Less is more when using technology with kindergarten aged children

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Robyn is an Early Childhood Advisor for C&K. Since 2008, she has explored how technology can be used with young children and this has remained a personal and professional interest. In 2012, Robyn was part of the C&K Research Team, investigating how new technologies can be introduced into programs for children in kindergarten. As a C&K Early Childhood Advisor, Robyn participates in community partnership meetings and events, Australian Early Development Census (AEDC) response groups and a range of other professional groups. She remains a passionate educator who continually encourages others to critically reflect on their pedagogy.

There has been a growing interest in purchasing Information Communication Technology (ICT) equipment, for use with young children in a range of early childhood settings, such as kindergartens, long day care and family day care. The principles and practices of *Belonging, Being & Becoming: The Early Years Learning Framework* (Commonwealth of Australia, 2009) are essential to the implementation of technology in an early childhood setting, as they guide educators to make curricula decisions which are based on their professional knowledge and judgments, while being reflective and intentional.

As a C&K Early Childhood Advisor, I was part of a research team to investigate the use of ICT with kindergarten-aged children. At the end of the 2012 Research project, C&K supported the use of ICT in line with *C&K Building waterfalls- A guideline for children's learning and for teaching in kindergarten*. During 2013 and 2014, the focus for our ICT Resources & Development Team is to provide workshops for educators and to develop criteria for their choice of software.

A key focus of our professional workshop program is to support educators to have a clear idea of how, why and what technology they would like to use in their learning environments. We feel a reflective and balanced approach is required, where ICT resources become one of the many tools and resources used for teaching within the environment to support, extend and enhance the children's learning. ICT offers the greatest opportunity for children's learning when children's engagement and experience is interactive and relates to their current play, ideas, thinking and investigations (C&K, 2012). Careful consideration needs to be given not only to the hardware and where it will be positioned within the environment, but also to the software that accompanies the device.

Interactive LED screens are now widely used in many C&K kindergartens and a growing number of long day care centres. The software provided with the screens provides educators and children the ability to collect and use children's images, audio recordings, while conducting research and documenting children's learning. Beginning to use ICT on a regular basis can be daunting for many. In my experience, educators initially adopt a more explicit teacher-directed approach. Continual critical reflection is needed to ensure ICT is implemented in line with early childhood pedagogy. I have found networking with other educators on the same ICT journey can be beneficial.

At the present time, a selection of apps have been approved for C&K services, based

on a set criterion which supports children researching and investigating their interests, creating with technology, engaging with text, supporting inclusive practice and documenting children's learning and investigations. Apps which do not meet this criteria have been found to provide limited choice and control for children, are product rather than process oriented, have inappropriate content such as violence, gender stereotyping and branding and offer limited repetitive skill-based learning. Studies have found that open-ended child-directed software makes a more significant difference in children's developmental gains than drill-and-practice based software (Haugland,1997).

The software and apps approved for use at C&K, encourage and build collaboration, sharing of ideas, thinking and problem-solving. There is a range of quality children's story apps and eBooks based on familiar stories, for example: Lynley Dodd's *Hairy Maclary,* Nick Bland's *The Cranky Bear* and Dr. Seuss's *Oh, the Places You'll go!* Educators using these apps have thoughtfully chosen to provide both a hard copy book and a digital copy of these stories. A wide range of young children's stories are also available on YouTube. These stories do need to be vetted to ensure there is no advertising and inappropriate pop-ups. Once children enter an online world, it is recommended educators have established centre protocols to protect children in this online environment.

There are a range of apps that provide opportunities for children to create their own stories with photos of themselves, their play, their friends, drawings and annotated photos and images. These apps allow for children to record their voices. C&K educators have found *Book Creator, Notability and 30 Hands* are easy to use with kindergarten-aged children.

There are many educational apps available for download from Apple Store (iPad device) and Google Play(Android tablet). Educators need to be critically reflective on the choice of software and consider how it can support and extend children's learning in ways not otherwise considered possible.

My experience of working with educators and supporting the implementation of ICT has highlighted the need for educators to be ready to explore alongside the children. The number of apps and software available for young children is varied and overwhelming. A few well-chosen apps or programs can ensure educators learn about all the possibilities of a program and are not overwhelmed by too many choices. Young children require many more hands-on active concrete experiences for their growing minds and bodies and educators need to be mindful of the recommendations of one-hour screen time for children from 2-5 years. (Raising Children's Network, 2014). Less can be more as children engage, revisit and collaborate with their peers and educators and more deeply explore the opportunities and possibilities for learning.

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