Please cite the Published Version

Toddlers, Tech & Talk

'It's what you do with tech that matters'

In the last article in the series about the research project 'Toddlers, Tech and Talk', **Rosie Flewitt,** Professor of Early Childhood Communication at Manchester Metropolitan University and **Dr. Lorna Arnott,** Reader in Early Childhood Education at The Strathclyde Institute of Education, share the findings from the research[1].

Since June 2022, a UK-based team at Manchester Met, Strathclyde, Lancaster, Swansea Universities and Queens University Belfast, have been leading a groundbreaking research study, 'Toddlers, Tech and Talk', that explores how very young children (from birth to age 36 months) use technology at home, and how tech might be shaping what they learn about language and literacy. To conclude the series about this project, we are now at the exciting point of being able to share our key findings and make recommendations for early childhood practice and home learning.

  Across this multi-stage project, which included a large-scale survey, interviews with UK parents and practitioners and in-depth case studies with 40 families and children at home, we worked from a post-digital perspective. "The post-digital pertains to a moment in human history whereby practices and digital technologies are intertwined with the daily actions and interactions of people." (Edwards, 2023, p777). A post-digital lens is helping us to understand how digital technology is omnipresent in young children's lives at home, in ECEC and in wider communities. This has led us to two key questions: Is it even possible to resist children's engagement with technologies in the contemporary world? Or is it more helpful to recognise children's inevitable interactions with digital devices and find ways to ensure this engagement aligns with high-quality learning experiences?

---

[1]

 Rosie Flewitt, Professor of Early Childhood Communication at Manchester Metropolitan University & Dr. Lorna Arnott, Reader in Early Childhood Education, at The Strathclyde Institute of Education

UNDERSTANDING DIGITAL PLAY

With children aged over three years, there is already some literature which tells us about how children engage in digital play and what high-quality technological experiences might entail. For example, we know that children skilfully and seamlessly manoeuvre between digital and analogue play, and often blend digital with non-digital play (Scott and Marsh, 2018). We know that older children also develop contemporary forms of digital play, such as role-playing being YouTube Vloggers (Potter & Cowan, 2020). These are just two examples, but research has found many ways that children aged three years plus play with, and about, technology. However, comparatively little is known about the tech lives of children aged under three years. Like the very young children themselves, this line of research is in its infancy.

   In this project, we've been able to study in detail how babies' and toddlers' play can be transformed, extended and enhanced with the inclusion of digital artefacts. At young ages, children's imaginations are powerful, so they will play with digital devices even if the devices no longer work. Even babies who are not yet walking or talking soon learn to hold and imitate their parents making phone calls - they hold the phone to their ear, vocalise with clear intonation and expression, and mimic how their parents might scroll for information on the phone while still chatting. Babies also replicate phone calls with objects that simply look like mobile phones, for example by holding remote controls to their ear and making sounds like 'Hello'. Activities such as these count as digital play, where babies and toddlers copy the social behaviours they observe in others, as they learn to navigate a technologized society and make meaning in a post-digital world.

   There are often many myths associated with children's technology use. One concern is that if children are using technology, then they are 'passive' and 'sedentary'. The very active digital experiences of children in our study debunks this myth. We've frequently observed children being very active during their multisensory interactions with tech, from mimicking actions seen on television, including early gross motor development as children learn to copy characters clapping on the screen, to full body engagement as babies and toddlers dance enthusiastically to music played on digital voice assisted devices, like Alexa and Google Home. In these situations, digital play moves beyond screen-based online games or engaging with virtual reality. Digital play can be tactile, emotive and embodied.

   We've also seen how video calls can help very young children sustain and strengthen close relationships with family who may live a long way away, offering excellent opportunities for them to use language in authentic contexts.

   Our findings clearly indicate that focusing on 'screen-time' using devices such as smartphones and tablets can be unhelpful when thinking about children's tech use, because it does not reflect the multitude of devices very young children encounter

that do not have screens. These include household devices with digital displays like washing machines and thermometers, digital sleep aids, smart home devices, internet-connected toys, digital audio players for listening to stories, as well as technologies outside the home like supermarket scanners. Moving beyond a focus on screen time allows us to recognise the depth through which children make meaning from, and with, technologies to understand their place in society and to develop language and literacy skills.

SUPPORTING DIGITAL LEARNING

The study shows that across the UK, most parents agree that tech offers children opportunities to develop skills with numbers, reading and creativity, and most disagree that they harm learning. The majority believe digital technology offers opportunities for young children to have fun. However, parents also have deep concerns about their children's tech use.

   In our study, parents thought deeply about their child's tech use, and had developed well-reasoned arguments as to why, where and when their child used tech. We saw evidence of children developing communication skills and knowledge, including sign language, first words and phrases inspired by their digital encounters. Children also learned cultural traditions from families across the world via video calls and sharing photographs. Appropriately chosen apps and games provided support for number recognition, letter recognition and categorisation. In many cases we saw evidence of parents, grandparents, siblings or guardians sitting with babies and toddlers to help them navigate how to use tech and to enjoy learning apps and games. Just one of many examples is shown in this image of a grandparent with her 15-month-old grandson, holding his hand and showing him how to drag items along an iPad screen to complete a toddler categorisation game. Later in the study, we saw how this child had mastered the physical dexterity required to complete the game with only verbal instruction.

   It was clear that parents and guardians were thoughtful about the place of technologies in their children's lives, and they engaged in a series of carefully crafted moves to support learning and development.

SUPPORTING EDUCATORS, PARENTS AND GUARDIANS TO PLAN DIGITAL PLAY

Although most parents had developed rational strategies to support their child's tech use, most remained unsure if they were 'doing the right thing', and felt they need more guidance about how best to support children's learning through digital play. At times, they looked to us as researchers for confirmation of whether they were using technologies suitably with children.

As a starting point the project team have begun to produce a series of Top Tips for parents and educators, to engage in high-quality digital play experiences with very young children. Our plan is to develop a series of accessible infographics to support parents in their quest to use digital technologies with children in responsible, purposive, educationally rich and fun ways.

TOP TIPS FOR YOUNG CHILDREN'S MEDIA USE

♥   Be playful and do things together with tech and children. Joint media engagement is key – talk with your child. Children learn best when they are interested and having fun.
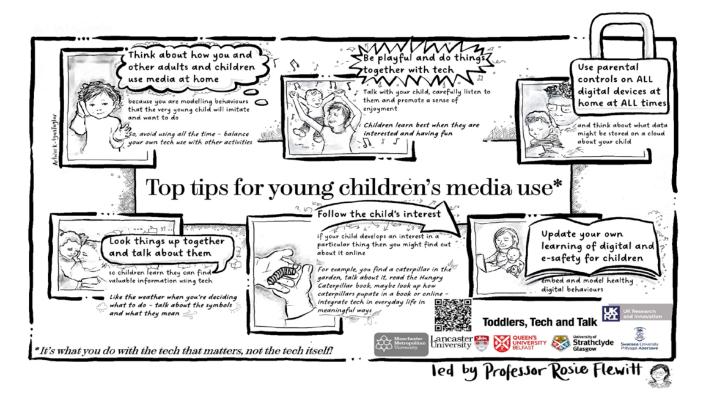
♥   Look things up together and talk about them, so children learn they can find valuable information using tech, like the weather when you're deciding what to do – talk about the symbols and what they mean.

♥   Follow the child's interest – if your child develops an interest in a particular thing then you might find out about it online. For example, you find a caterpillar in the garden, talk about it, read *The Very Hungry Caterpillar* by Eric Carle, maybe look up how caterpillars pupate in a book or online – integrate tech use in everyday life in meaningful ways.

♥   Think about how you and other adults and children use media at home, because you are modelling behaviours that the very young child will imitate and want to do. So avoid using tech all the time – balance your own tech use with other activities.

♥   Use parental controls on ALL digital devices at home at ALL times, and think about what data might be stored on a cloud about your child.

♥   Update your own learning of digital and e-safety for children and embed and model healthy digital behaviours.

Top tips for young children's media use*

*It's what you do with the tech that matters, not the tech itself!

Moving beyond a focus on screen time allows us to recognise the depth through which children make meaning from, and with, technologies to understand their place in society and to develop language and literacy skills.

REFERENCES

Edwards, S. (2023). Concepts for Early Childhood Education and Care in the Postdigital. *Postdigital Science and Education*, 5(3), 777-798. Available at: https://tinyurl. com/5n8uphra. Accessed 21/11/2024

Potter, J., & Cowan, K. (2020). Playground as meaning-making space: Multimodal making and re-making of meaning in the (virtual) playground. *Global Studies of Childhood*, 10(3), 248-263. Available at: https:// tinyurl.com/3e5kap8t. Accessed 21/11/2024

Scott, F., & Marsh, J. (2018). 'Digital literacies in early childhood'. In *Oxford Research Encyclopedia of Education*.