

Early childhood

# ▶ getting up to speed

Digital  
Business  
Kit

■■■■ on digital tools as education tools

Factsheet

Adults need skills to move around the digital world and make wise, informed choices on children's behalf. Educators, parents and leaders need to know the options and be capable of modelling the behaviours and attitudes that children need in order to form good lifelong habits. What a three-year-old learns today will still be informing his or her behaviour in 30 years. The educator and the parent are working together to help develop digital citizens.

## Need to know

When knowledge was a scarce commodity adults imparted what they knew to children and introduced them to the world. Now, with information everywhere—on the internet, a tap away on a smart phone, streaming into remote locations via webinars—the task for educators, parents and other adults is not getting information to children but helping children from the earliest ages learn to discern and deal with it.

Twenty-first century learning environments tend to be mobile, collaborative, flexible and connected. The tools children use and the skills they need have shifted to match. While children may seem more 'tech savvy' than many adults, they are not yet tech mature. That means adults preparing children to participate in the digital world need new skills too.

[Click here for a video on digital tools as education tools.](#)



## It's a digital world

- ▶ Be positive, informed and deliberate about engaging with the online world and digital technology. There is more to being a digital citizen than merely being *safe* (or cyber safe). Make the most of the world you live in by being *smart* online.
- ▶ Each individual has a digital footprint. Apart from self-created information, the organisations that individuals join, work for or do business with become part of a lifetime digital trail. Paying by credit card, entering a competition by email address, late payment of a bill can all become part of this digital footprint.
- ▶ Digital citizenship is part of twenty-first century living. Understanding rights and obligations and having the capacity to manage information about self, others and organisations in the public domain are basic requirements for living and working in this century.
- ▶ Being a digital citizen includes confident and informed online and digital technology use, considered decision-making about exchanging and securing personal information and it requires digital literacy.
- ▶ It includes financial digital literacy: choosing and using the best tools for business, knowing how to make secure transactions.
- ▶ Every workplace, business and household is part of the digital economy and transacts digital business. The question is not *whether* to participate but what can participation mean for the business of early childhood?
- ▶ Promoting and maintaining a professional or business profile is not new but the digital skills to do it might be. Get involved to manage reputation and understand legal obligations.

## Legal obligations in the early childhood environment

Privacy, sharing photographs of children, posting to social media sites, helping parents and young staff to understand boundaries are some of the digital age responsibilities of leaders, mentors and managers in early childhood. Considerations of ethics and duty of care extend to behaviour in the virtual world and after hours. Parents as well as educators, boards of management and managers all have obligations and human resource policies need translation into the digital age. New technologies make social media policies and information on privacy and copyright laws as vital to managing people and business as codes of conduct, mission statements and dress rules were to twentieth century organisations.

For a tip sheet on digital responsibility and managing risk [click here](#)

**There is more to come** in ECA's digital business kit on social media policies and technology plans in early childhood services. In the meantime, learn about digital citizenship and staying safe online at: [cybersmart.gov.au](http://cybersmart.gov.au) and [digital-citizen.co.uk](http://digital-citizen.co.uk). For resources about online protection, privacy legislation for individuals, small businesses, education and children's services see the Office of the Australian Information Commissioner at: [oaic.gov.au/privacy](http://oaic.gov.au/privacy) and the Australian Government's [Easy Guide to Socialising Online](#). For employer obligations, start at: [www.staysmartonline.gov.au/business/train\\_your\\_staff](http://www.staysmartonline.gov.au/business/train_your_staff).

## digital tools as education tools

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#### DIGI-WORD

A **digital citizen** participates in and takes responsibility for personal information, for fair treatment of others online and in text communications. A digital citizen is aware of and monitors their digital footprint: the information they and others create and store about them. A digital citizen is aware of their responsibilities and obligations in the digital environment for instance in relation to privacy, copyright and defamation.

#### Become a digital citizen

- ▶ Take responsibility for your own digital learning.
- ▶ Go to the government's digital business site: [www.digitalbusiness.gov.au](http://www.digitalbusiness.gov.au).
- ▶ Check your local library or newsagent to find educational technology magazines that describe devices and review software, apps and other digital tools.
- ▶ Talk to other educators and parents to research good practice and educational apps.
- ▶ Visit websites that review or profile apps and devices. Try **Chatterbox**, a jargon-free place where parents can share and build confidence about parenting in the digital age. For the more adventurous, *Mashable*, *Geek dads* or *Wired* are also helpful.

#### Technology and young children

Australian research into children's online activities suggests patterns of usage for today's young children are similar to how older children used technology five or six years ago. It also shows quite young children are using internet connected computers and mobile devices.

While it is not clear what the long-term impacts of technology on very young children will be, patterns of usage have changed drastically over the last 30 years. Desktop computers—more accessible to adult oversight—are often being replaced by multiple devices, whose size, mobility and potential for constant connectivity mean rethinking ideas on adult supervision and children's usage. Devices and software are marketed to very young children, their parents and educators. Sometimes technology is used with very young children for learning and play and sometimes for 'time out'. Smart phones have been described as the new car keys, given by busy adults to distract babies, with this generation of children being increasingly accustomed to these 'digital pacifiers'.

Research has tended to focus on school-aged children and lags behind technology developments and the pace of children's exposure to it (Edith Cowan University, 2013). However, most agree with psychiatrist Philip Tam (2013) that, 'young, developing brains are vulnerable to prolonged [technology] usage' and are concerned about 'potential associations with irritability, poor concentration, and even anxiety and aggressive tendencies'. Given these concerns, it is essential that educators are aware of risks of over-use and misuse of technology and move towards promoting healthy technology use for our youngest users.

This means educators and parents need to be informed, alert and involved in the digital world to ensure age appropriate use and technology that supports the individual child's learning.

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#### Tech tips on tots to tweens

**Babies up to two years** need real world, tactile experiences that develop brain and sensory functions. Babies and screen interactions are happening but there is no research that recommends screen time for babies.

**For toddlers to three years** technology use should be brief, fun and educational, preferably shared with an adult and peers and mixed with lots of other physical activity for physical coordination and brain development.



**For children three to five years** ensure that technology use has an emphasis on age-appropriate developmental apps; short periods of time using technology—up to 15 minutes mixed with physical activity. This age group can use technology sometimes on their own, sometimes with peers and adults. Make sure of regular posture changes to reduce stress on the body. A maximum of one hour of screen time a day is recommended for this age group.

**For children from kindergarten to eight years** limit to one hour a day of screen time; make exciting and interesting non-tech activities available that involve whole body movement. Parent involvement is key.

Sources: *Australia's Physical Activity and Sedentary Behaviour Guidelines* and Professor Leon Straker, Curtin University. Additional material from Dr Kristy Goodwin and Dr Kate Highfield, Macquarie University and Australian Council on Children and the Media.

**For a tip sheet for educators and parents on using technology with children** [click here](#)

#### Expand learning opportunities

Harnessing the enormous potential of technology requires using it intentionally and consistently with learning and child developmental principles that shape other decisions in the early childhood setting. Technology must be incorporated into the learning environment in the same way that other tools and opportunities are used: mindful of the challenges and the opportunities it creates.

While the research lags behind the technology, educational settings can encourage particular kinds of technology use.

Make it **intentional**—choose then use. Technology can be used to 'disrupt' learning in the best sense: to extend the educational experience into new forms. Make it more than a substitute; let it transform. If digital technology is one tool among many, the focus needs to be on what it uniquely brings to the learning experience.

Keep it **interactive**—choose digital media, tools and technologies that involve and engage the child. Sophisticated applications can create expectation and playfulness, support creativity and prompt graduated responses.

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**Forget the device**—focus on its possibilities. Tablets in early childhood almost always lead to apps and talk of which ones are ‘good’ or ‘bad’. Some of the best uses for a tablet emerge with experimentation. It has many features, only one of which is to run apps. It is also an audio recorder, a camera, a story telling device, an animator, a navigating and mapping tool, a calculator, a compass, a translation and pronunciation tool. Make a list and try it out.

### Collaborative

The smart features and mobile nature of new digital tools encourage different kinds of collaborative play. The connectivity and processing power of traditional computers and laptops combine with the physical movement and interaction of small group work. In the hands of an observant and responsive educator, technology with young children can stretch beyond the initial purpose.

Children in preliminary phases of *Early Start*, a multi-disciplinary initiative based at the University of Wollongong, show intense collaboration and focus around tablets and one-on-one computer use between child and educator, while smart tables tend to involve children walking around, making gestures and movements not previously associated with fixed ‘screens’. After the initial fuss about tablets and smart boards arriving, the children according to one educator ‘pretty quickly set the rules’.

For a profile on smart tools [click here](#)



Using an interactive whiteboard, children in the *Early Start* initiative at Northside Early Learning Centre, Moruya, listen to a story then participate together in a sequencing activity.

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#### DIGI-WORD

The **digital divide** occurs between the technology haves and have nots. It can open up between children, when adults, households and education environments are unable to support children's learning and wise participation in the digital world. The digital divide can also emerge between educators who have access to technology and training and those who don't as well as between generations and gender, with lifetime consequences for participating in the community and in meaningful work.

#### Supporting inclusion

There are many examples of technology being tailored or introduced to maximise the learning experience for children who would otherwise miss out. In the Victoria Government's *iPads for learning* initiative a diverse, inner city primary school, Debney Meadows, uses technology to help children with the transition to school. Other examples include strengthening exchanges with children from multi-lingual backgrounds or where reading and language skills are affected by disability.

#### Hands-on, active and outside

Connectivity and mobility of new technologies are bringing technology outside, making it easier than ever to incorporate movement, dance and physical activity. At Bold Park Community School in WA, where technology is used purposefully as part of a rich learning environment, the mobility of tablets is helping facilitate the school's strong commitment to an outside program.

For a profile on technology and inclusion [click here](#)

The [Joint statement on technology for children from birth to eight years](#) prepared by the US National Association for the Education of Young Children (NAEYC) and the Fred Rogers Center is a good place to start thinking about the opportunities and challenges that carefully chosen, well-applied technology can bring to early learning.

#### An amplifier

Technology does not replace or even improve the educator. What it tends to do is amplify. An observant, purposeful teacher will use technology in the way he or she uses other teaching tools and approaches. Digital technology is neither good nor bad but it will amplify whatever is already happening or lacking in the learning experience.

#### Technology as educational disruptor

Technology can be used to alter and enhance classroom practice, this happens when teachers harness the unique opportunities offered by digital tools to engage learners in new activities or tasks not available without the technology. For example, using Twitter or Instagram to contact learning centres in the northern hemisphere gives a quick, immediate way of discussing and comparing weather and environment. This example allows new engagement and opportunities for teachable moments with immediacy not previously available.

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### New ways to document and program

Many educators and early childhood services are already making use of new technologies to streamline documentation and help educators, managers, directors and family day care coordinators comply with regulatory frameworks more easily. They are also appreciating the capacity to exchange information, create and update programming using technologies that are expanding their options, making information available at times and places educators need it.

### Educator learning and professional development

Digital technology is pushing back the barriers of distance and size. Educators and early childhood leaders and managers in small towns and remote settings can still have access to the best minds, ideas and early childhood practices around the world with the help of technology. Large dispersed organisations can link more easily and efficiently with their teams for professional development and organisation meetings. Save on travel costs over time and relief staffing when educators attend training, professional development and network with colleagues using video conferencing and online learning. Later DBK modules will have more on this.

### Sources, resources and references

To learn more about technology in early childhood and perspectives on age appropriate use, try:

- ▶ Australian Communications and Media Authority (ACMA): [www.acma.gov.au](http://www.acma.gov.au)
- ▶ Chatterbox: [www.acma.gov.au](http://www.acma.gov.au)
- ▶ Australian Council on Children and the Media (ACCM): [childrenandmedia.org.au](http://childrenandmedia.org.au)

- ▶ Geek Dad: [www.geekdad.com](http://www.geekdad.com)
- ▶ National Association for the Education of Young Children (NAEYC): [www.naeyc.org](http://www.naeyc.org)
- ▶ TEC Center at Erikson Institute: [www.teccenter.erikson.edu](http://www.teccenter.erikson.edu)
- ▶ Children's Technology Review: [www.childrenstech.com](http://www.childrenstech.com)
- ▶ Mashable: [www.mashable.com](http://www.mashable.com)
- ▶ Wired: [www.wired.com](http://www.wired.com)
- ▶ Think you know: [www.thinkuknow.co.uk/5\\_7/fun/Nice](http://www.thinkuknow.co.uk/5_7/fun/Nice)

For more on cyber safety, bullying and school smart programs for young children see:

- ▶ Alannah and Madeline Foundation at: [amf.org.au](http://amf.org.au) and the e-smart program at: [www.amf.org.au/eSmartschools/](http://www.amf.org.au/eSmartschools/)
- ▶ ACMA's [cybersmart.gov.au](http://cybersmart.gov.au)
- ▶ Think you know: [www.thinkuknow.org.au](http://www.thinkuknow.org.au) and [www.thinkuknow.co.uk](http://www.thinkuknow.co.uk)

For information about privacy, copyright and other legal implications of online digital technology:

- ▶ Australian Communications and Media Authority (ACMA): [www.acma.gov.au](http://www.acma.gov.au)
- ▶ Office of the Australian Information Commissioner: [www.oaic.gov.au](http://www.oaic.gov.au)

To learn more about becoming a digital citizen see: [cybermart.gov.au](http://cybermart.gov.au).

Keep getting up to speed by returning to ECA's Digital Business Kit for updates and more examples. Share your story at [#digichild](https://twitter.com/digichild) or [dbk@earlychildhood.org.au](mailto:dbk@earlychildhood.org.au).

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