1461444807080335.
Livingstone, S. and Helsper, E.J. (2008) 'Parental mediation of children's internet use.' *Journal of Broadcasting & Electronic Media, 52*(4), 581-99.
Livingstone, S. and Palmer, T. (2012) *Identifying vulnerable children online and what strategies can help them. Report of the seminar arranged by the UKCCIS Evidence Group*. London: UKCCIS.
Livingstone, S. and Sefton-Green, J. (2016) *The class: Living and learning in the digital age*. New York: New York University Press.
Livingstone, S., Byrne, J. and Bulger, M. (2015) *Researching children's rights globally in the digital age*. Report of a seminar held on 12-14 February. London: London School of Economics and Political Science.

Livingstone, S., Haddon, L. and Görzig, A. (2012) *Children, risk and safety on the internet: Research and policy challenges in comparative perspective*. Bristol: Policy Press.

Livingstone, S., Haddon, L., Görzig, A. and Ólafsson, K. (2011) *Risks and safety on the internet: The perspective of European children. Full findings.* London: EU Kids Online.

Livingstone, S., Kirwall, L., Ponte, C. and Staksrud, E. (2014) 'In their own words: What bothers children online?' *European Journal of Communication, 29*(3), 271-88. doi:10.1177/0267323114521045.

Livingstone, S., Haddon, L., Vincent, J., Mascheroni, G. and Ólafsson, K. (2014) *Net children go mobile: The UK report*. Milan.

Livingstone, S., Mascheroni, G., Dreier, M., Chaudron, S. and Lagae, K. (2015) *How parents of young children manage digital devices at home: The role of income, education and parental style*. London: EU Kids Online.

Livingstone, S., Ólafsson, K., Helsper, E.J., Lupiáñez-Villanueva, F., Veltri, G. and Folkvord, F. (2016: forthcoming) 'Parental mediation of children's internet use revisited.'

Lopez, M.H., Gonzalez-Barrera, A. and Patten, E. (2013) *Closing the digital divide: Latinos and technology adoption*. Washington, DC: Pew Research Centre.

LSE (London School of Economics and Political Science) (2016) *Parenting for a Digital Future, About our research*. London: LSE.

Lunt, P. and Livingstone, S. (2012) *Media regulation: Governance and the interests of citizens and consumers*. London: Sage.

Lwin, M.O., Stanaland, A.J.S. and Miyazaki, A.D. (2008) 'Protecting children's privacy online: How parental mediation strategies affect website safeguard effectiveness.' *Journal of Retailing, 84*(2), 205-17.

Macleod, M. (2011) *Digital parenting: An evaluation*. London: Parent Zone.

Madianou, M. and Miller, D. (2012) *Migration and new media: Transnational families and polymedia*. Abingdon: Routledge.

Manjoo, F. (2011) 'Go ahead, a little TV won't hurt him' *Slate.com*. 12 October.

Marsh, J., Plowman, L., Yamada-Rice, D., Bishop, J.C., Lahmar, J., Scott, F. et al. (2015) *Exploring play and creativity in pre-schoolers' use of apps: Final project report.* Sheffield: TAP (Technology and Play).

Martin, D. (2014) 'Heavy web use harms a child's mental health: Every hour raises risk, warns watchdog.' *The Daily Mail*. 16 May.

Marwick, A.E., Murgia, D. and Palfrey, J. (2010) *Youth, privacy and reputation: Literature review*. Public Law & Legal Theory Working Paper Series (10-29). Cambridge, MA: Berkman Center for Internet & Society.

Mascheroni, G. and Olafsson, K. (2014) *Net children go mobile – Risks and opportunities*. Milan: Educatt.

Mascheroni, G., Murru, M.F. and Görzig, A. (2012) 'Varieties of access and use.' In S. Livingstone, L. Haddon and A. Görzig (eds) *Children, risk and safety on the internet: Research and policy challenges in comparative perspective* (pp. 59-72). Bristol: Policy Press.

Mazurek, M.O. and Engelhardt, C.R. (2013) 'Video game use in boys with autism spectrum disorder, ADHD, or typical development.' *Pediatrics, 132*(2), 260-6. doi:10.1542/peds.2012-3956.

Mazurek, M.O., Shattuck, P.T., Wagner, M. and Cooper, B.P. (2012) 'Prevalence and correlates of screen-based media use among youths with autism spectrum disorders.' *Journal of Autism and Developmental Disorders, 42*(8), 1757-67. doi:10.1007/s10803-011-1413-8.

Microsoft Corporate Blogs (2015, 3 April) 'Microsoft announces pilot program to hire people with autism.' *Microsoft on the issues*.

Miller, D., Costa, E., Haynes, N., McDonald, T., Nicolescu, R., Sinanan, J. et al. (2016) *How the world changed social media*. London: UCL Press.
MindEd for Families (n.d.) 'Parenting in a digital world.' http://minded.e-lfh.org.uk/families/index.html#/id/56cc7831a55aa90a52727c30.
Mumsnet (n.d.) 'How to limit screen time for children.' http://www.mumsnet.com/pre-teens/screen-time-and-children.
Nathanson, A.I. (1999) 'Identifying and explaining the relationship between parental mediation and children's aggression.' *Communication Research, 26*(2), 124-43 doi:10.1177/009365099026002002.
Nathanson, A.I. (2001) 'Parent and child perspectives on the presence and meaning of parental television mediation.' *Journal of Broadcasting & Electronic Media, 45*(2), 201-20.
Nathanson, A.I. (2015) 'Media and the family: Reflections and future directions.' *Journal of Children and Media, 9*(1), 133-9. doi:10.1080/17482798.2015.997145.
Nelson, L. (2016) 'Worrying over kids playing with phones and tablets is just another way to shame mothers.' Vox.com. 11 May.
NICE (National Institute for Health and Care Excellence) (2014) 'A healthier diet and being more active is important for everyone, not just if you are overweight.' [Press release]. London.
Nielsen, L.B. (2008) *Brief reference of student disabilities ... with strategies for the classroom.* Thousand Oaks, CA: Corwin Press.
Nikken, P. and Jansz, J. (2006) 'Parental mediation of children's videogame playing: a comparison of the reports by parents and children.' *Learning, Media and Technology, 31*(2), 181-202. doi:10.1080/17439880600756803.
Nikken, P. and Jansz, J. (2013) 'Developing scales to measure parental mediation of young children's internet use.' *Learning, Media and Technology, 39*(2), 250-66. doi:10.1080/17439884.2013.782038.
Nikken, P. and Schols, M. (2015) 'How and why parents guide the media use of young children.' *Journal of Child and Family Studies*. doi:10.1007/s10826-015-0144-4.
Notten, N. and Kraaykamp, G. (2009) 'Parents and the media: A study of social differentiation in parental media socialization.' *Poetics, 37*(3), 185-200. doi:10.1016/j.poetic.2009.03.001.
O'Connor, T.M., Hingle, M., Chuang, R.J., Gorely, T., Hinkley, T., Jago, R. et al. (2013) 'Conceptual understanding of screen media parenting: Report of a working group.' *Childhood Obesity, 9*(s1), 110-18. doi:10.1089/chi.2013.0025.
Ofcom (2015) *Children and parents: Media use and attitudes report*. London: Ofcom.
Oliver, M. (2013) 'The social model of disability: Thirty years on.' *Disability & Society, 28*(7), 1024-6. doi:10.1080/09687599.2013.818773.
Parent Zone (2016) *Mental health in the digital age – Our research*. http://parentzone.org.uk/article/mental-health-digital-age-our-research.
ParentPort (2016). Top Tips for Parents. http://www.parentport.org.uk/top-tips-for-parents/.
ParentZone (n.d.) 'About us.' http://parentzone.org.uk/about-us.
Park, Y. (2016) 'How much screen time should children have?' *World Economic Forum.*
Pasquier, D., Simões, J.A. and Kredens, E. (2012) 'Agents of mediation and sources of safety awareness: A comparative overview.' In S. Livingstone, L. Haddon and A. Görzig (eds) *Children, risk and safety on the internet: Research and policy challenges in comparative perspective* (pp. 219-30). Bristol: Policy Press.
Paus-Hasebrink, I., Sinner, P. and Prochazka, F. (2014) *Children's online experiences in socially disadvantaged families: European evidence and policy recommendations.* London: EU Kids Online.
Paus-Hasebrink, I., Ponte, C., Dürager, A. and Bauwens, J. (2012) 'Understanding digital inequality: The interplay between parental socialisation and children's development.' In S.

Livingstone, L. Haddon and A. Görzig (eds) *Children, risk and safety on the internet: Research and policy challenges in comparative perspective* (pp. 257-72). Bristol: Policy Press.

PBS News Hour (2016) 'The drug-like effect of screen time on the teenage brain' *PBS.org*. 4 May.

Peter, J. and Valkenburg, P.M. (2014) 'Does exposure to sexually explicit Internet material increase body dissatisfaction? A longitudinal study.' *Computers in Human Behavior, 36*, 297-307. doi:10.1016/j.chb.2014.03.071.

Preparing for a Digital Future (2016). Preparing for a Digital Future.

Plunkett, L. (2011) 'The origins of Pokémon: Bug collecting, magazines & Asperger's.' Kotaku. 30 May.

POSCON (2014) POSCON final report - outcomes and results from the thematic network on positive online content and services for children.

Prensky, M.R. (2010) *Teaching digital natives: Partnering for real learning*. Thousand Oaks, CA: Corwin.

Przybylski, A., Mishkin, A., Shotbolt, V. and Linington, S. (2014) *A shared responsibility: Building children's online resilience.* London: Virgin Media and Parent Zone.

Public Health England (2014) 'PHE's 2014 child health profiles published' [Press release].

Richardson, H. (2015) 'Children seeking mental health advice on internet.' *BBC News.* 2 October.

Rideout, V. and Katz, V.S. (2016) *Opportunity for all? Technology and learning in lower-income families*. New York: The Joan Ganz Cooney Center at Sesame Workshop.

Rudi, J., Dworkin, J., Walker, S. and Doty, J. (2014) 'Parents' use of information and communications technologies for family communication: Differences by age of children.' *Information, Communication & Society, 18*(1), 78-93. doi:10.1080/1369118x.2014.934390.

Schwartz, L. & Gutiérrez, K. (2015). 'Literacy studies and situated methods: Exploring the social organization of household activity and family media use.' In Rowsell, J. & Pahl K. (Eds.), *The Routledge handbook of literacy studies*. Abingdon, Oxon: Routledge.

Sellgren, K. (2016). 'Parents "struggle to get children off devices"' bbc.co.uk. 6 January.

Selwyn, N. (2014) *Distrusting educational technology: Critical conversations for changing times*. Abingdon and New York: Routledge.

Shane, H.C. and Albert, P.D. (2008) 'Electronic screen media for persons with autism spectrum disorders: Results of a survey.' *Journal of Autism and Developmental Disorders, 38*(8), 1499-508. doi:10.1007/s10803-007-0527-5.

Shin, W. (2013) 'Parental socialization of children's Internet use: A qualitative approach.' *New Media & Society, 17*(5), 649-65. doi:10.1177/1461444813516833.

Shin, W. and Huh, J. (2011) 'Parental mediation of teenagers' video game playing: Antecedents and consequences.' *New Media & Society, 13*(6), 945-62. doi:10.1177/1461444810388025.

Shin, W., Huh, J. and Faber, R.J. (2012) 'Tweens' online privacy risks and the role of parental mediation.' *Journal of Broadcasting & Electronic Media, 56*(4), 632-49.

Soep, E. (2014) *Participatory politics: Next generation tactics to remake public spheres*. Cambridge, MA: MIT Press.

Spector, J.M. (2016) *Foundations of educational technology: Integrative approaches and interdisciplinary perspectives* (2nd edn) New York and Abingdon: Routledge.

Takeuchi, L. and Stevens, R. (2011) *The new coviewing: Designing for learning through joint media engagement.* New York: The Joan Ganz Cooney Center at Sesame Workshop.

Timpson, E. (2015) *Edward Timpson: Improving access to physical education and sports*. London.

Tirraoro, T. (2015) 'SEN figures show 2.5% drop in children with special educational needs in England.' *Special Needs Jungle.*

Uhls, Y.T. (2015) *Media moms and digital dads: A fact-not-fear approach to parenting in the digital age*. Boston, MA: Bibliomotion, Inc.

Vaala, S.E. and Bleakley, A. (2015) 'Monitoring, mediating, and modeling: Parental influence on adolescent computer and internet use in the United States.' *Journal of Children and Media, 9*(1), 40-57. doi:10.1080/17482798.2015.997103.

Valcke, M., Bonte, S., De Wever, B. and Rots, I. (2010) 'Internet parenting styles and the impact on Internet use of primary school children.' *Computers & Education, 55*(2), 454-64.

Valkenburg, P.M., Krcmar, M., Peeters, A.L. and Marseille, N.M. (1999) 'Developing a scale to assess three styles of television mediation: "Instructive mediation", "restrictive mediation", and "social coviewing".' *Journal of Broadcasting & Electronic Media, 43*(1), 52-66. doi:10.1080/08838159909364474.

Valkenburg, P.M., Taylor Piotrowski, J., Hermanns, J. and de Leeuw, R. (2013) 'Developing and validating the perceived parental media mediation scale: A self-determination perspective.' *Human Communication Research, 39*(4), 445-69. doi:10.1111/hcre.12010.

Vandoninck, S., d'Haenens, L. and Smahel, D. (2014) *Preventive measures: How youngsters avoid online risks*. London: EU Kids Online.

Wallwork, E. (2016) 'Parents Struggle To Limit Children's Screen Time: Digital Detox Experts Offer Advice' *Huffington Post UK*. 6 January.

Wartella, E., Rideout, V., Lauricella, A.R. and Connell, S.L. (2013) *Parenting in the age of digital technology: A national survey*. Report of the Center on Media and Human Deveopment. Evanston, IL: School of Communication, Northwestern University.

Appendix: Screen time advice for parents

UK government/regulatory bodies

Organisation	Sample of advice	Evidence	Differentiation	Orientation
UK Council for Child Internet Safety (UKCCIS) **Example:** Child Safety Online	• Understand the risks your child(ren) face(s) • Understand why children use social media and how it might affect them • Talk to your child and stay involved • Familiarise yourself with the programs your child uses • Use parental control software and consider using filtering options, monitoring and setting time limits for access • Check features of apps and devices before use	Guidance note to parents doesn't cite evidence, but UKCCIS draws on a wide evidence base, including Ofcom and EU Kids Online surveys	No differentiation by age, device, socioeconomic status (SES) or special educational needs and disability (SEND) Tells parents to 'familiarise themselves' with what children do online, but no specific mention of parents' own media use	Risk-oriented Restrictive and active mediation
ParentPort (run by UK media regulators) **Example:** Top tips for parents	• 'Educate yourself': know about your children's internet use and be aware of any changes • Encourage your children to use child-safe search modes and report inappropriate content • Agree limits on the amount of time spent online • Set up parental control software • Show your children how to make secure online purchases	Member regulators have own research reviews (e.g. Ofcom) and link to Bailey Review	Differentiation by device and content Not clearly differentiated by age (some mention of film ratings), SES or SEND Some discussion of parents' own media use in sub-categories	Risk-oriented Restrictive and active mediation
National Institute for Health and Care Excellence (NICE) **Examples:** News report Evidence statements	• Reduce TV viewing and other leisure screen time, such as TV-free days • Set a limit to watch TV for no more than 2 hours a day	Links to research reviews, mainly health sciences	No differentiation by age, device, SES or SEND No discussion of parents' own media use	Risk-oriented Restrictive mediation
National Health Service (NHS) **Examples:** Healthy sleep tips for children Get going every day	• Avoid screens in the bedroom (yet also says relaxation CDs can help calm pre-bedtime) • Try to reduce time in front of screens and encourage babies and children to be active instead	Links to research reviews, mainly health sciences	Differentiation by age in broad strokes, not especially by device, content, SES or SEND No discussion of parents' own media use	Risk-oriented Restrictive mediation

Organisation	Sample of advice	Evidence	Differentiation	Orientation
MindEd for Families (online training and guidance for families funded by Department of Education in partnership with Health Education England) **Examples:** **Parenting in a digital world**	• Find out what children and young people do when they are on their computer. • Have some times when everyone is off the computer. No computers or phones at mealtimes or an hour before bed. • Help young people be wary if someone from the internet wants to meet them, this could lead to abuse – tell an adult if they are asked to meet someone • Talk to your child, let them know you will support them no matter what is happening in their lives • Report concerning material to the Internet Watch Foundation • Use the parental control settings on your internet router and if possible on your child's computer too. Use Google 'safe search' • Make time to talk to your children about what they see online and be interested in anything they find sad, frightening or embarrassing • Talk to older children about pornography, sexting and games addiction. Show concern rather than criticise	Cites Ofcom use statistics for teenagers	Differentiates between 'younger' and 'older' children. No discussion of specific devices, SES or SEND. Discussion of specific content (e.g. pornography, sexting). Indirect reference to parents' own media use in suggestion 'Have some times when everyone is off the computer.'	Risk-oriented Restrictive and active mediation
Industry				
Vodafone **Examples:** ***Digital Parenting*** **magazine and online advice site: Previous Issues/Newest Issue**	Wide array of advice for parents broken down mainly by 'problem' (e.g. bullying, sexting), but with general advice for parents and grandparents including: • Take an interest in what your children do online • Do fun stuff together • Encourage children to share worries and difficult experiences • Put passwords on your own devices • Use parental controls and filters • Make connections between online and offline advice (e.g. on being kind, considering others' feelings)	Links to Vodafone's own family case studies and to interviews/short articles written by experts on specific topic areas	Discussion of the importance of age ratings, but advice in general is not broken down by age Devices are differentiated by parental control and filtering mechanisms No direct discussion of SES or SEND Strong emphasis on parents' own media use, e.g. 'be a digital role model'	Balanced Restrictive and active mediation
Google for families **Examples:** **Make safety choices that fit your family** **Family safety basics**	• Talk with your family about online safety and make sure they feel comfortable enough to ask for guidance when they encounter problems • Use technology together with your children • Help your family children learn how to set secure passwords online • Use privacy settings and sharing controls – Google offers a 'supervised user' function within Chrome to monitor sites visited and block certain sites	No specific citations of information, but links to partner organisations including Family Online Safety Institute (FOSI) and Common Sense Media who do conduct their own	Some differentiation by age (e.g. article on age-appropriate content). No differentiation by SES or SEND. Some discussion of devices, e.g. computers vs mobile media in Stay safe on the go Emphasis on parents' own media use and on parents' setting themselves as models of good media use for the family	Balanced/risk-oriented Restrictive and active mediation

Organisation	Sample of advice	Evidence	Differentiation	Orientation
Google for families (cont.) **Keep your data secure**	• Check age restrictions • Get advice from other parents and professionals who work with children • Use antivirus software and update it regularly to protect your computer and identity • Try children's apps out yourself and talk to your children about your rules for buying and using apps • Discuss the importance of unplugging from mobile devices, and establish phone-free times or 'technology curfews'	research. Has short videos from parents who work at Google about how they manage children's media use		
Facebook safety centre **Example:** **Help your teens play it safe**	• Ask your children to explain social media to you. Ask them why it is important to them • Join Facebook so you can understand what it is about • Create a Facebook group so your family can share photos privately • Teach about privacy settings and the 'activity log' so teens can manage what others see about them • Talk about safety, just like you talk about safety while driving or playing sport	No specific evidence cited by Facebook directly but links to evidence-based articles, e.g. danah boyd or Pew research	Addressed to parents of 'teens'. No specific mention of SES, SEND or what devices might be used to access Facebook Assumes parents may not be familiar with social networking sites, but for parents who do have Facebook accounts, encourages them to respect their 'offline' relationship with their children. Tells parents 'It's all about balancing your teen's growing independence and need for privacy with your safety concerns'	Balanced/ opportunity-oriented Mostly active mediation, some restrictions
Non-governmental organisations				
Parent Info/Parent Zone **Examples:** **Screen time and young children: finding a balance** **Digital parenting tips**	• Set sensible limits for screen time • Keep a balance between real world interactions and digital ones • Choose appropriate media (content) • Do digital things together with children • Try not to worry too much if you slip up occasionally • Think about how you guide your family in the real world and how you can do the same in the digital world • Talk to friends and family about how they manage their children's digital lives • Remind older siblings that websites they use may not be suitable for younger brothers and sisters • Make digital issues part of everyday conversation – talking about subjects such as cyberbullying, sexting and copyright infringement	Parent Zone conducts some of its own research, links to other studies sporadically, e.g. in Screen time and young children: finding a balance, says that 'research has found a correlation between exposure to violent content and sleep problems in children aged between 3 and 5, but no link to study	Different types of devices and content demarcated with specific guidelines and considerations, e.g. phone safety and selfies or apps and social media There is a page organised by developmental stages with age-specific advice, although no clear way from main homepage to search by age SES not mentioned specifically, but there is a tab for Special Needs Encourages parents to 'try out the technologies your child enjoys'	Balanced Active and restrictive mediation

Organisation	Sample of advice	Evidence	Differentiation	Orientation
Parent Info/Parent Zone (cont.)	• Talk to your children about whether the issues they face are different online and offline • Remind parents not to 'worry too much', e.g. should parents worry about what their kids are doing online?			
Common Sense Media **Examples:** **'Screen time' topic section** **How much screen time is okay for my kid(s)?'** **'How can I get my kids to put down their phones?'**	• Pay attention to how your child acts during and after using screens • Consider what your child is doing during 'screen time', what types of content they are accessing, whether it is 'active' screen time (e.g. chatting with a relative) or 'passive' • Balance screen-time activities with screen-free activities • Consider creating a schedule that works for your family, including screen-time limits or screen-free times • Get your children's input into family rules and schedules so that you can teach media literacy and self-regulation, and to discover what they enjoy • Introduce new shows and apps for them to try out • Have a family movie night • Feel empowered to set limits on screens of all sizes, including for teenagers • Encourage children to be 'creative, responsible consumers, not just passive users' – help them find good content and 'foster a positive relationship with media' • Discourage constant multitasking and discuss its effects • Lead by example and put away devices during family time	Link to their own research	FAQs and articles are categorised by age: Pre-schoolers (2-4); Little Kids (5-7); Big Kids (8-9); Tweens (10-12); Teens (13+) Can't search by device on homepage, but many articles deal with specific content and devices including positive recommendations for age-appropriate content (so parents can search, e.g. for Best Apps for kids) Page for special needs and learning difficulties Parents' media use is mentioned in various places, e.g. there's an article named '5 ways to save yourself from device addiction' Some mention of importance of SES on blog, but not in advice for parents	Balanced/ opportunity-oriented Mainly active, some restrictive mediation
Zero to Three **Example:** **Tips for using screen media with young children**	• Watch together and talk about what you are viewing, ask questions to engage thinking skills • Get children moving when possible, e.g. act out scenes while you are watching • Play screen-based games together, make the experience interactive • Talk to your child about what they are doing to make the experience language-rich • Use games and apps to teach persistence, acknowledge challenges and learn from mistakes • Emphasises importance of 'three-dimensional' world and hands-on 'whole body' exploration and interaction with peers and adults, e.g. acting out scenes from shows or games or playing music and/or dancing along with favourite characters	Based on a research summary drawing on a range of research with an emphasis on developmental psychology	Specifically for parents of children aged 0-3 Emphasis on TV and games on smartphones/tablets Cites research on the importance of family backgrounds and demographics No specific mention of SEND	Balanced/ opportunity-focused Active mediation strategies (restrictive mediation is implied)

Organisation	Sample of advice	Evidence	Differentiation	Orientation
Nobody's Children Foundation (Polish children's foundation) **Example:** **Homo Tabletis**	• Slogan is 'Do not be a tablet parent!' • Children should not use mobile devices every day, more than 15-20 minutes at a time, or half an hour a day • Children should only access safe and positive content adjusted to their age • Parents should accompany their children during the use of mobile devices, explaining to and interacting with them • Children should not use mobile devices before going to sleep • Use of mobile device should not be treated as a reward or punishment • Parents should agree with each other on the rules of the child's media use and apply them consistently • Before sharing a smartphone or tablet with a child, secure it properly by using parental controls	Cites AAP guidelines and Common Sense Media research	The campaign is targeted at parents of children aged 0-6. No special mention of types of devices Doesn't mention parents' own media use No socioeconomic differences or special needs mentioned	Risk-oriented Restrictive mediation
National Literacy Trust **Examples:** **Talk to your baby – quick tips: Making the most of television** **A parent's guide to television**	• Try to limit your child's daily TV time to no more than half an hour for under-twos and an hour for three to five year olds • Always turn off the TV when no one is watching • Try to limit your child's viewing to programmes that have been designed for their age group • Allow your child to watch the same video or DVD again and again, which facilitates learning • Don't put a TV in your child's bedroom • Try to watch TV or videos together so you can talk about what happens. When the programme has finished, switch off the TV and talk about what happened	No explicit citation of any academic research	Focuses only on TV use When suggesting appropriate TV time, the report is divided between under-twos and three-to-fives Doesn't address the issue of parents' own media use No mention of SES Does have articles concerning special needs, respectively on children who are deaf, children who are born prematurely, and children who have visual impairments	Balanced Restrictive and active mediation
UK Safer Internet Centre **Examples:** **Resources for parents and carers**	• Start ongoing conversations with your children about where they go online and what they enjoy doing and how they stay safe, find out what they think is okay (or not) to share • Think about how you each use the internet. What more could you do to use the internet together? Are there activities that you could enjoy as a family? • Use safety tools on social networks and other online services, e.g. Facebook privacy settings, and decide if you want to use parental controls on your home internet	Extensive links to research including from Ofcom, UKCIS and others	Divides into resources for starting conversations with 3 to 11 year olds and 11 to 19 year olds. No other clear mention of age Specific guidance for devices and providers and how to set up safety and privacy settings No mention of SES or SEND, but there is	Balanced Restrictive and active mediation

Organisation	Sample of advice	Evidence	Differentiation	Orientation
UK Safer Internet Centre (cont.)			a specific section for foster and adoptive parents (and social workers supporting them)	
Internet Matters/BBC and Google collaboration with Internet Matters **Examples:** **E-safety advice for 6-10 year olds**	• Install parental controls on home broadband and internet-enabled devices, set up the accounts for your children and make sure your own accounts are password-protected • Agree boundaries with your children about how much time they can spend online, where they can go and share • Put the computer or device in a communal area so you can keep an eye on what they are doing and share in enjoyment • Talk to older children to help keep younger children safe • Use child-safe search engines and airplane mode for when you don't want your child to access the internet • Explore together with your child and ask them to show you what they do, talk about being a good friend • Check age ratings for content and social networking sites Advice on BBC website collaboration adds: • Remain aware, know the risks, take control (use technical tools), keep it private and have a conversation	Links to Ofcom and Childnet research within advice section	Differentiated by age (categories for 0-5, 6-10, 11-13, 14+) Extensive specific information about devices, content, providers that goes beyond safety advice to actually explain the platform (although not recommending as Common Sense Media does) No specific mention of SES or SEND Little mention of parents' own digital media practices except typology of 'what kind of parent am I?'	Risk-focused Restrictive and active mediation
World Economic Forum **Example:** **How much screen time should children have?**	• Convince your children that too much screen time can be harmful for them and come up with specific rules of sanctioned screen time, on which parents and children agree • Parents should agree to limit their screen time around their children, especially when getting home from work • Give proper incentives and penalties for the agreed rules to make it fun and rewarding • Teach children to exercise self-control. Have them set an alarm and encourage them to plan out their schedule • Be persistent and keep track of family performance • Try to find alternative hobbies or sports as fun as digital media	Links to research and World Economic Forum report on *Digital media and society*	No differentiation by age, device, content, SES or SEND Reminds parents that 'agreement should be mutual. Kids can also be bothered when parents are constantly checking their mobiles'	Risk-focused Mainly restrictive but some active mediation
Press and media				
Mumsnet	• Be a positive role model and be active yourself • Talk about why too much screen time is okay 'in moderation' • Decide whether to have a screen-time limit and enforce it properly if a limit is set, including obey the rules yourself	Doesn't cite any research, however, strategies are based on 'Mumsnetters' own	Specific advice for 'pre-school to primary' pre-teens, teens Not much specific discussion of devices or	Balanced Active and restrictive approaches

Organisation	Sample of advice	Evidence	Differentiation	Orientation
Mumsnet (cont.) **Example:** **Pre-teen advice on 'how to limit screen time'**	• Keep a family screen time diary and have an open family discussion about it • Be very careful about having a screen in the children's bedroom • Turn off the TV during family meals and have a rule about no mobiles at the table • Don't use 'no TV' or 'no computer' as a reward or a punishment • Talk to children about the content they watch and tell them about 'commercial pressures' and advertisements	*(cont.)* experiences with quotes from users at the bottom of each section	*(cont.)* of content, except to discuss no phones at the table and TV watching No specific mention of SES or SEND Strong emphasis on parents' own media use (parents addressed as digitally literate themselves, e.g. advice about digital detox is addressed mainly to parents)	
BabyCentre **Examples:** **Is screen time good or bad for babies and children?** **Ways to manage toddler's screen time**	• Limit your toddler's exposure as much as possible • Keep TVs and computers out of your child's bedroom • Don't let your child have screen time for more than two hours a day in total. Help your child to monitor her screen use so that she can develop an awareness of time spent • Choose programmes that have an educational element • Make sure that screen time does not cut into your child's opportunities for active, creative play and socialising • TV, computers and games should not be switched on during mealtimes • If you are going to let your toddler watch TV, choose calm educational programmes and watch them together	Has a long list of references at the bottom of the article to a wide variety of disciplines	Not much differentiation of devices or content except to say 'calm' and 'educational' media preferred. Some references to age but implied to all be younger children No mention of SES or SEND Some discussion of parents 'leading by example'	Risk-focused Mainly restrictive but some active approaches
Huffington Post parents **Examples:** **Digital detox experts advice** **How much screen time should a child have?**	• Plan family activities that don't involve technology, including favourite games from parents' own childhoods • Create a weekly schedule on the principle of an hour of 'energy in' (technology use) equalling an hour of 'energy out' (other activities) • Identify the challenges your children enjoy in the video games they play and replicate them • When your children are having screen-free time, turn off your devices too, provide positive examples and follow rules yourself • Encourage children to regulate their own screen time • Find out about what your child is doing with technology in school • Try to read from physical books, balance digital and non-digital play	Links to surveys, e.g. by Action for Children amongst others, along with AAP guidelines	Some articles differentiate under-5s from older children but not much discussion of age. Little substantive discussion of devices or content except to say 'choose the right sort of screen time' No differentiation by SES or SEND Address to parents includes parents' own interests, e.g. that parents and children both want to be informed and engaged. Stresses 'parental involvement rather than parental rationing'	Balanced Restrictive and active mediation

Organisation	Sample of advice	Evidence	Differentiation	Orientation
Huffington Post parents (cont.) **Examples:** **Screen time: Five ways to manage your child's technology diet** **How can parents get 'screen time' right for their children?**				
Washington Post on parenting **Example:** **Teens say they're addicted to technology: here's how parents can help**	• Declare tech-free zones and times, create boundaries, support your children in trying to find balance • Choose age-appropriate high-quality media for your family that can be used to deepen relationships and allow for creativity and exploration • Talk with your children about what they're seeing, reading and playing • Help children understand the effects of multitasking, help them minimise distractions • Be a good role model and follow house rules yourself • Seek help from experts if needed; talk to a paediatrician or psychologist	Based on Common Sense media survey	Focused on 'teens' No reference to particular content or devices except to say 'high quality' No mention of SES or SEND Tells parents to set a good example and partner with children in setting and following limits	Balanced Mainly active mediation, some restrictions
Forbes Tech **Examples:** **AAP just changed their guidelines on kids and screen time** **Parents don't need to worry about 'screen time' anymore**	• Parenting rules apply to your children's real and virtual environments • Role modelling is critical. Limit your own media use, and model online etiquette • The more media engender live interactions, the more educational value they may hold • The quality of content is more important than the platform or time spent with media; curate choices for children • Co-engagement counts. Family participation with media facilitates social interactions and learning • Prioritise daily unplugged playtime, especially for the very young; it's okay to set limits	Links to research from Common Sense Media, AAP, Joan Ganz Cooney Center studies	No special attention paid to the issue of age, although when citing research, the author usually mentions the age groups studied. Doesn't discuss specific devices or content but makes reference to 'curating' these for children Emphasises parents considering own media use as part of the requirement of staying 'actively involved'	Balanced/ opportunity-focused Mainly active but some restrictive mediation

Organisation	Sample of advice	Evidence	Differentiation	Orientation
Forbes Tech (cont.) **Examples:** **Teenagers in the US spend about nine hours a day in front of a screen** **Surprising facts about how kids learn from screen time** **Screen time can be good for your kids**	• It's okay for your teen to be online. Online relationships are integral to adolescent development • Recharge devices overnight outside your child's bedroom • Children will make mistakes using media. These can be teachable moments if handled with empathy		Specific mention of SES in article on 'under connected' children	
The Atlantic **Example:** **Parents: Reject technology shame**	• Parents should not limit children's media use but 'teach our kids' how to use technology • Digital 'mentors' are better able than 'limiters' to teach their kids 'specific skills they need in order to live meaningful lives online as well as off'	References to author's own research	No references to age, SES or SEND. Emphasis of article is on how parents' own digital media approaches determine how children will view technology	Opportunity-focused Active mediation
The Daily Mail - Femail/Science **Examples:** **Just what IS the ideal amount of screen-time for children?** **Why the iPad is a far bigger threat to our children than anyone realises** **Control your children's devices from ANYWHERE**	• Keep your own personal viewing habits low, children look to us as models of what to do • Eat meals together without screens, talk to children directly • No screens in bedrooms • Keep screens in places where you can see them so children are not influenced by 'strangers' rather than loved ones • Set clear limits • Spend time in 'wholesome recreational activities' • 'Screens dominate too many family agendas' – they are 'tools' to 'serve us – and not the other way around.' • Control and monitor how much time your child(ren) spend(s) online through apps and screening devices • Don't use screens as 'pacifiers' or as a reward for good behaviour • Make sure children have opportunities for 'real play' with others • Don't give very young children their own devices	References to parenting books, mainly from psychologists, and social science and health science surveys	References to age, especially 'teenagers' and 'young children.' Some advice differentiated for each although not clearly demarcated. No mention of SES or SEND Strong emphasis on parents own media use and modelling good behaviour	Risk-focused Mainly restrictive mediation with some active approaches

Notes

[1] Ofcom (2015).

[2] Ibid.

[3] Ibid.

[4] DfE and Morgan (2015).

[5] Public Health England (2014); Timpson (2015).

[6] Rideout and Katz (2016).

[7] Madianou and Miller (2012).

[8] Chaudron et al. (2015).

[9] LSE (2016).

[10] Brown et al. (2015).

[11] Lunt and Livingstone (2012).

[12] Davis (2013).

[13] Dunckley (2015).

[14] Draper (2016).

[15] Christensen (2015).

[16] PBS News Hour (2016).

[17] Wallwork (2016).

[18] Campaign for a Commercial-Free Childhood (2016).

[19] Livingstone (2016).

[20] Manjoo (2011).

[21] Carey and Hoyle (2015).

[22] Sellgren (2016).

[23] Hale (2015).

[24] Browning (2012).

[25] Brody (2015).

[26] Nelson (2016).

[27] Filucci (2013).

[28] Glenn and Larson (2013).

[29] Dell'Antonia (2015).

[30] Preparing for a Digital Future (2016).

[31] Nathanson (1999); Valkenburg et al. (1999).

[32] Livingstone et al. (2014).

[33] See, for example, Martin (2014).

[34] Livingstone et al. (2011).

[35] Egenfeldt-Nielson et al. (2016); Gentile et al. (2004); Nikken and Jansz (2006).

[36] Latzer et al. (2015); Peter and Valkenburg (2014).

[37] Fisch (2008); Guernsey and Levine (2015); Ito et al. (2013).

[38] boyd (2008).

[39] Jenkins et al. (2016); Soep (2014).

[40] Livingstone and Helsper (2007).

[41] Livingstone and Helsper (2008).

[42] Garmendia et al. (2012); Valkenburg et al. (2013).

[43] Evans et al. (2011).

[44] Beyens and Eggermont (2015); Clark (2011).

[45] Kirwil (2009); Lee (2012).

[46] Lee (2012).

[47] Mascheroni et al. (2012); Mascheroni and Olafsson (2014).

[48] Evans et al. (2011); Fujioka and Austin (2002).

[49] Hashish et al. (2014); Hiniker et al. (2016).

[50] Marwick et al. (2010).

[51] DeHaan et al. (2013); Parent Zone (2016); Richardson (2015).

[52] Vandoninck et al. (2014).

[53] Przybylski et al. (2014); Duerager and Livingstone (2012).

[54] Duerager and Livingstone (2012).

[55] Livingstone et al. (2012).

[56] Choi and Kirkorian (2016); Guernsey et al. (2014).

[57] Khurana et al. (2015).

[58] Livingstone et al. (2015).

[59] Vaala and Bleakley (2015); Wartella et al. (2013).

[60] Shin and Huh (2011).

[61] Takeuchi and Stevens (2011).

[62] Shin (2013).

[63] Nathanson (2001).

[64] Brough (2016).

[65] Valkenburg et al. (2013).

[66] Hashish et al. (2014).

[67] Hiniker et al. (2016). When parents and children disagree about mediation rules, there is room to introduce greater risk; see Shin et al. (2012).

[68] Lwin et al. (2008).

[69] Bilton (2014); Kaplan (2015).

[70] Graham (2014).

[71] Center for Science in the Public Interest (2013).

[72] O'Connor et al. (2013).

[73] NICE (2014).

[74] ParentPort (2011).

[75] MindEd for Families (n.d.).

[76] Mumsnet (n.d.).

[77] American Academy of Pediatrics (n.d.)

[78] American Academy of Pediatrics (2011).

[79] Evans et al. (2011).

[80] Brown et al. (2015).

[81] Common Sense Media (n.d.)

[82] ParentZone (n.d.)

[83] One example of good practice in evaluating the reach of interventions is Parent Zone's evaluation of the Vodafone *Digital Parenting* magazine; see Macleod (2011).

[84] Park (2016).

[85] iZ Hero (2016). The iZ HERO is a digital leadership initiative for children developed by Nanyang Technological University in Singapore and infollutionZERO in Korea. This internationally award winning research-based programme empowers children with *digital intelligence* – the core values, knowledge and skills in the digital age – by using a play-and-learn online education platform and a suite of offline school engagement programmes.

[86] Alper et al. (2016). Note that Ofcom research reports media access and use by child age and household socioeconomic status; it generally reports parental mediation only by child age.

[87] We focus on literature published in the past three years mainly in the UK and in North America as points of comparison. However, we note emerging studies from colleagues working on a more global scale; Livingstone, Byrne and Bulger (2015); Miller et al. (2016).

[88] Prensky (2010).

[89] Helsper and Eynon (2010).

[90] FOSI (2015).

[91] Based on having a household income of less than 60% of the median income for household size. See CPAG (2016).

[92] Clark (2013).

[93] Lopez et al. (2013).

[94] Rideout and Katz (2016).

[95] Clark et al (2005).

[96] Rideout and Katz (2016).

[97] Katz and Levine (2015).

[98] Wartella et al. (2013).

[99] Miller et al. (2016).

[100] Livingstone and Sefton-Green (2016).

[101] Brough (2016).

[102] Beyens and Eggermont (2014).

[103] Notten and Kraaykamp (2009).

[104] Clark (2013).

[105] Paus-Hasebrink et al. (2014).

[106] Brough (2016); Livingstone et al. (2015).

[107] For example, there are only a few brief mentions of parents in Selwyn (2014) and Spector (2016).

[108] Ascend (2016).

[109] The exceptions being guidance from Common Sense Media (CSM) and Parent Zone.

[110] Alper (2014).

[111] DfE (2016).

[112] DfE (2015).

[113] Tirraoro (2015).

[114] Oliver (2013).

[115] Alper (2014).

[116] Flores et al. (2012).

[117] Cranmer (2015).

[118] Benford and Standen (2009).

[119] Autism Blogs Directory (2015).

[120] Microsoft Corporate Blogs (2015).

[121] Jordan (2016).

[122] Blum-Ross and Livingstone (2016: forthcoming).

[123] Livingstone and Palmer (2012).

[124] Shane and Albert (2008).

[125] Mazurek and Engelhardt (2013).

[126] Nielsen (2008); Plunkett (2011).

[127] Mazurek et al. (2012).

[128] Burke et al .(2010).

[129] Alper (2016: forthcoming).

[130] Livingstone et al. (2015).

[131] Garmendia et al. (2012); Nikken and Schols (2015).

[132] Paus-Hasebrink et al. (2012).

[133] Livingstone et al. (2015).

[134] Barron et al. (2009).

[135] Katz (2014).

[136] Wartella et al. (2013).

[137] Davies (2011).

[138] Fletcher and Blair (2014).

[139] Uhls (2015).

[140] Marsh et al. (2015).

[141] Garmendia et al. (2012).

[142] Pasquier et al. (2012).

[143] Nathanson (2015).

[144] Chaudron et al. (2015).

[145] Shin and Huh (2011).

[146] FOSI (2015).

[147] Nikken and Jansz (2013).

[148] Madianou and Miller (2012).

[149] Rudi et al. (2014).

[150] Chaudron et al. (2015).

[151] Livingstone (2014).

[152] Chen and Chng (2006); Livingstone et al. (2014).

[153] Lenhart (2015).

[154] Wartella et al. (2013).

[155] Eastin et al. (2006); Kirwil (2009); Livingstone et al. (2016: forthcoming).

[156] Jigsaw Research (2012).

[157] Kuss and Griffiths (2012).

[158] Gentile et al. (2012).

[159] Eastin et al. (2006); Valcke et al. (2010).

[160] Schwartz and Gutiérrez (2015).

[161] One effort to support efforts to make high-quality, thoughtful content available to children of all ages and abilities is the POSCON initiative, which provides a checklist for content producers and developers to ensure they are making accessible child-friendly products. See POSCON (2014).