

Digital natives

New technology might divide opinion, but when it is used thoughtfully, it can enhance learning environments in the early years, **Karen Hart** finds

The rate at which technology is advancing is mind-blowing. And as we now live in such a highly technological age, a big question for many nurseries is: to what extent should we incorporate digital innovations into the early years curriculum?

While many educators like to operate their early years setting as 'close to nature' provisions, the focus is on giving children the skills they need for the future, and that means being digitally literate.

Digital education expert, consultant and author Fiona Joines believes it is important that educators should explore all aspects of what is available for children. 'New technology is just another aspect of exploration,' she says. 'Learning shouldn't be all sitting in front of a screen, nor should it be all sand tray, but a bit of everything. Children should be encouraged to use their inbuilt curiosity to dive into the technology of the future and investigate what it has to offer.'

Educators can build on children's fascination for anything they can interact with – 'whether it is something you press and then something happens, or something sensory,' says Fiona.

'Real-world objects are always a favourite, such as voice recorders, digital cameras and torches, and computers are great when connected to the internet – we want children to know these exist and understand how they can be used.'

She emphasises that exploring technology does not have to be a solitary experience. 'Exploring together in a group is fun. Children can look up facts as part of a project. For example, let's find out what a snail likes to eat.'

'Make this a communal activity, something where children are still



making the choices and a part of what children are interested in, or a project they're participating in at nursery – the internet is amazing!'

She believes that sometimes there can be a reluctance or fear among staff around using new digital technologies. In this case, the advice is that staff need to reconnect with their own playfulness and embrace that inherent curiosity.

'I'd suggest bringing out any new equipment at the next team meeting and exploring it together,' says Fiona. 'I worked in a provision some years ago which had this old lightbox stuffed right at the back of a cupboard gathering dust.'

'It had been there for years. One day I dragged it out and it only needed a new lightbulb – that was it! We had a play with it, looking at transparencies, all the different colours, it was a great bit of kit. We need to be curious in the way we want our children to be.'

'Digital technology is a part of children's lives, and this will continue to build into their futures. You can't turn it off. But embracing it with enthusiasm through play encourages exploration, imagination and a child's natural curiosity to learn.'

In her book, *Embracing Technology in the Early Years: A Practitioner's Guide* (Routledge), Fiona talks about the role of a digital champion in the setting and what they might do to provide support.

She says, 'The most important quality of a digital champion is that they are open to learn about, and curious about, the possibilities technology can provide for their colleagues, children and families.'

'There is likely at least one member of your team that "does technology" and is the go-to person for all questions relating to technology. Or you might be part of a team where any member could take on this role. ➤

Fiona Joines says 'new technology is just another aspect of exploration'



Perhaps you have children who fit that short description – could they be a tech champion? Perhaps that person is you?’

AI VERSUS DIGITAL LEARNING

Although many nurseries will have introduced aspects of digital learning into their curriculum, it can be the speed at which technology is progressing that seems so daunting to many, especially when thinking about the progress of AI-based systems.

As early years settings are such intimate, relationship-based spaces, the integration of AI-based technology can feel threatening to the integrity of ethical and moral values in relation to children, parents and practitioners alike.

An important question for early years educators to ask, is where does the distinction come between AI and digital learning?

Lucy Lewin is founder and owner of the Profitable Nursery Academy, providing training, coaching and resources to nursery owners and managers. Lucy recently hosted a panel looking at the implications of AI for early education, at the *Nursery World Exchange*.

‘There’s a lot of noise around AI and digital learning, and I think it’s crucial we distinguish between the two,’ she says. ‘AI has a lot of potential when used by informed adults. It can save time, personalise content and automate repetitive tasks. However, it’s not a shortcut to good pedagogy. We must ask: who benefits? What data is used? Does it enhance the child’s experience, or dilute it? In my view, AI can be valuable if it supports the practitioner, not if it replaces them.’

According to Lucy, few settings are using AI directly with children – ‘nor should they be without deep ethical reflection and proper safeguards’, she says.

‘Where I’m seeing AI emerge is in back-office tools: planning software, marketing, HR, policy templates. The impact on learning is indirect, the aim is to reduce burnout, improve operational clarity, and give staff more bandwidth to focus on children.’

‘Some digital learning platforms are beginning to add AI-driven personalisation features, but these are more common in Key Stage 2 and beyond. In early years, AI might surface in areas



➔ FURTHER INFORMATION

- Early Years Out of the Box: <https://eyoutofthebox.com>

such as language learning apps or personalised story-generation tools, but again, I’d urge caution.’

She adds, ‘Tech must never become a substitute for the warm, responsive relationships that are foundational in early childhood.’

case study: Stoke Newington Nursery and Pre-School (LEYF)

Princess Souassou, deputy manager at Stoke Newington Nursery and Pre-School (LEYF), talks about the benefits of using AI in the early years:

‘As AI becomes more popular, it can be used as a planning tool to support high-quality teaching in early years. For example, educators can use prompts to *Development Matters* and suggest age-appropriate, fun activities.’

‘AI can also support children’s learning more effectively by creating personalised content, such as stories or songs that follow the children’s interests. If a group of children in a pre-school room are interested in space, an AI tool such as Co-Pilot Chat can generate a space-themed story that will include ideas they have shared.’

‘This also helps them develop early literacy skills such as comprehension, and opportunities to enrich their vocabulary.’

‘AI can also support personalised learning by helping educators plan activities for children’s individual interests and developmental stages. For

example, using specific prompts, you can input a child’s current interests, such as dinosaurs, or cooking, and receive activity ideas that align with their age and developmental goals. This makes planning more intentional as AI can generate explanations of the learning intention, the skills being supported, and how it links to the EYFS *framework* and other guides, such as *Development Matters* or *Birth to 5 Matters*.

‘You can also use AI with children in creative ways, such as using a prompt to write a story together, setting the number of characters, choosing names (never the children’s names or details), and deciding the theme. You can either let AI generate it (giving it autonomy) or guide it with ideas from the children. I’ve noticed that this not only engages them in storytelling but supports language development, imagination and turn-taking within a collaborative, digital approach.’

‘At LEYF, we like to use Co-Pilot Chat, as it is integrated into Microsoft365, adding a layer of security for us. However, to protect data, we do not

include sensitive information like children’s names, parents’ names and other personal details or photos, as well as no private company information – we want to use AI in the safest and most appropriate way possible.’

‘To ensure our staff are well-trained in the new technology, we are developing an AI roadmap, beginning with a series of webinars tailored towards colleagues in central office, nursery and apprentices. We have also started learning about data protection, accuracy bias and fairness, compliance, privacy and security, and child safety and wellbeing. We’ve also started to look at prompt frameworks so that users become more comfortable with what AI is and how it can help them.’

‘In conclusion: AI isn’t about replacing us as educators and teachers; it’s a tool to empower and support us. AI can help reduce time-consuming tasks, although as its use raises ethical concerns, such as data protection, using it responsibly and thoughtfully is crucial.’



TECH SUPPORT

Sarah Steel OBE is owner and founder of The Old Station Nursery Group, where the adoption of new technologies has been put to use in areas ranging from researching new projects to helping children settle in.

'At Old Station Nursery, we use Connect software to observe child development and to communicate with parents,' she says. 'We have a "communication promise", so observations are really important to us. Our Quality Team supports nursery managers to ensure all staff know how to use the software and realise how important regular posts are to our parents.'

'Our nursery managers use a variety of digital resources, from

voice-recording devices to digital cameras. We also have digital tables in many of our settings, and everyone has tablets in each room.'

Sarah believes it gives children confidence in experimenting with new technology, in a world that is increasingly digital, and it can also encourage independence – for example, using a digital camera to record 'a child's view' of something.

'However, many children have access to digital devices at home, such as TVs and tablets, so parents don't want us to rely too heavily on technology at nursery, as they recognise how important our staff team are,' she says.

'Tablets are very flexible and can be used for observations, with their inbuilt camera making them perfect for this. However, they can also be used to research topics which staff are concentrating on, and this is a good way to introduce children to the ways in which technology will be used when they go to school.'

She adds, 'Tablets can also be used to access many apps – for example, staff may use a translation app for a child who has very little spoken English and may need help in settling in.'

CREATING RICH, INTERACTIVE ENVIRONMENTS

A well-equipped early years setting will benefit from a combination of digital and traditional resources, with educators maximising engagement in all areas of learning by sparking a curiosity in modern technology. Through thoughtful integration and adapting a balanced approach, educators can create rich,

Tablets are very flexible and can be used for observations

interactive learning environments that cater to all children.

Dr. Sue Allingham, consultant, author and trainer at Out of the Box Consultancy, says, 'My instinct is that digital resources are useful to build on and support teaching and learning, but not instead of (like an electronic babysitter, which I see too often). So, in this way I am a fan of anything that children can meaningfully interact with, and that will challenge their thinking.'

This includes resources that require programming to complete a task. For example:

- Recording devices – including video cameras, digital cameras, voice recorders and digital ways to record mark-making.
- Digital microscopes.
- Digital music-making – keyboards, etc.
- Digital measuring devices – weighing, measuring length, etc. (My granddaughter is a big fan of the laser measure that her dad uses when he is decorating).
- Voice-activated resources that interact with the speaker.
- Effective use of the interactive whiteboard to research an idea or topic.

Sue adds, 'I think that I would say the test of whether a piece of digital equipment is worthwhile would be if it can extend and challenge thinking or a skill. The market is full of lovely-looking shiny things. They are expensive, but of little value other than entertainment.'

'Too often I see children sitting with a digital story reader, or a story on the "interactive" whiteboard. This is very poor use of digital technology.' ■



Dr. Sue Allingham (top) says digital equipment is only useful if it challenges children's thinking. Sarah Steel (bottom) says technology can boost confidence and independence

recommended resources

TTS – tts-group.co.uk

- TTS Blue-Bot Bluetooth Programmable Floor Robot, £105.59 for 1 bot – packs of multiple bots available.
- Digital Weighing Scale – 3kg Capacity, £32.39
- Easi-Detectors – Metal Detectors and Magnifiers 6pk, £119.99



Hope Education – hope-education.co.uk

- Learning Resources Zoomy 2.0 Handheld Digital Microscope, £64.79
- Talking Products Multi Memo Voice Recorder, £22.19



Cosy – cosydirect.com

- Light Box Messy Tray / Sand Tray, £51.59
- Code & Go Robot Mouse, £40.45

YPO – ypo.co.uk

- Jumbo Digital Timer, £6.99



Fun Learning – funlearning.co.uk

- Learning Resources Calculator Cash Register, £35

Early years learning apps

- Khan Academy Kids – Free app with interactive early learning activities learn.khanacademy.org

- 2Simple's Purple Mash – A creative educational platform with interactive EYFS-aligned activities 2simple.com

- ABCmouse – Popular phonics, maths and creativity app for young learners abcmouse.com

- Busy Things – UK-based digital learning platform designed for nursery-aged children busythings.co.uk