Take control

Technology – especially the kind that involves screens – always divides opinion when it comes to children. ***Meredith Jones Russell*** talks to two digital tech experts to find out how they think the subject should be represented within the revised EYFS

MARC FAULDER
Early years teacher and Apple distinguished educator

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What is your opinion of the current position of digital technology in the EYFS?

The early learning goal for 'Technology', within Understanding the World, is too limited in its relationship to computing in the National Curriculum and needs to be more scientific. It needs to relate to computational thinking skills and coding to best prepare children for algorithmic thinking in Key Stage 1 (KS1).

The last curriculum review in 2012 took place in a very different landscape in terms of what children had access to and what they were using at home. Now we have had children go through that system and seen the impact of not including nurseries in it. Overexposure has led to some children becoming increasingly inactive physically, while no exposure has meant we have seen young children who don't know how to use a mouse or a keyboard. We need to address this.

Why is coding important in the early years?

Our role is to lay the foundations of skills that children will need later in life, and coding will be one of those skills – already there is a massive shortage of people with science, technology, engineering and maths (STEM) skills.

'Coding' is the process of creating step-by-step commands for a computer to follow, while 'computational thinking' is the skillset needed to be a good coder – namely, problem solving, logical reasoning, evaluation, prediction and sequencing.

These are all skills that we already teach in the early years, so introducing coding would require only tweaking existing activities. Basic coding can be introduced even without the use of technology – through what are known as 'unplugged' activities. These activities turn the more abstract ideas of coding into concrete concepts. This would help ready children for the coding and digital aspects of the KS1 computer curriculum.

Coding also gives children control of technology, rather than simply consuming it. Having technology for learning rather than consuming is there in KS1 but not in the early years. Again, we need to address this.

'Basic' technology such as a digital camera can be enough to enhance children's learning

Why is the difference between 'creating' and 'consuming' technology so important?

'Consuming' relates to passive, uncreative technology activities often carried out at home, such as watching videos. That's why many settings just ban screens. However, some technology activities, such as recording messages, taking photographs and making videos, enable children to take control and be creative.

We should be prompting children to use voice-recording technology, photography, animation and paint and video-making programs. As well as developing children's creativity, these activities can all be used to develop other skills

such as children's speaking, writing and socialising.

Recording your voice or working with images are powerful uses of technology, rather than sitting passively in front of a screen watching *CBeebies*.

We need the confidence and knowledge to emphasise to children and parents the difference between 'creating' and 'consuming'. This will help children and their families make better choices and move the discussion from simply screen-time to digital well-being. We will never break the detrimental effects of children 'consuming' technology at home unless we embed these creative principles in the nursery.

What technology do you think settings should have?

My main message to practitioners is that they can do everything that an app can do using basic technology such as standalone microphones, digital cameras, an iPad and a desktop PC or laptop.

Practitioners don't need the greatest of devices or any specific software, and they don't need to feel under pressure to buy them. They can use basic kit and still have a really positive impact on children's learning.

How can technology enhance children's learning in Expressive Arts and Design?

Children's use of technology to support art and design can enhance the creative process and provide meaningful links to STEM subjects. When children move from digital – for example, through the use of simple Paint software – to physical work, this adds a new layer to the process of creating and thinking about design.

So, technology should be used to inform all areas of the EYFS?

The current requirement for children to 'select and use technology' needs to be embedded across all areas of learning. Practitioners need to understand that embedding technology in their provision can enhance children's learning across the curriculum from communicating to design. And there is no time to waste on this. The sooner we address it, the better we will do.

LORRAINE KAYE
Visiting lecturer, Middlesex University and editor of *Young Children in a Digital Age*

What is your opinion of the current 'Technology' goal?

We need to up it. My three-year-old granddaughter had already met the ELG a year ago. The gap between the Foundation Stage and Key Stage 1 is ridiculous. In Key Stage 1 they're learning algorithms, and in the EYFS it's about 'recognising a range of technology is used'. We have to understand children are born into a world where technology is everywhere.

By two or three, children know how to use the internet, iPhones, how to get access to games and can learn your password just by watching you. Of course, you can't always make the assumption that all children are exposed to technology, as some will come from a home where it isn't available. However, we have to be aware that is happening less and less, and practitioners have to be there to teach children how to take advantage of the digital world.

What are the priorities for teaching technology?

We need to start on the health and safety aspect straight away. We have to talk to children about what they do if something comes up online that they don't like. A lot of places now use virtual learning environments (VLEs), which provide almost a 'walled garden' for messaging and learning safely. But at some point, you have to interact with the wider world.

We also need to look at transitions, which are an important part of early years education. How do we bring children who have been engrossed in the virtual world back into the room to do another activity? And so many role-play areas don't reflect technology.

Children's toys need to reflect the world. There are so many opportunities for using walkie-talkies or metal detectors outside, it's amazing. That's their world, and if technological tools are the best things to use, we should encourage them. But you still see teachers in nurseries with laptops that children aren't allowed to touch.

> **We need to up the ELG. My three-year-old grand-daughter had already met it a year ago**

MORE INFORMATION

- For **Marc Faulder's four-part series** on computational thinking, visit: **www.nurseryworld.co.uk**

Marc will also be presenting a seminar on computational thinking at **Nursery World Show North** in Liverpool on **11-12 May.** For more information, see: **www.nurseryworldshow.com/liverpool**

How do we combat this?

Practitioners often don't have confidence in computing and don't like that children know how to do it better. Sometimes they say they have never used technology before and aren't going to start now. Even some of my students don't know as much as children know. I ask them to write a blog and insert pictures and they can find it really difficult.

We need to help in initial teacher training to increase confidence with technology such as whiteboards and so on. We can also introduce them to apps which can help with assessments and other key areas of their work.

Is this situation only affecting the early years?

Programming is not taught very well in Key Stage 1. Teachers don't know how to teach it. And increasingly computers do everything for you, so they don't even consider it. Meanwhile, in Key Stage 2, although the level is very high, often they get people in from outside to teach, or they use a program like Scratch. You only need to be one step ahead or know a good program. As an analogy, I can't sing a note, but that doesn't stop me teaching music. And now we are running out of programmers, so industry is demanding children learn this coding. Education is so often driven by the jobs market.

Does linking technology to other aspects of education help?

Technological developments are exciting. For example, augmented reality apps on a tablet or smartphone will allow children to observe a plant and discover more information about what they see.

Every so often there is some kind of moral panic, like the American Academy of Pediatrics saying children shouldn't have any screen-time, or people worrying that technology makes children obese. There is no mention, of course, of fast-food outlets, or the fact parents won't let them play outside any more. Meanwhile, we can connect digital technology to understanding the world and learning outdoors. I say you can't ignore what children use now and you can't say it's worthless. You can't go backwards. We need to respond and support children's learning.