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**Young children and tablets: the views of parents and teachers**

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### **Abstract**

Touch screen tablets are now widely available and due to the increasing use of these technologies in homes and early years centres, it is important to consider parent and teacher views about their use. This paper reports on an interview study which explored the perspectives of four parents of children aged 20-36 months and their two teachers in one early learning centre in the north of England. Key findings were that parents and teachers had a positive perspective on young children's use of tablets and viewed them as educationally valuable. They expressed that they did not wish children to be left behind in learning about new technologies and emphasised having a 'balanced' approach to tablets. However, there were also concerns voiced over the potential overuse and misuse of tablets at home suggesting more guidance for parents is needed to support young children's experiences with tablets.

*Key words:* parents, teachers, iPads, touch screen tablets, young children

### Introduction

The rapid uptake of touch screen tablets by young children at home and in early education centres has accelerated the need to investigate how these technologies have become part of the lives of children and, in turn, the ways in which they may influence literacy, learning and development (Marsh et al., 2015; Ofcom, 2014). Through touch-based gestures such as tapping, swiping and pinching young children quickly learn to interact with the digital screen and its multimodal features (e.g., colours, sounds, pictures, and visual movement) and their interactive features appear to engage children's attention (Merchant, 2015; Neumann & Neumann, 2015). Tablets have a range of functions and applications that appeal to young children, and apps can provide rapid feedback and multiple avenues for learning and communicating with their world (Marsh, 2016; Neumann, 2014). These may include taking photos, watching videos, playing games, talking to family members on video chats or text messaging, mark making, and reading story books (see for instance: Barron, Martin, Takeuchi, & Fithian, 2009; Kuricova, Messer, Sheey, & Flewitt, 2013; Marsh et al., 2015; Neumann & Neumann, 2014; Neumann, 2016). Such a multifunctional technology certainly has the potential to enrich young children's learning (Wood, Petkovski, Depasquale, Gottardo, Evans, & Savage, 2016).

Since their release, nearly a decade ago, iPads and similar devices have provoked both positive and negative reactions – particularly, it seems, when they are in the hands of young or very young children. Some concerns reported through surveys and observational work include worries about increased screen time (American Academy of Pediatrics, 2016; Neumann, 2015), possible links to antisocial behaviour, and a variety of problems associated with reduced attention and reduced language ability (Christakis & Zimmerman, 2007; Chistakis, Zimmerman, DiGiuseppe, & MaCarty, 2004). Concerns also exist around children encountering violence or inappropriate content, lack of online safety measures (Livingstone,

Marsh, Plowman, Ottovordemgentschenfelde, & Fletcher-Watson, 2014) and how potentially addictive behaviour might impact negatively on early development (Ebbeck, Yim, Chan, & Goh, 2016). Whilst limited empirical research exists on the negative effects of tablets on young children's social, emotional, physical, and cognitive development (Herodotou, 2017; Neumann & Neumann, 2015) the positive educational benefits of using tablets to support aspects of early learning such as literacy and language has been explored by a number of researchers (Burnett, Merchant, Simpson, & Walsh, 2017; Masataka, 2014; Neumann, 2018).

Parents and teachers clearly play a key role in encouraging or directing children's engagement with tablets, providing them with access to tablets themselves, steering them towards particular apps and allowing (or preventing) different levels of engagement with the internet (Marsh, 2017; Wood et al., 2016). Research on adults' attitudes and practices in this domain is in the very early stages. However, we suggest that it may be possible to identify some emerging themes and current concerns. In the course of collecting contextual information for a larger study on the use of iPads in an early education setting, we conducted semi-structured interviews with small groups of parents and teachers. Our analysis of these data, reported on in this paper, mapped on to the findings from other studies in interesting ways. In this paper we identify three key themes which we feel are beginning to emerge and clearly warrant further investigation. Before reporting on these, we summarise the existing research, focusing first on the role of parents and then that of teachers.

### **Parents and young children's use of tablets**

In a study of six families with children in the 0-5 age range, Marsh (2017) describes the range of activities that parents and caregivers used to support early engagement with tablets. Marsh (2017) identified three different activity domains: 1. managing devices (e.g., controlling access, preparing tablet activities, searching and downloading age-appropriate apps); 2. preparing the tablet for use (e.g., checking the volume), and 3. talking with their

children (e.g., linking app play with other media experiences). Other researchers have drawn attention to the ways in which parents scaffold children's interactions with tablets (Danby et al., 2013; Wood et al., 2016) and these include cognitive scaffolding (e.g., asking and responding to children's questions during tablet play), affective scaffolding (e.g., praising children's attempts and successes), and technical scaffolding (e.g., showing how to use touch gestures) (Neumann & Neumann, 2016; Neumann, 2017a, b). Importantly though, parental views on tablets, the decisions they make about children's early exposure and access to tablets, and the ways they could support young children's use of tablets are key areas for further research that might profitably build on this work.

Related research suggests that parents of young children generally hold positive views about the ways in which computer technology might support learning (Plowman, Stevenson, McPake, Stephen, & Adey, 2011; Plowman, Stevenson, Stephen & McPake, 2012). In one study, Green, Orwitz, and Lim (2009) reported that parents believed having computers at home was key for their child's academic achievement and future employment success. It has also been suggested that carers who own tablets themselves are more likely to introduce tablets to their children and view them as educational tools. Whereas carers with less experience with tablets have expressed anxiety around their child's use of tablets (Michael Cohen Group & US Department of Education, 2011).

Neumann (2014) examined the views of 109 parents of Australian pre-schoolers aged 3 to 5 years old and found that only 35% of parents believed young children should have access to tablets at home but a greater number of parents (53%) believed that tablets should be available at pre-school. Although speculative, it was suggested that this could be due to parent perceptions that home should be a place for more traditional activities such as outdoor and physical play and that schools should support children's learning in a digital world. In a survey of 104 parents, Wood et al. (2016) found that tablets were mainly used at home for

entertainment purposes, although half of parents believed that tablets and apps would help literacy learning. This sits well with the more general view that positive computer experiences at home may also advantage children at school (Downes, 2002; Healy & Schilmoeller, 1985; Levy, 2009; McPake, Plowman, & Stephen., 2012; Plowman et al., 2011). Examining the beliefs of both parents and teachers from home and school perspectives will help deepen our understanding of technology use and relationships between home and school experiences (Henderson, 2011; Marsh, 2017; Neumann & Neumann, 2015; Paiva, Morais, & Moreira, 2017). We now turn to research on teachers' views.

### **Teachers and young children's use of tablets**

The role that teachers play in supporting children's use of tablets for collaboration and play and their views on tablets are an important area of concern (Marsh et al., 2015). Studies have shown how teachers use tablets in early years classrooms as a tool for encouraging social interaction, communication, play, and creating (Geist, 2014), suggesting that they can be used independently (Lu, Ottenbreit-Leftwich, Ding, & Glazewski, 2017) as well as in small groups (Huang, Clark, & Wedel, 2013; Northrop & Killen, 2013). It has however been argued that teachers need support in effectively integrating tablets into early years classrooms (Lu et al., 2017). Such assistance may be needed in order to overcome technological barriers such as accessing the internet, selecting developmentally appropriate apps, and generally building teachers' confidence in using tablets for learning and teaching (Geer, White, Zeegers, Au, & Barnes, 2017; Lu et al., 2017). Supporting teachers in integrating tablets into the classroom is likely to be influenced, at least in part, by their views on tablets at school and home and their increasing understandings about how tablet use at home and school could help contribute to classroom learning and teaching (Henderson, 2011).

As such, the present study explored current perspectives on young children's use of tablets by listening to conversations and views shared by parents and teachers. Allowing such

voices to be heard is key to expanding and deepening our understandings of how new technology is used by young children at home and in the classroom. Discussion of these findings will help pave the way for exploring evolving perspectives around tablets and young children.

## **Method**

### **Participants and setting**

Data in this paper are drawn from interviews with parents and teachers about young children's use of touch screen tablets. They were collected to provide the background context to a larger study of the use of tablets in an early years centre in northern England. Spinney Top Early Years Centre<sup>1</sup> is a local authority-maintained nursery school catering for just over 150 children in the 2-5 age range. Full day care for children from nought to two years old also operates within the centre. Formerly designated as an Early Excellence Centre, it serves a mixed semi-urban and rural area that has experienced the decline of the coal and steel industries.

Interviews were conducted with four English-speaking mothers of children aged between 20 to 36 months who attended the centre and two qualified female teachers who worked at the same centre. Each parent reported that they either owned an iPad or tablet at home and their children had access to the device(s). The teachers shared two iPads in their centre which were designated for use in classroom activities.

### **Interview procedure**

University ethics and early learning centre permission was obtained before undertaking the study. All parents and teachers of the early learning centre were invited to participate in a semi-structured group interview at a time that suited their schedule. Semi-structured interviews are defined as having the flexibility of an unstructured interview (e.g.,

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<sup>1</sup> We have used a fictitious name in referring to the setting to comply with ethical guidelines.



extending discussions and providing opportunities for participants to communicate and express personal opinions and experiences) alongside the organisation of a structured interview whereby focus questions are asked in a specific order (Li & Liu, 2017; Newby, 2010). The methodology used for the present study is adapted from previous family studies that have interviewed parents and teacher viewpoints related to families, teachers, and early childhood education (Geer et al., 2017; Hubel, Schreir, Wilcox, Flood & Hansen, 2017; Li & Liu, 2017; Lu et al., 2017).

Following the completion of the consent form by the participants, three of the parents completed the semi-structured interview in one session and one parent completed the interview after that session. Both parent interview sessions lasted approximately 20 minutes and were completed on one mid-week morning in a quiet room at the centre. Two days later, the teachers were interviewed in separate sessions to suit their schedule. One teacher was interviewed in a quiet room near her classroom and the other teacher interview occurred in a quiet corner of her classroom. Each teacher interview lasted approximately 10 minutes. The first author conducted the study interviews and these were done using a conversational approach where the discussion began with the first interview question. The list of parent and teacher questions are presented in Table 1. Where appropriate the interviewer then followed up with additional questions related to responses or to probe, clarify answers, or seek further ideas (Hubel et al., 2017; Ulin, Robinson, & Tolley, 2005).

All the interviews were video recorded and fully transcribed for analysis. Similar to the methodology use by Li and Liu (2017), the transcript data for each interview question were imported to the qualitative software program NVivo (Version 11) for analysis and coded into categories based on the interview questions. Through the process of thematic analysis (collating and evaluating categories into potential themes then reviewing and defining themes; Braun & Clarke, 2006) three key themes were identified.

Table 1. Parent and teacher interview questions

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Questions
<i>Parent interview</i>
1. What types of mobile devices do you have at home?
2. Do your children use these devices?
3. What kinds of things do they do on the iPad or tablet?
4. What do you think about children using iPads, tablets, and apps at home and school?
5. What kind of support do you give your child when playing their iPad or tablet?
<i>Teacher interview</i>
1. What did you notice about what children did with iPads in the classroom this week?
2. How do young children interact with iPads or tablets in your classroom?
3. What are your views on young children and iPads or tablets at home and preschool?
4. How much support do young children need when they use iPads or tablets at home and preschool?

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## Results

Because of the relatively small numbers in the interview sample we report our findings under three broad headings, indicating points of difference between parents and teachers where they occurred. The key themes identified were:

1. How young children play with tablets
2. Young children's engagement and learning with tablets
3. Benefits and concerns of tablet use

Examples from the transcripts that represent these themes are presented below.

### How young children play with tablets

All families owned either an android tablet or an iPad and allowed children to play with them in various areas of their home. Although discussion was focused on tablets, parents also noted that children were interested in other mobile devices which were perceived as being "*new and interesting*". One parent described a child's interest in her father's laptop, stating how her child liked to "*hit the keys*" on the keyboard or enjoyed playing with the calculator on the iPhone, saying the numbers whilst typing them in. Another parent said:

*“...she’s getting very good at knowing what you press to do what”. Mothers also described children’s technological knowledge referring to how they could operate and explore a tablet, for instance through finger swiping, pressing clear, scrolling up and down, turning the tablet on independently, returning to the main menu by pressing the home button, and clearing the screen by touching the cross in the top right of the screen: “She’s picked it up surprisingly well. She’ll even point.[...] She goes “iPad” she shouts for it. She’s got the grasp for it. She knows the button to press to like clear it all and she can press the play on it and then she’s really clever and she’ll scroll up and down”.*

Mothers described tablet play as a distinct kind of behaviour, however none of them had observed their children using tablets alongside non-digital objects at home. As one parent said, she *“...stays inside and she will get up and dance and do the actions and turn around to the music and things but she never brings anything else, she doesn’t bring her toys to the iPad”*. In contrast however, they had noticed phones being incorporated into play *‘She will have it like we do, like talking on it and she’ll go and get the baby and push the pram and use it in the context then like I do. But with the iPad, with a tablet, no, if she’s got it she’ll just watch it’*. On the other hand children seemed to make connections between tablet play and other experiences. For example one parent explained how after her child had been using an iPad to play with a dinosaur learning app, she went on to play with her non-digital toy dinosaur *“...if she has done something on the iPad she will then go and play with her toys, so if she’s been washing the dinosaur [on the iPad app] then she will go and find a dinosaur and do that”*.

Teachers thought that children used tablets competently in their classrooms: *“They really sort of grasped how to use them really fast, which I thought was interesting.”* There were individual differences, however, *“Some children really liked using the iPads for a long time whereas others took a quick look then played with something else in the classroom”*.

However, teachers also indicated that during play, some tablet operating skills were easy for the children to learn on their own but other more complex skills such as dragging required additional support and scaffolding: *“They did it instantly, the matching one. But having to drag things is quite a skill. And I was amazed at how skilful they were, even the younger ones picked it up as soon as you modelled it, they picked up the drag”*.

### **Young children’s engagement and learning with tablets**

Parents and teachers expressed the view that children liked using tablets and were engaged and motivated to learn new digital skills and knowledge about their world through these devices. With tablets they felt that children quickly learnt about shapes and animal sounds and were aware that places like the AppStore contain a wide variety of learning resources: *“...there’s lot of different apps I’ve used with shapes and animal sounds and you press the animals and you’ve got to link the sound to the animal and shapes and things”*. Children also engaged in a range of tablet activities at home and school such as watching nursery rhymes, doing actions to songs (e.g., with video characters such as ‘Mr Tumble’, ‘Five Little Monkeys’), and learning about colours on YouTube, looking at photos in personal photo albums (e.g., baby and family pictures), taking photographs, engaging in mark making (e.g., trace over letters and numbers, drawing, dragging pictures or stickers), and listening to story book apps and playing games (e.g., CBeebies). In addition, parents described a range of activities with tablets which suggested active learning: *“My daughter likes to play the game ‘Andy the Dinosaur’ app that is based around that, so it might be hunting for food for the dinosaur, what might he like to eat and she likes watching him and she gets bubbles on her finger to wash the dinosaur”*; and sorting games *“She likes doing the ‘Postman Pat’ sorting games where parcels come on a conveyor belt and silhouettes and she has to match them to actual parcel shapes”*.

Children also used drawing apps: *“She likes the drawing one where she can just have a blank canvas and select the colour pencil and use a finger to mark make and she likes making different things and she’s got really good at mark making. And she likes the books, she does really like the books, flicking pages”*. Tablets seemed to provide opportunities for communicating thoughts, memories and ideas such as recording personal experiences with their family *“We have used photographs that we have taken when we have been out and about, and we’ve created our own books on the iPad. My children have enjoyed doing that because it’s an electronic version of a slide show in a nice way of what they have enjoyed doing. It’s just brought to life something they have done and it’s been nice to see an electronic version that looks all finished and polished and lovely, and it matches the experiences they have had”*.

Other parent and teacher comments suggested that tablets helped to engage children’s interest in stories. Adults felt that children enjoyed playing with story book apps in the classroom with one teacher noting that the *“more attractive the more involved in it for some, it’s more appealing and exciting with it being a visual thing as opposed to being just a book”*. One of the parents described sharing story book apps with her child: *“I’ve just downloaded one that was a recommended CBeebies story one so I did sit with her the other night and showed her and I am quite impressed with it because you have to press the button for the page to turn and it was quite interactive as well it was a Peter Rabbit one and you got to collect the vegetables and so she got to click on the vegetables as well, so it was quite responsive rather than just sitting and watching”*.

In the classroom, children were interested in apps that were similar to the ones they used at home: *“We have got a lot of sensory apps for the younger ones, like ‘Fireworks’ looking at those colours and shapes and all that kind of thing. As they get older they go to nursery rhymes, to popular culture, ‘Peppa Pig’ and ‘Bob the Builder’ all that kind of thing*

*and also when they get into their foundation year it's more with the letters and sounds and phonics apps where they could do mark making on them. So for us it's knowing the children, what they like, and what we want them to get from it as well".* This suggests that a range of learning experiences, from sensory engagement to mark making and phonics learning can be enriched through the use of tablets. Tablets also allowed children to communicate and connect with their family and other children: *"We do have family abroad and I think sometimes if you are skypeing or things like that then you get to be with that person and I think that's good and that would be good to do something in the nursery where somebody leaves them a message and they can listen to it and send messages back. I think it would give an opportunity to get to know other people".*

### **Benefits and concerns about tablet use**

Teachers did not voice any concerns about the use of tablets in their classrooms and were able to see the benefits of children using tablets at home for learning literacy skills. In the words of one teacher: *"...some parents who are wanting them to use like letters and sounds, that kind of thing and phonics all of that which is more appropriate and good for the children because they will be learning at the same time".* They felt that sharing the apps used in the classroom with parents would strengthen home-school links: *"I think it would be useful for us to find out more about how children are accessing them at home and using them".*

However, the teachers did have some concerns about the influence of tablets on family and social interaction in the home setting: *"But my worry is especially, sort of with parents and children, they can get misused quite often and used to quiet them down. For when you go out for a meal you see children and parents chatting and things, I think I'd hate to lose all that social side to it".* Parents were also worried about tablets reducing social communication and interaction: *"I think that a lot can affect the social side because you tend to find a lot of children now are just on the Xboxes, play stations, iPad's and not going out to play. There*

*was a time when you saw children playing all the time, now they more or less are on technology things, I think this is a huge disadvantage. They don't want to socialise with their friends they just want to sit and play on the Xbox or iPads so that's the main disadvantage for me."*

Parents also expressed concerns about young children using tablets at home but endeavoured to embrace their children's use of tablets because of perceived learning benefits and keeping up to date with new technologies: *"I think they are really good for the schools to use because everybody seems to be using them, they have to keep up with technological advances"*. But at the same time some parents were more resistant to tablet use because of concerns such as reduced social interaction and interaction with the real physical world: *"And I think sometimes that people use the grasp of real objects and real hands on experiences to support their learning and support their understanding and just find out about the world around them, I think you have got to have the right balance"*. *"I've always had a bit of a thing about children using too many electronic devices...So I've had to move with the culture of iPads, I suppose because I've restrained myself from allowing them to use them. But the school that my son goes to, they've all got class sets that they use so you feel like you are holding them back a little bit, so I think I've been more relaxed with my toddler allowing her to access them when she needs to...I can't deprive my children of that world so I've got to start trying to embrace it a bit more"*.

Seeking the right balance between digital and non-digital experiences was a thread that wove through the parents' conversations. For example: *"I just feel that you know a lot of children probably spend a lot of time on them and these are my own reservations that have prevented me from doing that in my house, but I think that some children are very skilled on them and some children are probably given too much time on them, and at the detriment of other activities that could probably supplement their experience of the world around them,*

*and I just feel that I'm trying. I'm not an expert on iPads but I'm trying to get that right balance for my children".* Parents shared how much their young children enjoyed tablet activities more than traditional media such as TV. This reflected a belief that tablets provided opportunities for children to learn independently and have voice and agency "*...can do more of what they are wanting to do with it with their own direction*".

However, cyber safety and viewing of inappropriate content was also a concern: "*she's using all the data and downloading games which is charging to my phone, we did not know that. So we've actually just bought her a kindle fire I think, so it's a bit safer, I much prefer that than the iPad actually because when they go on YouTube she starts watching 'Peppa Pig', then I find she has got onto adults dressing up as characters and there's one that for example a joker, and it's a bit scary you know, but this is all on like the kids section of YouTube kind of thing. So I prefer her to stay away from that because I find that she's actually fascinated about that stuff I probably would not want her to watch as much*". Young children purchasing and downloading inappropriate items on the iPad was highlighted as unacceptable: "*They are buying things too easily. I don't know how they can buy stuff without putting in any details. My phone bill seems to say there you go*". Also, lack of information about which apps to purchase concerned parents: "*But at home I don't particularly know where to look for the best educational apps and to be honest I was thinking that yours [classroom apps] are really good but ours are a bit more just games kind of thing*". Tablets also distracted young children from completing tasks at home. "*I know it's not exactly a blaring out computer game on there, but I feel that my children like any child, once they start using it they are more reluctant to come off*".

The time young children spend on tablets at home was another issue raised by parents: "*...I think some of my friends have had concerns about the length of time their children have spent on them and then their inability to focus on other things when they have come off and*



*then being quite bad tempered*". Parents expressed some feelings of guilt about allowing their child to play on the tablet at home if the parent had to complete a job or have a bath: "My toddler is quite hard to entertain and she wants your attention constantly so if I've got to do something it's really an easy way of distracting her and just letting her play on her own because it's one thing she doesn't want me doing with her. And I don't mind it but I guess the other alternative would be she would start watching TV or something because she just doesn't play on her own at home, I know she does here [in her classroom] but she doesn't at home. Although I'd love to give her my attention all the time I can't".

Other parents responded by reflecting on their own behaviour and how young children watch what their parents do: "So like in an evening we'll be sitting and we'll both [mother and father] be on our phones and I have to constantly say let's put our phones down, let's talk. So I think they learn from us as well. If they see us on our phone they want to go on the phone. So I think its role modelling too, as well isn't it?" The importance of parents needing to monitor their child's tablet use very closely was expressed: "I think sometimes generally, and my own children included, when they are running out of time they are absorbed in that world they don't know what is happening behind them, they are not causing any destruction, it's a very quiet activity, and I think you soon become involved in your own kind of work if you are trying to clean up and somebody's on that it could go on for a long time and I think probably that a lot of children are left to that in some situations. I'm not saying it's a bad thing but I just think that you need to be wary about how long they are accessing it".

## **Discussion**

This study used semi-structured interviews in one early learning centre in northern England to explore and identify key parent and teacher views on young children's use of

tablets at home and school. Parent and teacher beliefs surrounding new technologies has the potential to influence how children engage, interact, and learn about these digital devices and their world (Marsh, 2017; Paiva et al., 2017). The findings of the current study suggest that tablets are popular tools that engage young children in play and enable them to gain positive learning experiences and skills and knowledge at home and school. This is supported by previous research (Marsh, 2016; Merchant, 2015) showing that tablets can be useful learning tools for young children who, as competent operators, use them for a range of purposes. However, a finding of the present study was that parents expressed some concerns about young children's use of tablets at home. Teachers, although very positive about tablet use in the classroom, also shared concerns about the over-use of tablets at home. There is a need to address these concerns if tablets continue to be used in educational contexts.

Although the benefits of tablets (e.g., as supports for early learning,) were highlighted by parents and teachers, there were several concerns raised such as cyber safety and impact on young children's opportunities for social interaction. This is in sympathy with the parental concerns around increased screen time in Kucirkova & Littleton (2016)'s parent survey on the digital reading habits of young children. In the present study, parents described the importance of managing young children's time on tablets at home and providing support during tablet play. Although parents indicated the need to embrace tablet technologies so their children would "*not be deprived of that world*" and "*keep up with technological advances*" it was clear that more support is needed for families at home to increase their confidence with tablets, provide them with knowledge on how to select quality apps and achieve a balanced approach to both tablet and traditional non-digital activities.

Similar thoughts were expressed by teachers who highlighted the importance of communicating with parents about young children's tablet experiences. Parents had positive views on young children's use of tablets for motivating them to learn new skills and

communicate with family members through skype and messaging, which aligns with previous research (Verenikina, & Kervin, 2011; Wood et al., 2016). However, greater discussion occurred around parents' concerns about young children's tablet use. The key concerns were about young children downloading and viewing inappropriate content on You Tube, making unsolicited purchases and not knowing the most suitable apps to download. There is a clear opportunity to form stronger home-school links in terms of sharing classroom apps with parents to use at home.

All parents felt that their children spent too much time on iPads and were not going outside to play and they expressed a degree of guilt for allowing young children to play too long on a tablet with some children becoming unhappy if asked to put their tablet away. It is possible that parents may begin to associate tablets with negative feelings if they are exposed to these experiences. Despite these range of concerns there was a strong sense that the mothers were allowing their young children's access to tablets so their child would not be left behind in the "*culture of iPads*" and were trying hard to "*embrace it a bit more*". Some were struggling to find "*the right balance*" for their child's home use of tablets, for example, in terms of time spent on the devices and encouraging them to socially interact with the real physical and outdoor world.

These parent perspectives suggest that more needs to be done by policy makers to provide practical and educational support for the positive integration of new technologies such as tablets into the homes of young families. Providing strict screen limitation guidelines may not be the best solution as 'one size does not fit all' (Neumann, 2015) and recent research has suggested that little evidence exists that supports negative associations between screen time use and young children's well-being (Przybylski & Weinstein, 2017). Moral panics about screen time may exert additional pressure on parents who are struggling to manage tablets effectively. It is likely that parents' confidence would be strengthened if they

had greater knowledge and understanding of how to use tablets to support learning and were better informed about the influence of tablets on early child development. In the light of this more research on the effect of tablets on children's social, emotional, physical and cognitive development is needed (Herodotou, 2017; Neumann, 2018).

Teachers were positive about using tablets in their classroom to support young children's learning and this aligns with previous research (Geer et al., 2017; Huang et al., 2013; Lee, 2015; Lu et al., 2017). They reported that children enjoyed reading story book apps with their teacher and toddlers liked the sensory apps and playing shape and colour matching games and mark making. The teachers discussed how some iPad skills were easier for children to learn such as tapping compared to other hand gestures such as drag and drop. They stressed how it was important for teachers to model and scaffold these skills to children and highlighted the importance of assessing children's abilities and previous experiences to understand how best to assist them with tablets.

Similar to the views expressed by parents, the teachers also aimed to have a balanced approach in the classroom when using tablets, emphasising the importance of using them appropriately, being there to guide their interactions with the tablet, and to ensure there is an educational purpose that leads to positive learning experiences. The teachers did however voice some concerns about the home use of tablets where there could be a chance that tablets may not be used appropriately or that excessive tablet use may limit family time and social interaction. Together, teacher and parent concerns around early tablet use are still evident and these should be addressed quickly in order to better understand how to most effectively use and manage tablets for early learning at home and in classrooms (Troseth, Russo, & Strouse, 2016).

### **Future research and limitations**

The present study was exploratory and should be considered in the light of several limitations. The number of participants was small; therefore, the findings cannot be generalised. Direct observations of young children's behaviours around tablets in home and early learning centres would increase the ecological validity of this study. Future questions to examine are: do young children use tablets for longer or shorter periods of time at home or in the classroom and do young children behave differently with these devices in a range of settings? What is the optimal time that young children should spend on tablets per day and what factors may influence this (e.g., type of app, purpose of activity, type of adult support)? Designing programs that assist parents in managing and using tablets positively in their homes would help families become more confident and knowledgeable about tablets. Gillen (2018) suggests that providing digital literacy programs for families to support young children's use of technology is needed. Also, longitudinal studies are required to examine the effects of tablet use on young children's social, emotional, physical, and cognitive development. In particular, the emergence of digital literacy skills needs to be investigated empirically as some skills are more difficult for young children to master than others (Marsh et al., 2015; Neumann, Finger, & Neumann, 2017).

### **Conclusion**

The overall findings of these interviews suggest that parents and teachers believe tablets can be a useful learning tool for young children if used appropriately in the classroom and at home. Parents were keen not to allow their children to be left behind in this evolving world of new technologies and had a cautious approach to tablets aiming to manage them carefully. Teachers also sought to provide a balanced approach to using tablets and traditional activities in the classroom. Concerns were expressed by parents and teachers about overuse and misuse of tablets at home. Future research is needed to address these concerns around

tablets in order to provide the best and most appropriate learning experiences for young children at home and school.

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