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Parental mediation of very young children's early experiences with digital media at home

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ABSTRACT

Digital devices are now found in the majority of homes, including the homes of very young children, and may be said to be a "dominant force" in their lives. This highlights the critical role parents play in mediating their very young children's access to, ownership and use of digital technology in the family home. One of the greatest challenges that parents experience is managing the tension between enhancing their children's digital opportunities and safeguarding them from its potential harms. Referred to as parental digital mediation practices, there is a body of work that both conceptualises these practices and explores their daily lived reality. While there has been a great deal of research around digital technology and parental mediation practices with older children, a stronger research base regarding very young children is needed; not least because there is a growing concern to ensure both digital inclusion and digital safety and privacy. Drawing on findings from a UK-wide study that explored digital ownership, use and parental attitudes and practices, in relation to very young children aged 0–36 months, this paper focuses on parents' perceptions of their mediation practices. The findings suggest that parents proactively mediate their children's use of digital technology using complex, fluid, nuanced and interrelated approaches and strategies. We suggest a new paradigm for capturing this complexity. We end by exploring the implications for research and practice. The study was funded by the Economic and Social Research Council (Grant Reference ES/W001020/1).

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Introduction

Digital devices are now found in most homes, including those of very young children, and have been referred to as a "dominant force" in their lives (Council on Communications Media et al., 2013, 958), with most children in developed countries having a presence online by the time they are two years old. While there has been a great deal of research around the impact of watching TV (S. E. Beatty, 2003; Chaudron et al., 2018; Fu et al., 2024; Huang & Lee, 2009; Shin, 2004; Zimmerman & Christakis, 2005) concerns have been raised about the applicability of older studies about TV-viewing to the more recent, and much altered, digital landscape (Beatty & M, 2020; Janssen et al., 2020). Over the past decade, studies of children's use of hand-held and digital touchscreen devices has increased, but these have tended to concentrate on older children (El Gemayel et al. (forthcoming); Harrison & McTavish, 2018; Lee et al., 2018). Researchers and practitioners alike have called for a stronger research base around the use of new technologies for all children (Choy et al., 2024; Clark, 2011; Council on Communications Media et al., 2013), especially young children (Chaudron et al., 2018; Dardanou et al., 2020; Domoff et al., 2019; Holloway et al., 2014; Siibak, 2019), and the types of digital devices they encounter (Palaiologou, 2016). While the value of the home learning environment to children's development is well known (Lehrl et al., 2020), that environment as a digitally rich locus of young children's activity is not yet adequately understood (Flewitt & Clark, 2020). The extent and reach of digital devices in the home has led to some researchers discussing the concept of digital parenting, which includes all actions parents take around their children's use of such devices (Banić & Orehovački, 2024; Tan et al., 2024), as well as parental mediation of child technology use (Bayar et al., 2025).

The Toddlers, Tech and Talk project team purposefully adopted the term "digital media" rather than "screentime", as "screentime" relates to the use of devices with screens, such as televisions, tablets and mobile phones (Beatty & M, 2020). These represent only a portion of digital devices, which may be defined as:

> … an electronic device that can create, generate, send, share, communicate, receive, store, display or process information, and such electronic devices shall include, but not limited to, desktops, laptops, tablets, peripherals, servers, mobile telephones, smartphones, and any similar storage device which currently exists or may exist as technology develops. (Law Insider)

This is one of many possible definitions of the digital devices, but such things are prevalent in contemporary homes and have, as a core characteristic, the ability to create, store and process data in binary forms, including laptops, phones, tablets and desktop computers as well as electronic toys and other household devices with digital display components and functionality (Huber et al., 2018; Wu et al., 2024). Young children may also encounter digital devices outside the home, such as interactive displays in museums and self-service retail tools (Johnston et al., 2022). Touchscreens – often referenced in the literature and public discourses around "screentime" – are portable electronic media devices where the information processing system is activated through single or multi-touch gestures – a sensory mode that renders these devices accessible to very young children (Flewitt et al., 2015).

Research literature calls for a more nuanced understanding of children's use of digital devices (Beatty & M, 2020; Council on Communications Media et al., 2013;

Sanchez-Bravo et al., 2025; Suh et al., 2024; Sweetser et al., 2012), delineating, for example, between active and passive engagement (Sticca et al., 2025; Sweetser et al., 2012), and how devices are accessed, e.g. television content now being accessed through other devices (Council on Communications Media et al., 2013). Research must now address not just the amount of time spent on devices, but how that time is used (Sticca et al., 2025). There are also calls for policy and guidelines to move away from simplistic, blanket strictures that are unhelpful to parents, and to take a more holistic approach that reflects the ubiquity of digital technology in the lives of most children (Blum-Ross & Livingstone, 2016). Parents, as well as policy makers, require more in-depth and reliable information and support around the use of digital devices by very young children (S. E. Beatty, 2003; Holloway et al., 2014; Smahel et al., 2020). We need, in Patrikakou's view, to be pro-active, rather than re-active to digital technology (Patrikakou, 2016).

The work presented here is part of a much larger project, reporting on issues relating to very young children's digital rights, digital play, parental attitudes towards very young children's use of digital devices, and language and literacy learning with digital media (El Gemayel, forthcoming); Flewitt et al., 2024; Winter et al., 2025). This paper concentrates on issues surrounding parental mediation of the use of digital devices by children aged from birth to three years.

Literature review

How families with very young children use digital devices

Research indicates that even very young children are surrounded by digital devices (Çaylan et al., 2021; Dardanou et al., 2020; Savina et al., 2017; Taylor et al., 2024), that their use by very young children is increasing (Covolo et al., 2021; Nevski & Siibak, 2016; Suh et al., 2024), and has been exacerbated by the social isolation of the pandemic period (Banić & Orehovački, 2024; Devine & Smith, 2023; Erol et al., 2025; Fitzpatrick et al., 2022). Carr and Dempster have characterised the modern household as a "rich technological landscape" (Carr & Dempster, 2021, p. 1), with use shifting away from televisions towards other devices (Beatty & M, 2020; Henderson et al., 2024), many of which are robust enough to withstand use by infants and toddlers (Archer et al., 2021). By the age of two, many children have the manual dexterity to use touchscreen devices such as smart phones and tablets (Fu et al., 2024). Young children appear to use digital devices primarily for four main purposes: entertainment and leisure, information and learning (Sticca et al., 2025), creation and communication (Chaudron et al., 2018), and as a form of emotional regulation (Suh et al., 2024).

Parental factors, such as parents' own views about and use of digital technology, and their own self-confidence in such use (Benedetto & Ingrassia, 2021), impact on children's use of these devices (Chaudron et al., 2018; Lauricella et al., 2015; Soyoof et al., 2024). Indeed, parents' use of devices may be the greatest predictor of their children's use (Reich et al., 2024), as children are most likely to learn about digital media from family members, either through modelling what adults and older siblings do or through direct instruction (Nikken, 2017; Reich et al., 2024; Soyoof et al., 2024). Contextual issues such as socioeconomic status (Fekonja et al., 2024) and geography (rural vs. urban, for example) may also play a part (Bennett et al., 2008; Brito et al., 2017;

Gou & Perceval, 2023; Selwyn, 2009; Soyoof et al., 2024; Suh et al., 2024). Given that parents are chiefly responsible for very young children's digital device access (Plowman et al., 2010; Suh et al., 2024), they are inevitably faced with the challenge of balancing many practical and ethical decisions around their child's technology use (Dardanou et al., 2020).

Much work around parental mediation theory has focused on the detrimental impacts of screen use by children (Clark, 2011), the impact of the use of screens on children's sleep patterns (Janssen et al., 2020; Sanchez-Bravo et al., 2025; Suh et al., 2024) and the impact on children's eyesight (Chaudron et al., 2018; Covolo et al., 2021), language development (Sundqvist et al., 2021) and a variety of other health concerns (Gou & Perceval, 2023; Sticca et al., 2025). These concerns have led to a variety of national guidelines for parents (Covolo et al., 2021; Janssen et al., 2020). Interestingly, research has shown that even while aware of guidelines and concerned about the possible dangers of the use of digital media, many parents do not adhere to the guidelines as set (Covolo et al., 2021; Fitzpatrick et al., 2022; Suh et al., 2024), seeming to take a more nuanced approach.

Research has also shown potential benefits of child tech use, especially when parents and children jointly engage in media activity, including opportunities for learning (Sundqvist et al., 2021), increasing empathy, prosocial behaviours and general socio-emotional development (Sticca et al., 2025); and sensory motor development for young children (Archer et al., 2021).

Parent mediation theory

Parents can actively mediate the use their young children make of digital media (Chaudron et al., 2018; Livingstone et al., 2015; Nichols & Selim, 2022; Reich et al., 2024; Warren, 2001), that is, they have the ability to control how, when, where and for how long children access devices (Suh et al., 2024) and, depending on the device, its content as well (Livingstone et al., 2015). Scholars have adopted the term "parental mediation theory" to define "the strategies that parents introduce to maximise the benefits and minimise the risks (potential negative impacts) of media influence" (Jiow et al., 2017, p. 310) and to mean "any strategy parents use to control, supervise, or interpret content" (Clark, 2011; Warren, 2001, p. 212). The importance of parental mediation has been increasingly recognised in guidance for parents around children's use of digital devices, with an emphasis on the need for parents to talk with their children about what they are seeing/doing, and to connect digital experiences to "real life" experiences (Action for Children, 2024; Canadian Paediatric Society, 2017; Gov.uk, 2016; NSPCC, 2024). Some scholars have noted, however, that there remains a tendency in parental guidelines to foreground the negative and downplay the positive potential of technology mediation in families (Clark, 2011), and that guidance is quickly overtaken by advances in technology (Siibak, 2019).

Mediation theory scholars have argued that technology is so embedded in society that its inclusion in research is essential to understanding daily life (Hjarvard, 2008). For example, mediation theory has shed light on how parents control their children's access to television viewing (Brito et al., 2017). Scholars of communication have also sought to understand how parents act to "mitigate negative media effects on children" (Clark, 2011, p. 323), highlighting concerns around the marketisation of childhood and

recommending limiting the time children spend watching TV and the potential impacts of TV-viewing on children (Jiow et al., 2017).

Parents' decisions about child media use are based on a wide range of factors: their desire to be "good" (or good enough) parents (Clark, 2011); to balance all of life's activities with very young children (Çaylan et al., 2021); to adhere to advice from various sources including official guidelines (cf., Canadian Paediatric Society, 2017, etc.), as well as external factors such as the cost and upkeep of devices (Clark, 2011). In the mêlée of everyday life, parental mediation of children's technology use will be complex, influenced by many factors, changeable and hard to capture.

The literature has begun to delineate various parental mediation strategies parents might employ often categorised under three main headings: restrictive mediation, active mediation, and co-use, as further discussed below (Banić & Orehovački, 2024; Valcke et al., 2010). There are many overlaps between these concepts, and research has shown that families often employ more than one strategy and move between them (Nikken & Schols, 2015; Valkenburg et al., 1999; Valkenburg et al., 2013); it is likely that mediation is too complex to be adequately understood through the use of one theory alone (Devine & Smith, 2023; Nichols & Selim, 2022). Technology moves on (Young & Tully, 2023), and parental mediation of child technology use remains under-researched (Brito et al., 2017) and under-theorised. This paper therefore seeks to investigate the applicability of frameworks for parental mediation in the context of our findings. First, we discuss the elements of the framework in the light of salient previous research findings.

Restrictive Mediation

Restrictive mediation (Clark, 2011; Coyne et al., 2017) involves family rules in relation to time spent on devices or content accessed (Banić & Orehovački, 2024). This could be related to authoritative (setting and discussing rules in an atmosphere of warmth and support) or authoritarian means of parenting (setting rules with less discussion/support) (Brito et al., 2017; Valcke et al., 2010). Restrictive mediation could be seen as a type of gatekeeping (Fu et al., 2024; Kalmus, 2012), with parents seeking to ensure that their children encounter only appropriate types of digital content (Fu et al., 2024; Merdin & Şahin, 2023). Parents with higher levels of education (Lou et al., 2024) and mothers overall (Duek & Moguillansky, 2020) are likely to follow more restrictive practices, and parents are, unsurprisingly, likely to relax restrictions as child age increases (Beyens et al., 2018; Valkenburg et al., 1999). Restrictive mediation may be considered as either supporting the autonomy of children, leading to beneficial uses of digital media, or as controlling (restrictive) mediation which focuses on obedience to set rules; parents may also vacillate between the two leading to what has been denoted as "inconsistent restrictive mediation" (Reich et al., 2024, p. 380).

Active mediation

Active mediation (Coyne et al., 2017) involves family discussions about the use of technology (also considered as Joint Media Engagement (JME) (Reich et al., 2024; Taylor et al., 2024), as well as guidance around safety (Kumpulainen & Gillen, 2019), the negative impacts of media (Griffiths et al., 2016), and the skills needed to use devices (Plowman

et al., 2010; Clark, 2011); some research suggests this may be the most common form of mediation (Beyens et al., 2018), and increasingly used by parents (Banić & Orehovački, 2024). Active mediation also involves adults guiding children's use of technology (Kalmus, 2012), for instance by modelling device use (Blum-Ross & Livingstone, 2016) and placing technical restrictions (parental controls and locks) on devices (Nikken & Schols, 2015; Stoilova et al., 2024), with family members acting as windows on the wider world for their children (Kalmus, 2012). Active mediation has been shown to reduce potentially negative technology effects and to support learning with media (Valkenburg et al., 2013), with previous research suggesting that most parents are indeed making thoughtful decisions about their children's digital media use (Holloway et al., 2014) although as noted above, the majority of the literature concentrates on older children.

Nevski and Siibak (2016) suggest that monitoring children's device use might be seen as a distinct category of parental mediation, and Nikken and Schols (2015) suggest supervision as a separate category from active mediation. We have included it as part of active mediation as very young children are unlikely to be able to access digital devices without initial help from an adult (or older child) (Fu et al., 2024). Furthermore, monitoring and supervision can be seen as dependent on the prior action of granting access to technology.

Livingstone et al. (2017) identified four factors that characterised active parental styles of mediation of the internet labelled as (1) active co-use, (2) restrictions of time and content, (3) technical restrictions, and (4) monitoring. Chaudron et al. (p. 47) add to this the following: "A fifth strategy has been highlighted by this study": (5) "active distraction" to describe how parents proposition for alternative attractive off-line activities (Chaudron et al., 2018; Holloway et al., 2014).

Clark (2011) suggests that participatory learning between an adult and a child may form a separate category of mediation, but we have again included it here under the general heading of active mediation, as it seems to fall well within the overarching understanding of this form of mediation.

Co-Use

This category of mediation has been used to refer to an adult viewing media with a child but without interacting with the child during the experience (Brito et al., 2017; Valkenburg et al., 1999; Valkenburg et al., 2013). The viability of this mediation category has been questioned for young children who are likely to be dependent on adults to access media (Beyens et al., 2018; Valkenburg et al., 2013); in fact, much interaction at these ages is likely to be "pass back" that is, the parent is likely to give their own device to the child for a limited time (Holloway et al., 2014). However, we have included "co-use" here as a parent or other might initiate the use of digital media for a child (switching on the television, handing over a phone or tablet) but then have no further interaction with the child's experience of that medium. The two ideas overlap – in neither case is the adult interacting with the child during the use of the digital device.

One concern around co-use is the time children may spend alone with digital devices, (or in the case of very young children who are unlikely to be left alone for significant periods, if not physically alone, then interacting only with the digital device and not with another person) is that time not being spent interacting with others, which in turn may lead to

diminished social-emotional development (Gou & Perceval, 2023; Sundqvist et al., 2021). Arguably, however, this concern could be raised for all mediation categories.

As noted above, there are many ways of cutting the metaphorical cake of parental mediation. We have chosen to begin with the most commonly used framework, but we also recognise that alternative framings exist. For example, Nevski and Siibak (2016) highlight the roles that parents play, rather than the strategies they adopt, describing parents as: gatekeepers, allowing (or denying) children's access to devices and content; guides, who help children use devices; windows, opening new opportunities for children; and consolers, who support and comfort children who have been upset or frightened by their digital encounter(s). Nikken and Schols (2015) suggest supervision as a separate category from active mediation, yet while these are important *functions* that parents perform, and thus are included in Figure 1, they are not means of mediation *per se*. While there is a lack of clear agreement in the literature, and some forms of mediation might seem to fit under more than one category, our review of research suggests that in the literature, parental mediation can be summed up as in Figure 1.

The distinctions between types of mediation are not clear cut, and this lack of clarity may be partly attributable to the fast-changing nature of digital technologies. Much of the earlier work around mediation concerned access to broadcast television programmes, which were available only at set times on a static device, which was often situated in an area accessed by all members of the family. Today's parents face a very different situation: streaming allows families to access television and other content at times of their choosing (Moss & Waddell, 2025), and handheld devices such as tablets, phones and laptops mean that content is accessible in an almost limitless range of locations and on a very wide range of devices both with and without screens. This paper draws on empirical evidence from survey and interview data about how parents mediate their very young children's digital device use to build on extant work on parental mediation strategies.

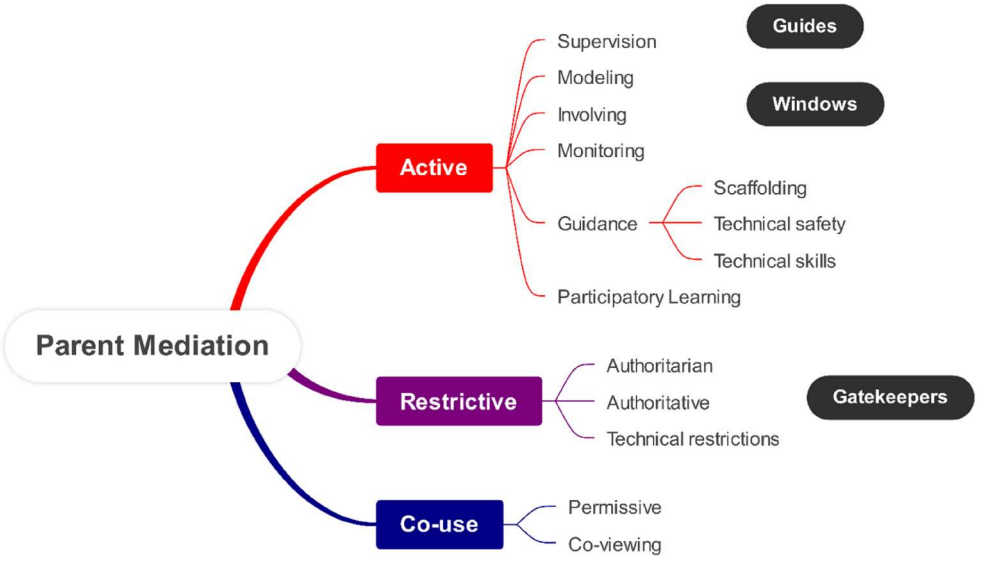

Figure 1. Findings from the literature.

Methodology

The overarching aim of the Toddlers, Tech and Talk study was to examine how the home lives of children aged from birth to three years intersect with digital technologies in diverse families in England, Northern Ireland, Scotland and Wales, and how digital media may be shaping very young children's experiences of talk and literacy. The 3-phase study methodology is reported in Flewitt et al. (2024). Here, we give a summary account of the Phase 1 survey and Phase 2 interviews with parents which inform this paper on parental mediation. See Flewitt et al. (2024) and Winter et al. (2025) for more detail.

Online survey

A draft survey was developed and piloted in July-October 2022 and launched online in December 2022. It was available in English and twelve other languages used in families who self-reported in the 2011 census as not speaking English well, plus the languages of recently immigrated populations.[1] It was also offered in print form or as a structured interview. The target sample was mothers, fathers and legal guardians of children aged 0–36 months in diverse socioeconomic and ethnic groups, living in rural, urban, and inner-city locations across the four UK nations. The survey was distributed in an open call across diverse social media and parent and childhood organisations in majority and minority ethnic platforms. By March 2023, we had reached almost half the target completion rate. We therefore engaged a survey panel provider, Panelbase (subsequently rebranded Norstat) to help secure a nationally representative sample of parents. The survey closed late June 2023 with 1444 valid responses. These were analysed by team members at Queens University Belfast using SPSS V29 and Jamovi V2.4.11 (see Winter et al., 2025).

Parents of children throughout the 0–36 months age range completed the survey; 48% of the children reported on were female, and 52% male; 4% of children were reported to have a disability. Just over 80% of respondents reported being the mother of the child in question, nearly 18% were fathers; others included legal guardians, grandparents, child minders and foster carers. Most respondents were between 31–40 years of age, with a mean of 33.57 years; 85% of respondents reported they were employed. 60% had at least one degree, 29% held qualifications at A level, Certificate or Diploma level, and 11% had either no qualifications or GCSE level. Across the same, 67% fell into the income bracket between £15,600 and £51,999 per year (See supplementary materials for further detail).

Interviews

A similarly diverse sample of interview respondents was subsequently sought, with each nation team conducting in-depth online interviews with ten parents of children aged 0–36 months (n = 40), and five early childhood professionals (n = 20). Face-to-face or telephone interviews were also offered, and some respondents opted for these. Anonymised transcripts were produced for all interviews, following a team transcription style, and these were stored securely in line with the approved project protocol.

Half the interview respondents defined their ethnicity as British, 20% "Asian/British Asian background" and 10% "Black, Black British/African, Caribbean". 55% reported speaking English and another language at home, 33% English only and 13% reported speaking a language other than English only. 60% reported minimum degree-level education, 29% A level or equivalent, 12% GCSE only or no qualifications, and 12% preferred not to answer. 12% of respondents reported annual income between £52,000-£100,000, 21% £26,000-£36,999, and 22% £15,600-£26,000.

A coding framework was developed and discussed based on an extensive literature review of the field, yielding a series of nested, a priori codes (Stuckey, 2015) with descriptions to enable cross-team consistency in coding. These codes were then discussed, supplemented by emergent codes and amended so that all nation teams were working with the same codebook. Transcripts were entered into NVivo and coded by nation teams, with an overview of the process being provided through regular team meetings and iterative coding development to check consistency, and to discuss progress and anomalies. A minimum 10% sample was joint or double coded to ensure intercoder reliability (Given, 2008). As coding progressed, the coding framework was adjusted to allow for more in-depth analysis of emergent themes. This article reports on all project interview coded data, focussing on data coded under the headings of "Parental mediation", "Parent digital safety and Safeguarding", "Parents' reasons for allowing children to use technology" and "Parents seeking out expertise". Interviews were additionally coded to examine concepts of active, restrictive and co-use mediation as a priori codes, although, as discussed below, this was not always the most effective way of understanding parents' experiences in mediating their children's use of digital devices. Necessarily brief extracts from interviews are included in our findings below.

Ethical considerations

Initial ethical approval for all project phases was obtained from Manchester Metropolitan University, the lead institution, and subsequently from collaborating universities (Lancaster, Queens University Belfast, Strathclyde, and Swansea). Ethical considerations are at the heart of this project, interwoven into methodological decisions at every turn (Flewitt et al., 2022; Kuntz, 2016). Every effort was made to highlight the voices of as wide a range of parents as possible, through offering the survey in diverse languages spoken in the UK and offering translation and interpretation services for parents wishing to undertake interviews in languages other than English. Interviews were conducted at times of parents' choosing, after an introductory email, telephone or online initial meeting. Voluntary informed consent was obtained from all participants. All transcripts were anonymised by nation teams before being shared with the wider project team; all names of people and places were removed from transcripts and replaced with either signifiers or pseudonyms.

Findings

The study findings strongly support Archer et al.'s claim that digital technology is seamlessly woven into the lives of young children (Archer et al., 2021, p. 1). As Baym (2015) suggests, for today's families with very young children, digital technology has more or less completed the slide from being "marvellous and strange" to being in essence invisible, or at least very difficult to detach from the rest of everyday life. 98%

of survey respondents owned a smartphone and over 80% a tablet computer, which means that almost all parents find themselves needing to mediate their children's access to such devices.

In our interview findings many parents referred to the fine balance they try to draw between opportunities offered by technology and potential risk,

> So I think I need to find a way just to balance the right amount of using, but I think that would be very difficult to know what is the right balance. (Mother of 13-month-old boy, England)

One of the messages that came through from parents in our interviews was an attempt to walk a fine line around digital technology with their children,

> I think that it's all about balance and making sure that your parenting is not being replaced by a device, if that makes sense. (Mother of 8-month-old boy, Wales)

Parents acknowledged the ubiquity of digital devices in their children's lives, and their desire to find a balance around their use,

> I think it's with everything, I think there's pros and cons … my view is just everything in moderation. … I'll put the TV on for him, if I need 5-10 min to go and do something, but then I think at the same time, if you would just shove a child in front of the TV at that age, for 24 h, seven days a week, that's not good and it's not going to benefit them developmentally. (Mother of 8-month-old boy, Wales)

No survey or interview respondents refused all digital technology access for their children. Our interview respondents often spoke about technology in their children's present and future lives,

> I feel like they are born into it. (Mother of 8-month-old boy, Wales)

At times, parents linked this directly to the lives that lay ahead for their children,

> I think it's just part of our culture now as we're such a digital culture and I think if we don't let them use it young in a safe way, then we're almost like disadvantaging them a little bit, growing, moving forward. (Mother of 23-month-old boy, Scotland)

How families use digital technology.[2]

In our survey, 43% of parents reported showing their child how to use a device (how to tap, slide, etc.), and 43% join their child in digital activities. Slightly fewer (42%) reported pointing to things on a screen or explaining them to the child, and the same percentage reported they use devices to help their children learn, including words, letters, sounds, shapes and colours.

Our survey found that the most frequent activity shared between parents and children was taking photographs, followed by looking at family photographs and videos. This was then followed, in decreasing order of frequency, by speaking with family and friends, watching children's programming, playing music and watching clips from YouTube. Parents of children with disabilities were 1.9 times more likely to report often using a digital device to play with their child.

The types of mediation found in the survey were less wide ranging than those in the interview stage; therefore, we discuss them separately.

Types of mediation: survey results

In our survey, we found that parents were most likely to mediate their child's technology use by (in descending order): showing their child how to use a device; joining the child in what they are doing with the device; supervising device use; pointing to things on the device and naming/explaining them to the child; helping the child learn new words, concepts, etc.; helping the child to hold the device; talking with the child about what they are doing; and finally setting time and/or content limits on the device use. Figure 2 gives a visual representation of the survey results for types of parental mediation, aligned to the concepts taken from the literature.

Even in the survey data, it was difficult to separate these forms of mediation. This became more apparent in the interview data which, by its nature, was much richer and allowed us to probe more deeply into issues emerging from the survey findings. These two data sources have permitted both a broad and nuanced understanding of how parents mediate their children's use of digital devices. Below, we present findings of how parental mediation relates to time, media content, and access to devices. We then consider parents' co-engagement with their children's technology use, parents' use of digital media for the purposes of entertaining or distracting their children, and finally, parents' mediation of their own use of technology around their children. We depart from the frameworks of parental mediation as presented in the literature as we found this did not map onto our respondents' reports of their mediation practices.

Mediation: time

Most respondents reported they were making active decisions about the time their children are allowed to access devices, and that the times allowed vary widely from family to family. Some families differentiated between apps or programmes,

> Um, if it's passive, again, so if it's like, I'm putting a song on to help her sleep, I don't think there's much time limit on it (Mother of 4-week-old girl, Wales)

Some parents allowed different amounts of time dependent on circumstances that day,

> We might let him watch half an hour or 40 min of telly and if we are in a restaurant, give them 20 min … on a day that he's ill and he's really under the weather then we would let him watch more, but it would be spaced out. So, like, you know, watch 40 min, then we'd do something else for an hour then you can have like, another half. (Father of 31-month-old boy, England)

Other families set limits to the amount of time children were allowed to access digital devices:

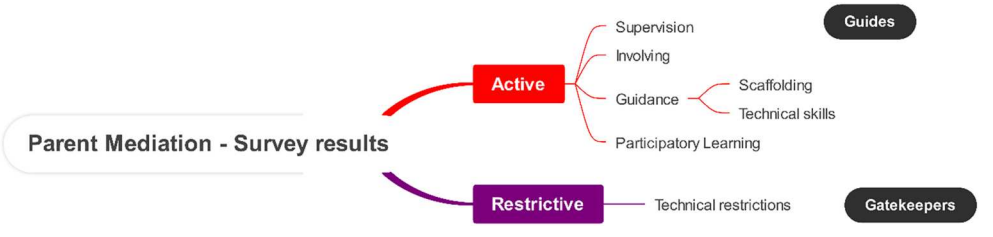

Figure 2. Types of mediation (survey results).

> … let's say it's probably about 20 min. It's not much longer than that. So usually the things he does watch they're about 5-10 min long, so they're not very … I would say it's for like 2 episodes. (Mother of 22-month-old boy, England)

Other families preferred not to have set times but rather to monitor on a case by case, or day by day basis,

> We just try and do short periods if he's watching something, it's short lived. We do try and limit to his TV time. (Mother of 32-month-old boy, Wales)

Mediation: managing end of access

We have included parental mediation around the end of children's access to digital devices for a number of reasons. In the first instance, this topic arose numerous times and was coded 13 times as a unique, emergent code. Secondly, this concept does not generally feature in the literature around parental mediation, yet it is clear that it is part of parents' lived experiences of mediating their children's technology use. Finally, this concept adds more nuance to the concept of parental mediation.

> Teletubbies has a fantastic ending where they say goodbye and it takes like ages like a good 10 min to say goodbye. But it really prepares the toddler to say goodbye and to transition. So when the Teletubbies say OK bye bye bye Tinky Winky bye. … she knows. OK, now it's bye bye time. The TV is gonna turn off soon. … So it's really, really good in transitioning her to get off the screen. (Mother of 30-month-old girl, England)

> And usually I think we wait for whatever he is watching. It doesn't have to be the episode, but whatever the episode is or some scenario we want for that to finish and then say OK, that's it, it finished and then we stop it. Uh, yeah, we try not to cut it in the middle, just want him to finish the (Father of 18-month-old boy England)

Parents also reported discussions with their young children about ending media use, ensuring the children understood what was going to happen and why,

> It's more that we would tell her that, so that she expects and knows that it's going to be turned off rather than if you go up to a child and you haven't prepared them or warned them, then they'll get really annoyed that it's being turned off. (Mother of 36-month-old girl, Northern Ireland)

Mediation: content

This section describes parents' mediation of the digital content their children can access, or the functions that a device can perform (Stoilova et al., 2024) including the use of parental controls; parents may also "tailor" the content their children access, that is, choose among different forms of content (Thierer, 2009). There are overlaps here with the section about children's access to devices. Most parents were clear that they controlled the content their children could access, not only now but would continue to do so in the future,

> Yeah, so yeah, the content always, hopefully always, will be restricted. (Mother of four-week-old girl, Wales)

For some parents, restriction of content was easier with children of this age range, because very young children are unable to access content without support,

> Because we have control over what they can use essentially, I would be keeping an eye – well not keeping an eye because she can't download apps herself anyway! (Mother of four-week-old girl, Wales)

Some parents expressed satisfaction with controls that came with specific devices or apps,

> I think the main companies that you would expect to utilize for kids when it comes to touch screen stuff, whether that be the tablet manufacturers, your software, you know like Apple or your actual entertainment companies like the BBC, Netflix, Disney Plus, they all are very well built kids elements to it … if you sign … into the kids profile, you know you're not, they're not gonna be able to access … content that isn't suitable for them. And as if from the tablet manufacturers point of view, the Amazon kids tablets … We gotta pay a fee anyway to have the kids subscription element, but again, you know therefore, they can only access the apps that have that have been checked, have been vetted. … at least you know that it's safe. (Father of 29-month-old girl, Wales)

Parents also reported discussing the control of content with their children,

> I said, "We're not gonna watch Peppa pig cause Peppa Pig's naughty" and now he says it back to me, he says "ohh Peppa Pig's naughty" and I'm like, yeah, Peppa Pig is naughty. But shall we watch and then say something else that we might be able to watch and he's happy (Mother of 35-month-old boy, England)

Parents often reported overlapping means of restricting content, such as the choice of apps or programmes available, constant supervision of child digital activity, as well as restriction of time on devices,

> … she only has access with the YouTube Kids. There's only kids program there and the camera. So that's it. And I'm satisfied why? Because she's always in front of me in front of my eyes. Like I know what she's watching. … (Mother of 26-month-old girl, England)

A striking finding throughout the interview phase of the project was that parents were making careful, deliberate choices about the content their children could access, but found this a demanding task,

> It just takes a lot of effort and sometimes a bit of expense to make sure that they don't get the wrong type of exposure, but to me it's a positive thing, giving them that digital experience. (Father of 29-month-old girl, Wales)

As part of this form of mediation, parents reported on the use of parental (or other) controls

> Yeah, it's so easy now to put parental guidance and parental access. There's no excuse to it anymore. There's no excuse for me it is just flat out just child endangerment if you're not putting some kind of parental guidance on your tablets (Mother of 33-month-old girl, Wales)

As mentioned above, some parents had not begun to use controls for devices due to the young age of their children,

> Whereas if he was a bit older and he got to the point where he did have his own iPads then I would be put in like a limit on it type thing. But because it's not his I don't have anything on it. (Mother of 22-month-old boy, England)

Parents showed an awareness of such controls and their use, and some families had already put them in place,

> We have taken off the kids Amazon just because we don't like the software that was on that. We took it off and put on our own kind of operating system and then have locked it down for a child. We have all the Google protection, the Google family protection on it, so he can only get on to certain apps and then he can only spend so much time on it as well. (Mother of 31-month-old boy, Northern Ireland)[3]

Some parents reported that the controls were not specific to software (such as parental controls on YouTube) but rather on the devices themselves,

> We all have the codes on to lock, so he never opened that by himself, yeah; all digital devices are under passcode protection. (Mother of 26-month-old boy, Scotland)

Mediation: access to devices

This section considers parents' mediation of children's access to devices themselves. As with the discussion above, this form of mediation overlaps with others and can be difficult to separate out. Some parents reported remotely using a different device to control the device being used by their child,

> My husband and I both have apps on our phones, so we can control the tablets on our phones (Mother of 31-month-old boy, Northern Ireland)

Other parents controlled access to devices by not having them turned on – there are self-evident overlaps here with time-based mediation,

> The television isn't password protected just because we just keep it switched off. It's actually switched off on the wall. She couldn't even accidentally turn it on. (Mother of 24-month-old girl, Scotland)

Interestingly, and in some cases related to parental concern about children's eyesight, some parents preferred their children to watch content on a large television screen, rather than on handheld devices,

> We want to avoid her like having the device to herself in her own hands, we'd rather get these programmes casted onto our TV (Mother of 30-month-old girl, England)

Mediation: co-engagement and supervision

While this element of parental mediation cannot be completely separated from other forms of mediation, we highlight parental co-engagement and supervision of children's use of digital media because it was a clear theme in the data. We have used the term "co-engagement" because parents reported being engaged with the content being accessed by their children. This is different from the term "co-use" as discussed above, which suggests side by side use of different devices, accessing different content (Valkenburg et al., 1999; Valkenburg et al., 2013).

> So although she might sit with the phone if she's sitting with the phone, we're sitting with her, watching what she's accessing. (Father of 23-month-old girl, Scotland)

Even if parents were not physically sitting with the child all the time, they reported continuing to supervise content,

> So I suppose that's a natural restriction, because we're always – she'll never be left alone. And I wouldn't leave her alone anyway. And it's just making sure that we're in the room and we're monitoring it at the time, really. So we know what's going on and what (.) she's doing and she doesn't break it. (Mother of 18-month-old girl, Wales)

We also found parents reporting that they actively engage with their children around the content accessed,

> My husband watches with him. He has, like, few specific songs that he says this is our song. … So they have a couple of them that they watch every single time … And my husband says that for these songs he shows more excitement because since baby was baby he was kind of showing it to him and he thinks that he knows them more than the others. He likes them more than the others. (Mother of 13-month-old boy, England)

Mediation: distraction or comfort

Some parents reported using digital devices with their children either for the purposes of entertainment, or, linked to this, distraction – that is, to occupy the child so that the parent can attend to other tasks and activities.

> Yeah (..) I wish we didn't but sometimes we do and sometimes just feel like not got a choice. Especially like if you're out for a meal or something like that and she's starting to get really agitated (..) [child]is incredibly active so we do a lot of sports stuff with her as well, but it means she can't sit still, … if you don't give her that, then she wants to run about the restaurant, she's not any trouble, she doesn't scream or anything like that, but it's (..) you can't have your meal because you're having to watch her so at that point in time I'm more than happy for the phone to be handed over. (Father of 23-month-old girl, Scotland)

One parent reported giving their child a tablet as a means of winding down from being over stimulated,

> … so that she can really zone in and recover because she's already masking (Mother of 33-month-old girl, Wales).

Some parents in our project reported using digital devices – usually those with screens – to provide entertainment for their children, and sometimes as a distraction,

> We'd put her in the bouncer, say I needed to nip out of the room, just to do something, I would put her in the bouncer, put her in front of the TV and she'd just be watching the sensory fruit dancing around the screen and she wouldn't even know I'm gone. (Mother of 18-month-old girl, Wales)

While "consoling" is mentioned in the literature as a function parents can perform for their children in relation to content accessed through digital devices, we found few instances of this form of mediation in our data. However, at least one instance of a parent consoling a child was mentioned in the data,

> … when he watches Finding Nemo, I know there's some bits he finds a bit frightening, like when the shark comes or Nemo goes missing or his mum goes missing, … and I feel like I need to be there to explain what's happened to reassure him. So I think sometimes I think maybe I don't wanna leave him to watch it by himself … The thing kind of co-viewing or something is like better than them just watching it on their own because at least you can have conversations about it … (Mother of 35-month-old boy, England)

Mediation: own use of digital technology

> But I think, long before a need to put restrictions for him, I think we have to put some on ourselves in front of him. (Mother of four-month-old boy, Wales)

We have added a new dimension to parental mediation to include consideration of how parents mediate their own use of digital technology, as we found some parents mentioned this in relation to how they mediate their children's use of devices. For example, some parents reported limiting their own device use to model appropriate use for their children. Concerns have been raised in the literature about "technoference", that is, parental distraction from their children as a result of the use of digital devices (although it is worth noting that a recent study found that digital devices were no more disruptive to parent/child interaction than other forms of distraction) (Chamam et al., 2024). Rather, parents noted that their children were likely to want to copy the parents' use of devices (Chamam et al., 2024), and took this desire into account when restricting their own digital device use.

As noted above, young children in particular are likely to learn about the use of digital devices through modelling what other do (Soyoof et al., 2024). Social learning theory, as used in recent research, would supports the concept that children learn by observing their care taker's actions (Sari & Yalçın, 2024) thus making parental use of these devices all the more important,

> I talked to my husband about this, this week, I think we have to put restrictions on our own use. So [child's name] not far off from the age where he'll be interested in whatever we're interested in. So I'm holding something he wants to hold that thing. Or, and I think already we've said, we'll try and be mindful about how much we're on our phones in front of him, because it becomes really, really desirable if you're modelling it being used all the time. (Mother of four-month-old boy, Wales)

Discussion: active parental mediation

Our findings suggest that the distinction between active and restrictive mediation is not applicable to families with very young children, as we found no instances of restrictive mediation alone. Instead, all the forms of mediation overlapped, as is reported in the literature (Palaigeorgiou et al., 2017) and parents played an active role in all forms of mediation. We found no parent reports of co-use as described in the literature, which may relate to the very young age of the children in this study. Nor did we find instances of parental phubbing, that is, avoidance of face-to-face interaction with their children but instead directing them to digital devices (Liu et al., 2024; Siibak, 2019); instead, we found the opposite, that parents were aware of this possibility and acted to avoid it.

We did find some instances of children using devices while parents were busy with other things; we have not, however, used the term "non-supervised" for this use as all parents reported continuing to supervise children's digital media, even if the parents were not co-present at every moment. In Figure 3, we present an alternative framework to conceptualise parental mediation of very young children's digital device use, which may be insightful for older child age ranges.

Figure 3 represents what parents have told us about their experiences of interacting with their children's use of digital devices. While the diagram presents the different elements of mediation as separate boxes, in reality all of these overlap in families' experience; what we are presenting is a simplified view of the different ways in which parents enact mediation around their very young children's device use.

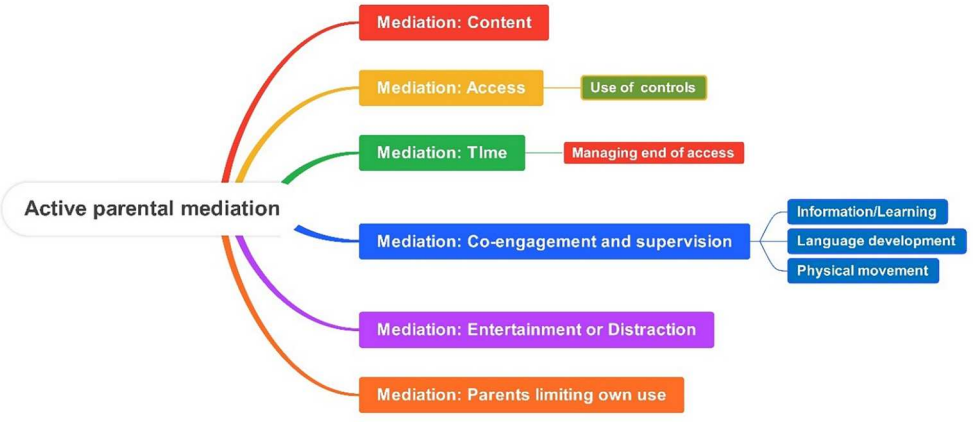

Figure 3. Active parental mediation.

We found no instances of mediation which would seem to fit under the heading of an "authoritarian" style of mediation (Brito et al., 2017). Rather, parents seemed to be adopting an authoritative style, in that they had guidelines and/or rules about media use but were also open to discussion about those rules with their children (such as not watching Peppa Pig as "she's naughty"). As one parent said, "I'll be quite mindful but not ruling with an iron fist". This finding suggests that parents are seeing their children as active agents in their own digital device use and respecting their children's views whilst still providing clear rules for child device use. This aligns with research that shows that parental controls tend to be more successful when they are negotiated between parents and children (Stoilova et al., 2024); however, our work takes this further by highlighting this negotiation in relation to the cessation of activities.

Only one parent in the interview phase reported having no rules about their child's media consumption. All other families reported having specific limits (in terms of time elapsed, number of episodes or episodic content) or making decisions on a case-by-case basis (which involves even more active engagement on the part of parents). From our data, it would seem that there are few if any instances of parents adopting a laissez-faire approach to the use of digital devices by their young children (as noted by some previous literature) (Banić & Orehovački, 2024; Chaudron et al., 2018).

Limitations

While this study accessed a diverse respondent cohort, it remains limited to families living in the United Kingdom. Further, the study looked only at the experiences of families with children from the ages of birth to three. This choice was intentional as it represents a unique offering to the field, given that this age bracket is under-researched. As shown in the demographics (see above and supplementary materials), the sample in both the survey and the interviews leaned towards those with degree or higher qualifications, which is higher than the national average of 31.4% (Office for National Statistics, 2023). The families in our study may have had access to more devices than families with

lower incomes, and may have therefore felt a need to enact more restrictions (Fekonja et al., 2024; Office for National Statistics, 2025; Radó et al., 2024).

Contribution

This paper offers five distinct new contributions to research on parental mediation of the use of digital devices by very young children. While most work around parental mediation has relied on surveys (Tan et al., 2024), this paper is based on data from a nationwide survey followed by in-depth interviews (Flewitt et al., 2024; Winter et al., 2025 for other reports on the project). Due to the increasing presence and diversity of digital devices in contemporary homes, this work is particularly timely and important, as it presents current insights into parental experiences and understandings. In this way, this paper provides an answer to the calls for more research in this area, responding to the call to be proactive in this support.

Firstly, we provide a new diagrammatic representation of parental mediation of digital technologies for very young children. The diagram presents a new understanding of the ways parents engage with and support their children's use of digital media. This will be of value to families and professionals working in early years, as well as those supporting families more generally. For example, this framework could be used in the training of early years professionals, and in their support for parents.

Secondly, we highlight the holistic nature of parental mediation. While we have presented a diagram with varying types of mediation separated into different boxes for clarity's sake, our findings clearly indicate that the hurly burly of family life is a much messier reality, with parents utilising a variety of types of mediation, and often more than one type at a time (e.g. restricting access to content and co-engaging with the child).

In the third place, we add two new forms of mediation to previous schemas, those of managing the end of access, and parents' own media use. We found that many parents in interviews reported discussing the end of access to devices/content with their children, treating the child as an active agent in the process and showing respect for the child's understanding of the process of mediation, while still maintaining control over device usage. This finding is all the more important in view of the perception that some instances of digital content (television and YouTube, for example) can be continuous, without clear delineation between episodes (Chaudron et al., 2018). This finding also echoes earlier research that highlights the importance of induction, that is, of parental explanations, to children's development (Hoffman, 1975; Hoffman & Saltzstein, 1967; Tompkins & Villaruel, 2022).

Further, in our discussions with parents around their own mediation strategies, we found that parents highlighted limiting their own use of digital devices around their children. Data from this study showed that the three dimensions of digital parenting (Türen & Bağçeli Kahraman, 2025) discussed by Tan et al. were in play (mediation, parents' own use of technology and modelling) (Tan et al., 2024), although our paper extends this categorisation by showing that parents are being reflexive about the two final elements of this grouping, sometimes restricting their own use of digital technology *because* of its modelling effect for young children. Again as a practical example of how this could contribute not only to research but to practical work, this information could be included in ante- and post-natal support for parents.

An important fourth and interconnected original finding that is not apparent in the literature is that parents are consciously limiting their own use of digital devices around their children, which echoes the concept of modelling (Blum-Ross & Livingstone, 2016), but is not quite the same. As young children have been found to pick up their digital skills through watching and imitating those around them (Chaudron et al., 2018; Devine & Smith, 2023), this limiting of parents' own use of devices is likely to impact on children's use as well. In the literature, parents have been shown modelling *how to use* devices, rather than taking account of the impact the full range of their own everyday use of digital devices might have on their children. In point of fact, the parents reported modelling *not* using devices, that is, avoiding their own overuse of devices around their children. As children are likely to imitate what adults around them do, particularly if those adults are considered by the child to be nurturing and caring (Devine & Smith, 2023), parents are, in consciously restricting their own use of digital devices, modelling appropriate use to their children.

In presenting these concepts, we accept that they may not be applicable or not immediately so, to families with older children. The need to delineate understandings of parental mediation by the age of the child provides our fifth and final contribution to the field; we offer the framework in this article as being appropriate to parental mediation for very young children.

In conclusion, we offer as our fifth contribution, a slightly amended definition of parental mediation, as again appropriate for families with very young children. Parental mediation consists of the strategies and actions that parents **enact** to support their children's use of digital devices, to maximise benefit and control risk. This is a slight change (change of verb from "use" (Jiow et al., 2017) or "introduce" (Warren, 2001)).

Previous definitions have not fully captured the range of mediation strategies used by parents with children in this age group. Previous definitions tend to concentrate on the risks or benefits parents perceive their children may encounter (Jiow et al., 2017) or as a strategy used by parents (Warren, 2001). These definitions originally arose out of research based mainly around parents' mediation of static television viewing; families today inhabit a very different world.

This new definition highlights our finding that parents are taking thoughtful decisions about how their children interact with digital devices, and also that this mediation is an action, or better, is an ongoing series of activities; many couples discussed and agreed how they would model device use for children. Consequently, their mediation strategies involve on ongoing often jointly decided series of actions that help them to balance the perceived opportunities offered by digital media with their concerns about potential risk. Clark (2011) points out that parents' decisions around technology mediation are influenced not only by logic and adherence to official guidelines, but also by their emotions, and their desire to be good parents, or seen as responsible (Siibak, 2019). We found this to be the case; parents were for the very most part very concerned about their own responsibilities to safeguard their children from digital harms whilst not excluding them from digital encounters and expertise. Overall, we can confidently report that the very diverse parents with whom we engaged in this study were taking considered, deliberate decisions around their children's interactions with digital devices and they were putting those decisions into action.

Recommendations for further study

While this project has advanced our understanding of how parents currently mediate their very young children's encounters with digital devices at home, there is still a very great deal to be investigated. Further research might study specific areas such as children's creative play with digital media, how early years educators mediate children's digital technology use, and how greater consistency in child media use across home and early years education and care settings might be achieved.

AI declaration

SciSpace was used to supplement the literature search for current papers during the review process.

Notes

1. Professional translation services were commissioned to translate the survey into Arabic, Bengali, Chinese, French, Gujarati, Panjabi, Polish, Romanian, and Urdu, plus Welsh, and Farsi and Ukrainian to enable the inclusion of recent asylum-seeking populations. All translations were double-checked for accuracy prior to the survey launch.
2. Fuller information can be found in Flewitt et al., 2024.
3. Again, this shows the overlapping nature of forms of mediation: access, control and time.

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