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‘It’s more funner than doing work’: children’s perspectives on using tablet computers in the early years of school

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Introduction

There has been a proliferation of research into the use of tablet computers in early years education over the last decade since we are now living in an age where we are surrounded by technology and where the technology industry is targeting the youngest members of society more and more (Ernest et al., 2014). It is indisputable that the twenty-first century home is a digitally fluent home (Palaiologou, 2016a) where children are in daily contact with a wide range of digital tools (Chaudron, 2015) and are immersing themselves at younger and younger ages into new technologies (Teichert and Anderson, 2014). There has been a dramatic upsurge in tablet computer use; it was reported that 73 per cent of under-fives were using a tablet or computer in 2015 compared to just 23 per cent in 2012 and tablet computers are especially popular, with more than three in five using one (ChildWise, 2015). Likewise, the National Literacy Trust (Formby, 2014) reported that 91 per cent of parents said their children had access to a touch screen at home. Marsh et al.’s (2015) research concurs with this and showed that 65 per cent of 3-7 year olds have access to a tablet computer with parents reporting that children under five used tablets for an average of 1 hour and 19 minutes on a typical weekday. Therefore, it is clear that tablet computers are playing an increasingly important role in the daily lives of many young children.

The use of tablet devices in education is also seen as one of the ‘hot trends’ for technology adoption in schools (Clark and Luckin, 2013) and, since they first appeared in 2010, iPads and other similar tablet devices have been heralded for their potential to transform education (Kucirkova, 2014) and to pave the way for unprecedented learning opportunities and positive outcomes for children (Aldhafeeri, Palaiologou and Folorunsho, 2016). Their portability,

affordability and efficiency (Flewitt, Messer and Kucirkova, 2015) and apps which have child-friendly, intuitive designs (Kucirkova, 2014; McManis and Gunnewig, 2012) have all been acclaimed, and recent research reports on how tablets can enhance children's creative expression (Kucirkova and Sakr, 2015), enable and support children's early mark making development (Price, Jewitt and Lanna, 2015), develop children's motivation and persistence in solving tasks (Clarke and Abbott, 2015; Fekonja-Peklaj and Marjanovič-Umek, 2015) and offer rich opportunities for communication, collaborative interaction and independent learning (Flewitt et al., 2015). Yet, it is alarming that, despite the huge financial investment in digital technology and the reported benefits, the Organisation for Economic Cooperation and Development [OECD] recently reported that over the last ten years, there has been no appreciable improvement in student achievement in reading, mathematics or science in countries that have invested heavily in ICT for education (OECD, 2015).

Disquiet from a number of sources has ensued this upsurge in technology use by young children. Parents, whilst perceiving the opportunities for their children in using digital technologies, have 'guarded' attitudes towards children's technology use (Plowman, 2014) with concerns about the health and social impacts of using too much technology (Chaudron, 2015) and the potential negative impact on children's concentration and awareness of the world around them (Gray, Dunn, Moffett and Mitchell, 2016). Similarly, Teichert and Anderson (2014) purport that popular news media has described children's uptake of digital media as an affront to childhood and claim it has diminished children's play activities. Likewise, the introduction of tablet devices into schools is not without its controversies (Clark and Luckin, 2013) and there can be tension when potentially transformative technologies meet institutionalised educational practices (Lynch and Redpath, 2014). Many early childhood educators recognise the potential benefits of using technology with young children and there is the contention that it is 'our duty as educators' to support children in

developing their digital skills and attitudes to enable them to function as literate citizens in the future (Association of Teachers and Lecturers [ATL], 2012). However, many teachers lack pedagogical and technological knowledge and report confusion around when and how to effectively integrate technology into their teaching (Fenty and Anderson, 2014). Teachers' attitudes to technology use in the early years classroom can be a significant inhibitor to their use (Burnett, 2015) and it is suggested that this 'contentment with what is known' needs to be challenged in order to reconceptualise learning and technology (Aldhafeeri et al., 2016).

Therefore, polemic debates exist within the literature between technophiles and technophobes (Jenkins, 2015) and troubled relationships prevail between digital and non-digital resources in learning (Kucirkova, 2014). Researchers query whether the use of tablets in classrooms is a kind of flamboyancy aid or if there is a learning purpose with the youngest pupils (Clarke and Abbott, 2015). Whilst much of the research focuses on adults' perspectives, there is less time given to children's perspectives. Yet, they are the key users in the dizzying advancement of technology and their views within research in this area are a crucial element as early years education continues to grapple with the conceptualisation of digital technologies as pedagogical tools. Indeed, if children remain invisible in research and policy, then nothing much is likely to change (Livingstone, 2014). Therefore, this paper seeks to add further insights to the debates on digital technology in early years education by presenting the views of one of the central players within this debate – young children.

Conceptual perspectives for listening to children's views

In the recent Good Childhood Report (2015, p.3), the Children's Society poses the question that 'without listening to children and understanding children's own views about their quality of life, how can we ever expect to improve the lives of children and young people?' Indeed, children's viewpoints are refreshing because they often challenge polarised narratives. It is

argued that the image of the child and the view of childhood have changed profoundly in recent decades (Quennerstedt and Quennerstedt, 2014) and the ideology of the child-centred society gives the 'child' and the 'interests of the child' a prominent place in policy and practice (James and Prout, 2015). This approach has been strongly influenced by the new sociology of childhood (James and Prout 1997; James, Jenks and Prout 1998) and has led to recognition and focus on children's agency, voice, experience and participation (Tisdall and Punch, 2012). Children's competence and expertise has been recognised (Tisdall and Punch, 2012; Salamon, 2015) and whilst there is some debate about the usefulness of the notion of expertise in research (Gallacher and Gallagher, 2008), Levy and Thompson (2015) welcome the constructions of child expertise to encourage children to talk confidently about their own views, knowledge and opinions.

This changing view of children as knowledgeable, strong and competent also owes much to the mandates of the United Nations Convention on the Rights of the Child [UNCRC](UN, 1989) which has been a pivotal driver for garnering children's views in research. The ratification of the UNCRC represented a potentially dramatic shift in approaches to children's rights to be heard. Article 12 (para 1) states that:

> States parties shall assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child (UN 1989).

However, despite the UNCRC being the most ratified international convention, the Committee on the Rights of the Child recognised there was a lack of focus on early childhood and a concomitant lack of understanding on the broader implication of the UNCRC for young children. Therefore, General Comment No. 7, Implementing Child Rights in Early

Childhood (UN, 2005), gives prominence to the importance of young children as holders of all rights enshrined in the Convention and advocates early childhood as a critical period for the realisation of these rights. Similarly, General Comment No. 12, The Right of the Child to be Heard (UN, 2009) clearly elucidates the right of all children to be heard and taken seriously and General Comment No. 14 further emphasises the fact that although the child is very young, this does not deprive him or her of the right to express his or her views, nor reduces the weight given to the child's views in determining his or her best interests (UN, 2013). Yet, despite the assertions that inviting children's perspectives is 'not an option which is the gift of adults, but a legal imperative which is the right of the child' (Lundy, 2007, p.931) there is still a divide between the rhetoric and the reality of listening to the views and interests of very young children (Dunn, 2015). Indeed, the UK Children's Commissioners recognised this in their most recent report and recommended that the UK government should renew their commitment to Article 12 to enable all children, including younger children, to have their voices heard and their experiences understood (NICCY et al., 2015).

A social epidemic of listening to children's views

As a result of both changing perspectives of childhood and the ratification of the UNCRC there has been a wave of literature that expounds children's participation in research (Salamon, 2015). It has been likened to a social epidemic (Palaiologou, 2014) and there are concerns about an oversimplified view of listening to children (Kjørholt, Moss and Clark, 2005), mono-layered approaches to research with children with an illusion of participation (Palaiologou, 2014) and uncensored celebration of voice (Silin, 2005). Others caution that the 'mantra' of valuing children's voices (Tisdall and Punch 2012), whilst commendable, is not simple in practice. Therefore, whilst enabling young children's voices to be heard within research is an exciting and deeply welcome development in early childhood research (Levy and Thompson, 2015), care must be taken not to romanticise participatory research (Mayes, 2016). Yet, if

research is going to influence pedagogy, then situating it in classrooms and the presence of children as research participants must be taken seriously (Rogers, Labadie and Pole, 2016). It is suggested that the key element of participatory research is the methodological attitude of the researcher (Gallacher and Gallagher, 2008) and the stance the researcher takes in respecting and understanding the research participants (Cornwall and Jewkes, 1995; Salamon, 2015).

This paper presents the findings from a project investigating children's views on the use of tablet computers in the early years classroom. This paper adopts its theoretical framework from both the new sociology of childhood and children's rights and respectfully positions the child as one of the experts who can provide important information on this current and topical issue.

The study

The Belfast Education and Library Board[1] (BELB) in Northern Ireland was awarded a grant from the Belfast Regeneration Office, Department for Social Development (DSD), to develop an ICT pilot programme in the Greater Belfast area. The programme focused specifically on the impact of tablet devices in early years education. Five primary schools were selected from areas of multiple deprivation and iPads were given to each of the teachers participating in the project and class sets of iPads were provided for Year One children (the first year of statutory schooling in Northern Ireland with children aged four to five years) and Year Two children (aged five to six years) in the first year of the project. An additional class set of iPads was provided in the second year of the project to allow the participation of children from Year One to Year Three along with their teachers and parents. The programme ran from 2013 to 2015. The BELB commissioned researchers at Stranmillis University College to carry out an evaluation of the impact of the use of mobile tablet devices on learning in the early years. The

[1] In April 2015 the Education Authority became operational and took over all of the roles and responsibilities of the former Education and Library Boards (ELBs) in Northern Ireland.

primary objective of this evaluation was to investigate the impact of the use of such devices on the development of pupils' literacy and numeracy skills. The study involved principals, teachers, parents and children. However, this paper specifically presents the views from the children involved in the programme. One of the ethical principles from the European Early Childhood Education Research Association's [EECERA] Ethical Code for Childhood Researchers highlights the importance of 'knowing from multiple perspectives' (Bertram, Formosinho, Gray, Pascal and Whalley, 2015, p3). Hence, this study acknowledged that children's perspectives are distinct from those of adults and that their views, by virtue of being children using mobile devices in primary classrooms, can contribute to improved understanding on how tablet devices impact on early years education. Therefore, this study aimed to investigate the views of children on using mobile devices during literacy and numeracy teaching in early years classrooms.

Methodology

The study adopted a qualitative stance to data collection and drew heavily on the Mosaic Approach (Clark and Moss, 2011) as a framework for listening to young children. The different pieces of the 'Mosaic' which were used within this study were observations of the children using the iPads during class lessons, children's focus groups and individual child-led tours of the iPad. The researchers were mindful of 'the inescapable power disparities between child participants and adult researchers' (Hunleth, 2011, p.82) and adopted the role that can be described as that of 'not knowing' (Mukherji and Albon, 2015, p.96) where the researcher was positioned as less knowledgeable than the child. Four researchers were involved in gathering the data and were assigned specific schools which they worked with throughout the duration of the study in an attempt to build mutual trust and respect with those teachers and children participating in the study. All of the researchers were experienced early years practitioners who collaborated in designing the research tools and who attempted to

adopt a reflexive stance in acknowledging their own potential biases and world viewsof the area under investigation (Cohen, Manion and Morrison, 2011).

Participants, research tools and procedure

Study group/participants

The funding for this ICT pilot programme was specifically aimed at primary schools in socially-deprived areas of Belfast, in Northern Ireland. Therefore, the majority of children attending the five schools in the study were from lower socio-economic backgrounds. The children in the study were in Year One (aged 4 to 5 years), Year Two (aged 5 to 6 years) and Year Three (aged 6 to 7 years) of primary school and included both boys and girls.

Observations

Two classroom observations were carried out in Year One, Year Two and Year Three classes in each school resulting in a total of 30 observations across the five primary schools over the course of the study. There were a total of 374 children in the 15 classes being observed. The observations were specifically focused on literacy and numeracy lessons using the iPads and they lasted for the duration of the lesson, anywhere from 30 minutes to over an hour. An observation schedule was used with opportunities to identify children's talk while using the iPad, responses to the use of the iPad and interaction with others, in an attempt to capture the 'authentic story' of iPad use in the classroom (Fetterman, 2010, p.1).

Child focus groups

One child focus group was carried out in each of the Year One, Year Two and Year Three classes in each primary school with a total of 15 focus groups. The groups were made up of eight children with equal numbers of boys and girls therefore resulting in a total of 120

children participating in focus groups The children were selected by the class teachers based on their perception of children who would be likely to engage in discussion. Each focus group lasted for around 15 to 20 minutes and the children were asked about their use of and views about the iPad and associated apps. See appendix one for a copy of the child focus group questions. All focus groups were carried out in rooms within the school which were familiar to the children but were outside of the classroom to minimise noise and disruption.

Child-led tours

Individual child-led tours of the iPad were carried out with one Year One and one Year Two child from each school, with ten children taking the researchers on tours of the iPads in total across the five schools. These lasted anywhere from 10 to 20 minutes and sought to follow the child as they led the researcher through their favourite apps and why they liked using them.

Ethical procedures

In the course of the research, there was strict compliance with the ethical guidelines mandated by the British Educational Research Association [BERA] (2011) and EECERA (Bertram et al., 2015). All identifiable information was removed prior to analysis and procedures at every phase of testing were made accountable to the Stranmillis University College Research and Ethics Committee. Consent was acquired from both parents and children and this was ongoing throughout the study as researchers informed the children that their participation was voluntary and that they were free to return to their classroom at any point during the discussions (Alderson and Morrow, 2011).

Data Analysis

The discussions from the focus groups and child-led tours were recorded on an iPad, transcribed and, together with the classroom observations, the data were analysed using

thematic analysis to capture the level of patterned response within the data. This was done systematically through five stages as identified by Braun and Clarke (2006). The first phase involved familiarisation of the transcribed data. This was followed by the generation of the initial codes from across the entire data set and care was taken that extracts of data were coded to ensure that the context was not lost. Codes were then collated into potential themes with the aid of thematic maps and then these themes were reviewed. In some cases, themes were collated or even deleted if there was insufficient data to support them. The fifth phase led to naming and defining the final themes. Internal reliability of the data was improved with several of the researchers being involved in the analysis. Codes and themes were compared to determine the extent of agreement and consistency (Gray, 2014). The trustworthiness (Guba and Lincoln, 1994) of the data was also enhanced by triangulation where the codes and themes were agreed across the data from the observations, focus group interviews and individual iPad tours.

Findings

Four over-arching themes were identified as being key across the three different sources of data These were: links with home, fun and games, choice and competition.

Links with home

It was clear from the findings that the children in this study had access to a variety of tablet devices at home and they were using them on a regular basis. They talked about being able to use iPads, iPad minis, Kindle Fires, Hudls and smartphones. However, children are not always aware of branding as one child said 'It's kinda like an iPad'.

They were using these devices for a variety of purpose at home: 'We play games and watch YouTube'; 'I'm allowed at home to take photos'; 'I play on it and do maths and all'; 'I have a school game you have to write'; 'dressing up games'; 'my favourite thing about the iPad is

watching TV on it'; 'All I do every single day is watch Netflix on it' and 'you can get games on it and play on it and do whatever you want at home with them'. Although they were not specifically asked about where they used their tablet devices at home, several children referred to this in their general conversations: 'In my bedroom; in my sister's bedroom; in my mummy's bedroom; in the kitchen and the living room' and 'sometimes when I am at home I go out in my garden and sit on my bench and use my iPad'. These children clearly had a sense that the tablet devices were something that moved with them to whatever spaces they wanted to be in, whether it was on their own or with someone else, to play and relax.

Family members had special significance for these children as their conversations were sprinkled liberally with reference to people who were important to them in their daily lives: 'My mummy takes photos on her iPad. I know her code and I like to play Candy Crush and Frozen Freefall'; 'I like to play on my Granny's iPad. I like to play Frozen Double Trouble'; 'My Dad had to reset my iPad cos I had too much games on it' and 'Me and my sister Sky have iPads but my big sister Rebecca has a Kindle Fire'; 'I like to share with all my cousins' and 'My mummy takers her iPad to work'. Therefore, it is evident that ownership and use of tablet devices is family-wide and there is sharing and discussion going on between family members as part of tablet use. The children in this study did not see the use of tablet devices as only for them but they saw it as a multi-generational activity.

Although the focus with the children was mainly on school use of the tablet devices, the children quite naturally brought their home experiences into their conversations and saw their tablet use in and out of school as seamless, yet different. When asked about what they did with their iPad in school, some responses were: 'You're not allowed to download anything. Only on my iPad can I do that. I can do it on my Mummy's phone' and 'The teacher decides but if you have an iPad at home your mummy and daddy can decide when you use it. Me and my brother get to decide at home if we want to use ours'. When asked what they did in

school if they were stuck when using the tablet one child said: 'You have to get a friend and you have to say "Can you help me please?". Cause I do that to my big brother when I'm stuck with my games'.

Fun and games

The children were asked what sorts of activities they did on the tablet devices in school and their responses reflected the notion that they were using games: 'I like playing games on it'; 'Look at all the games I've got'; 'you can go on word games. That's the coolest of them all. You have to find words'; 'Time games' and 'I really, really like playing clock games'. However, the children also recognised that the games they played in school had learning potential: 'It helps you learn your pluses'; 'The teacher has lots of games on it. Different games to learn'; 'There's a game called BlobbleWrite and you have to trace over the lines. That helps you with your letters'; 'There's all maths stuff' and 'There's phonics games and literacy and that helps you learn'. Even very young children realise that learning is the stuff of schools and that digital play must have a learning element through the 'schoolification' of apps (Professional Association for Childcare and Early Years [PACEY], 2013). We can see this in one child's comment: 'Because the people who made the iPads put stuff on it to help you learn'.

Yet, games were clearly very important to the children and they had detailed knowledge about how some games worked including games they played at home. This was an area where they had the expert knowledge:

> I like to go on to Minecraft. And I like to go on to Subway Surfers. It's a game like the cops chase everyone. You have to run away and there's coins you have to get and if you go into the train that is you done playing the game. But you can buy mystery boxes and you can unlock people. It's a chasing game.

Fun was closely linked to the concept of games. The children had a real sense of enjoyment when they were using particular apps on the tablet devices and in these instances they were demonstrating their enjoyment of playful learning. When asked about what they liked about using the tablet devices or particular apps, some responses were: 'Because it is really, really fun'; 'They are really fun to do'; 'I hate it when you have to do hard stuff while you are waiting to do all the fun stuff' and 'It's more funner than doing work'.

Choice

Having choice appeared to be very important to the children when they were using apps in the classroom for their learning. This choice was not about which app to use but rather using apps which allowed them a sense of choice and creativity in their learning. Quite a few children took us to the app Book Creator during the child-led tours of the tablet device or talked about the app in the focus groups as an app they enjoyed using. A number of classroom observations also took place during the use of Book Creator. One child described her use of this app:

> You see when we were doing Journeys, we had to go on holiday and we had to pick what we needed for the holiday. Do we need a book or do we need sun-cream or do we need sunglasses? So we took pictures of them and we put them on our iPads and we done like this little Journeys book in Book Creator.

Book creator appeared to be valued for its potential for more individual expression. Another child said:

> We were doing this topic about instructions. And we were doing instructions about washing your hands and we took the iPad down to the girls' toilets and took pictures of the girls washing their hands and then we put all the instructions into Book Creator.

Similarly, quite a number of children took us to Puppet Pals during the child-led virtual tours and talked about it as being one of their favourite apps. This appeared to be due to the variety and choice within the app:

> I like to use Puppet Pals. There's puppets already in there but if you want to take pictures of yourself, like you were making a puppet of yourself. One time we went on a spring walk and we made our puppet show about a spring walk and we used the iPad to take photos of people. We cut the people out into the way we like it. You can change the background. We took photos of dandelions and stuff and put them as our backdrop.

Likewise, other children, when referring to apps they enjoyed, mentioned choice: 'Cbeebies Storytime. You can hit 'read to me' and it will read to you or there's a button and it doesn't read to you and you can just read it out'; 'Pic Collage cos you can make all sorts of pictures and you can add stickers' and 'Colour Pencil cos you can draw your own stuff on it and you can take a picture of it and put it in Book Creator'.

These apps had more 'open content' with opportunity for more choice and creativity and many children liked this. Other apps being used in the classroom with children had more 'closed content' (Lynch and Redpath, 2014) where the emphasis was on drill and practice of particular skills, such as letter formation or letter sounds. Some children appeared to enjoy these but it was apparent that a number of children tired of the repetitive format. When asked if there were any apps they did not particularly like using, some of the responses were: 'Little Writer because you only have to write and it's only one letter'; 'Pocket Phonics…there's wee letters and you have to try. See? And I don't think it is very fun'; 'Word Magic cos you have to spell something and you don't know how to spell it'; 'I don't like Colour Pencil cos you have to do writing and you have to keep it on the line' and 'BlobbleWrite. You have to do all this (child shows the letters for tracing over). It's too hard. Look what happens when you miss the line? It's too hard'.

Competition

Some children appeared to enjoy an element of personal competition within an app such as moving up levels and winning prizes. When talking about apps they enjoyed using in class

many children mentioned the numeracy app Mathletics: 'Mathletics. Sometimes you get a bronze or silver or gold. Whoever gets the highest gets trophies'; I like Mathletics too cos you get to race people and it helps you with your maths too'; 'I like going on Mathletics. That's where you have to answer questions and do some sums and you get up your points for your class.' This element of competition was not just about challenging each other, children enjoyed personal challenge and the sense of beating their own score: 'The fish one. You have to add the numbers up and then the fish would eat it. It's like you are doing a test cos you have a time. You get a highest score'; 'There's like a calculator. And there's like a wee line and it fills up and then it goes right down to the bottom and you see if you can do the sums on time' and 'There's a clock game and you can win five stars and then a fish thing comes up and you can pick a fish thing for your tank. That's my favourite.'

Discussion

As experts in being children now, at a time of great technological progression, children are in that unique position of living and growing up with a vast array of technology. They have that singular experience of being enveloped in technology from birth which adults can only view from an outsider's position. Therefore, if we take the view of children as having 'extraordinary strengths and capabilities' (Malaguzzi, cited in Gandini, 2012, p.53) and of being 'reliable, knowledgeable and trustworthy informants' (Merewether and Fleet, 2014, p.911) then we have the opportunity as adults to hear new insights which can inform our own understanding of current issues. The children's voices in this study emphasised the importance of their home lives and demonstrated the necessity of offering technological continuity between home and school (Palaiologou, 2016b). The debates about technology use in the early years demonstrate that many adults working within education are in a quandary over this issue. Children, however, have no such qualms. They view their use of tablet devices both in and out of school as seamless. Bronfenbrenner's ecological systems

theory (Bronfenbrenner, 1979) clearly sets out the importance of the child's home setting as essential in their development and there is growing recognition of the important influence of the home as a learning environment (Melhuish et al., 2008). The literature raises the questions of how do children in the twenty-first century learn and how should twenty-first children be taught (Hannaway and Steyn, 2016)? What children are learning at home, and how they are learning it, is an important part of the answer to these questions and the ways in which family and friends are using technology is clearly very influential on young children's use of technology and potential learning from that use (McPake, Plowman and Stephen, 2013; Plowman, 2014). Children are bringing this new learning with them to school but the question might be posited are schools ready for the twenty-first child, are they open and receptive to the learning that has gone on at home and can they set up supportive links with families to enhance the home learning? These areas were not the focus of this research study, yet the messages about the importance of home and family that arose from the children's voices would suggest that these are important aspects to be considered by schools.

There is current research interest in playful approaches to integrating technology in the early years and new classifications and frameworks have been proposed which attend to the changing nature of play in the digital age (Arnott, 2016; Marsh, Plowman, Yamada-Rice, Bishop and Scott, 2016; Bird and Edwards, 2015). There have been concerns that technology has had a detrimental effect on children's play and that play with digital technology is not real play (see Marsh et al., 2016 for further discussion of this). However, it was evident that the children in this study particularly enjoyed the playful element of learning, including an aspect of competition, and this was important in their learning. This study was not specifically focused on whether tablet devices have a role within play based pedagogy, yet the children's voices in this study validate the playful possibilities in using tablets in learning. Therefore, it might be suggested that it is time to move on from

questioning the efficacy of digital technologies in play based pedagogy (Palaiologou, 2016b) and, in line with Arnold's (2016) view, we need to carefully construct playful learning experiences that position technology as facilitating tools which will enhance children's learning.

Recent research indicates that teachers are anxious that digital devices may impede children's imagination and creativity (Palaiologou, 2016b). Creativity is recognised as one of the key twenty-first century skills whereby children are endorsed to look at novel ideas playfully, to know that a choice is always available, to make connections, compare ideas and to account for an array of opinions (Hannaway and Steyn, 2016). Therefore, it is essential that the apps that are selected for use with children in the early years will allow for the development of creativity. Marsh et al. (2015) provide a useful outline of characteristics of apps that promote creativity yet they warn that some of the most popular apps that children use at home provide limited opportunities for creativity. Therefore, there is an urgent need for schools to take the lead in providing opportunities for children to develop their creative skills through the use of selected apps. Other researchers have discussed the potential of digital technology to transform the education process and it is this enabling of flexibility, choice and creativity that can promote new practices (Lynch and Redpath, 2014, McTavish, 2014). The ratification by the children in this study that particular apps are their favourite for these very reasons is compelling evidence for schools to move forward in identifying and using such apps to transform learning in early years classrooms.

Conclusion

There is a clamour of voices on the contemporary subject of tablet devices and their potential for learning in the early years. These voices come from all sections of society and all have valid perspectives. However, research which is concerned with young children's use of tablet

devices in the early years must heed the voices of those young children who are central in the debate. This small scale study only allowed the views of a small number of children in a limited number of schools to be heard; yet these views can contribute to the fast-moving discussions on digital technology in early years education. The realisation of children's rights to be heard has faltered in recent years in the UK yet listening to their views and their experiences in using tablet devices can illuminate and add to the body of research in this area.

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Appendix 1

Questions for pupil focus groups

1. How often do you use your iPad in class?

2. Do you use it when you want to or does the teacher decide?
3. Do you use your own iPad in school or do you share with a partner? Which do you prefer?
4. What do you do with the iPad?
5. Where do you use your iPad? E.g. around the class, school at home?
6. What are your favourite apps to use in maths time?
7. What are your favourite apps to use in literacy time?
8. Are there any other apps you enjoy using?
9. What else do you do with your iPad? E.g. Do you take pictures, videos, do you use the internet
10. Do you prefer to use an iPad or a computer? Why?
11. How does the iPad help you learn?
12. What do you like about using the iPad?
13. What do you dislike about using the iPad?
14. Would you like to use your iPad again next year in school?