Talking technolo

Rachel Ager concludes her series on early years ICT with advice on equipping nurseries with the necessary resources...

Given the technological nature of the world in which we live, a high-quality early years technology provision is essential if our children are to grow up to become 'digitally literate' citizens, equipped to take an active and successful part in society. The cornerstones of children's digital literacy are laid during the EYFS. During this period, children need to learn about everyday technologies and information communication technologies (ICT), and use the latter to enhance and support their learning.

Everyday technologies include the vast range of electronic and digital equipment that we come across and use in our daily lives. This includes electronic toys and games, televisions, Freeview boxes, satellite TV boxes, DVD players, MP3 players, mobile phones, digital cameras, multi-function devices (printer/scanner/copiers) and computers/laptops, calculators, toasters, washing machines, dishwashers, microwave ovens, cash machines, satellite navigation devices, traffic lights, street lights and pelican crossings.

ICT includes all electronic or digital equipment that allows us to gather, store and retrieve information, and to communicate, present and exchange it. This includes MP3 recorders, digital cameras, digital magnifiers, metal detectors, GPS-enabled devices, personal computers (desktop and laptop) with appropriate software, the Internet, online resources and email.

With such a vast array of technologies to choose from, it can be difficult to know where to start when choosing resources for an early years setting. An obvious starting point might be an audit of the existing resources available in the setting. I would suggest that it is also worth pausing for a moment to consider the four 'themes' and associated 'principles' of the EYFS and what implications these have on the technology you might want to invest in.

1. A unique *child*

This theme is underpinned by the principle that "every child is a competent learner from birth who can be resilient, capable, confident and assured". We therefore need to:

■ consider how each child's individual development is supported, and in particular whether the technology is developmentally appropriate for each child. (Child development)
■ ensure that all children and families feel included, safe and valued by considering whether the technology chosen will promote this inclusive practice. (Inclusive practice)
■ ensure all the technology on offer can be used without compromising children's safety at any time. (Keeping safe)
■ consider how technology can be used to support and encourage mobility and movement. (Health and wellbeing)

2. Positive *relationships*

This theme is underpinned by the principle that "children learn to be strong and independent from a base of loving and secure relationships with parents and/or a key person". We therefore need to:

■ consider how technology is used to support the development of respectful relationships. (Respecting each other)
■ discuss with parents and carers what technology the children are already using, and consider the implications of this when choosing which technologies to use in the setting. (Parents as partners)
■ ensure that the technology available will enable children to build on prior learning. (Supporting learning)
■ consider how technology will be used to support and enhance the key person role. (Key person)

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Recommended resources

Unless your setting has access to a huge pot of money, you will have to prioritise the resources that you want to buy. Here are some points to consider:

Digital cameras

Digital cameras are among the most powerful resources available to an early years setting. Practitioners and children can use photography to record and celebrate learning and achievement, and I would suggest that they should come high on the list for any setting.

Ideally, every practitioner should have a camera available to them at all times – you can never predict when children will do something you want to photograph! There also should be sufficient cameras for the children to use. These need to be housed at various points around the setting so that wherever a child is there is a camera within reach. Cameras that are made specifically for children may be easier to use, but the quality of the image is often not as good. For this reason it might be worth considering simple 'adult' cameras.

It is important that we don't reinforce any perceived gender differences between boys' and girls' technology. So, if the cameras come in both blue and pink, it may be wise not to buy the pink ones which clearly send the message that they are just for the girls. **H&S point** Practitioners should never use personal devices to film or photograph children.

Everyday technologies

A good range of everyday technologies is essential to resource role-play areas. There is a wide selection to choose from, and many items simulate aspects of how the real technology works. These often come in a range of colours; however, if your role-play areas are to truly recreate the real world, it might be sensible to choose those that come in more realistic colours. It is also worth ensuring that there is an equal balance between resources that may appeal more to the boys and those that might appeal to the girls.

Remember, these resources don't all have to be bought. Defunct technologies can be used, while children can make others for themselves (when they do so, they often play with them more carefully because of their sense of ownership.)
H&S point If defunct technologies are used, ensure that all electrical cables are removed.

4. Learning & development

This theme is underpinned by the principle that "children develop and learn in different ways and at different rates, and all areas of learning and development are equally important and inter-connected". We therefore need to:
- ensure that children will be able to play with and explore the chosen technology. (Play and exploration)
- consider how children will be able to use the technology independently. (Active learning)
- ensure that the technology will support open-ended activities. (Creativity and critical thinking)
- ensure that technology is used to support and enhance all six areas of learning and development. (Areas of learning and development)

3. Enabling environments

This theme is underpinned by the principle that "the environment plays a key role in supporting and extending children's development and learning". We therefore need to:
- consider how the technology can be used to support and enhance the process of observation, assessment and planning. (Observation, assessment and planning)
- consider how the technology can be used to enhance communication between settings to support continuity in the children's learning. (Supporting every child)
- consider how the technology will be used across the whole learning environment, both indoors and outdoors. (The learning environment)
- consider how the technology will be used to support and enhance multi-agency working. (The wider context)

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Computers and laptops

Desktop computers are usually more robust; however, they are less easy to move and therefore tend to stay in the same location (usually facing a wall). Consider using child-friendly keyboards, as they are often easier to navigate than conventional keyboards.

Laptops can be used anywhere within the learning environment, including the role-play area. Their mobility is a very definite plus as it means the children can take the computer to their learning wherever that might be (inside or outside – as long as it's not raining!), rather than the other way around. Remember that a laptop's battery needs to be charged if it is going to be used away from a power source, and this needs managing if the laptops are to be kept available at all times.

H&S point: Ensure desktop computers and laptops are set up at an appropriate height for children to use.

Software

It is important to choose software carefully. There is an incredible range of products that claim to be suitable for use in the EYFS, but many of these only offer children closed activities which represent nothing more than animated worksheets with sound effects. Select software that allows children to engage in truly open-ended activities and make real choices about what they do and how they do it. It is also very important to ensure that software is free from stereotypical or patronising images or violence.

H&S point: If children are given access to the Internet, ensure appropriate measure or procedures are in place to prevent access to inappropriate material.

Remote-controlled and programmable toys

Children should use remote-controlled toys prior to using programmable toys, and there is a good range to choose from. Unfortunately, a lot of them operate on the same frequency. If this is the case, only one toy can be used at a time as each controller will control all the toys. There are a few which operate on three different frequencies (selected by the user) enabling children to play with them as a group. Some remote-controlled toys are designed for use outdoors as they can navigate rougher terrain and this offers one more way to take technology into the outdoor environment.

The selection of programmable toys is more limited, but it is worth investing in more than one type as this will offer children the opportunity to transfer their learning from one to another. Make sure that the programmable toys you choose don't require children to input the number of degrees to be turned but rather have buttons to turn the toy 90 degrees to the right or left.

H&S point: If rechargeable batteries are used, ensure that the battery covers are secured.

Other resources

In addition to the above, other resources well worth considering as part of your setting's continuous provision are digital magnifiers, DVD players and metal detectors, as well as MP3 / sound recorders (*see p34 for ideas on the latter* – Ed.)

findoutmore

A former primary school teacher, Rachel Ager is an internationally-respected educational consultant who worked to develop the use of ICT in the EYFS. She is currently Chair of Naace, the ICT association.