# Going online: young children and teachers accessing knowledge through web interactions

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Children accessing and using internet-connected technology is a relatively recent phenomenon, and rapidly having an impact on their experiences and activities in homes and early childhood classrooms. Technology refers to devices such as computers, smart phones and tablets – many capable of being connected to the internet – and the products, such as websites, games, and interactive stories (Plowman & McPake, 2013). These activities can be played, created, watched, listened to and read, and incorporated into traditional everyday activities.

*It is no longer possible to suggest that technologies have no, or peripheral, places in early childhood education.*

Guidelines such as the *Early Years Learning Framework* (2009) promote the educational value of experiences for children involving technology. At the start of their educational trajectory, young children with access to technology may have improved opportunities for play and learning (National Association for the Education of Young Children (NAEYC) (2012). Computers and mobile devices such as tablets are becoming essential resources to support young children's everyday classroom experiences. To date, however, there is not a great deal of practical guidance on ways to integrate technology and more traditional activities into early childhood education.

The increasing prevalence of tablets and smart phones suggests more children are accessing smart technologies and the Internet. In 2009, 60% of Australian children aged five to eight years accessed the internet, up from 37.7% in 2006 (Australian Bureau of Statistics, 2009), and no doubt the percentages are higher now. When we hear these statistics, it is easy to suggest young children are naturally 'wired in' to using technology. For example, we've probably seen videos of toddlers swiping iPads (http://www.youtube.com/watch?v=aXV-yaFmQNk) and children using their parents' phones to play games. What is often not realized is that these children are immersed in environments where the bedtime story is increasingly likely to be delivered using a tablet as a book. At the same time, there are still many children who do not have access to internet technology, and come to school with little or limited access and understanding.

*Educators have the responsibility of building technology experiences into classroom activities in ways that are fun and also have meaning for children's everyday lives.*

Use of technology can support, not hinder, social interaction (Plowman, 2013). Below, there are some suggestions to engage young children in web searching and other internet-

connected technologies, to support web use for socially interactive learning and knowledge building in early years classrooms. While not an exhaustive list, many examples are drawn from real-life practices of educators and children accessing the web in early childhood classrooms in Queensland.

### Strategies

1.  *Using technology to support communication and connect globally.* Skype is a free software program for users to contact each other, at a distance, using the Internet. Connections are free from computer to computer, and have the advantage of calls having visual and audio contact.  Skype can be used to keep in touch with a classmate on holidays or at home (e.g. with broken leg); with others with specific knowledge, such as scientists and book authors; and with classmates across the country and globe (Morgan, 2013).

2.  *Using technology to support engagement in the cultural and everyday experiences of home, school and community.* In one classroom, the teacher mentioned at group time that she was putting together a shopping list to buy classroom materials, and asked for suggestions. A couple of children became involved in drawing what they needed (e.g. basketball), and then worked with the teacher on the online form. Not only was this activity real-life use of technology, it modeled other possible online everyday activities, such as online grocery shopping.

3.  *Using technology for information seeking, investigating and problem solving.* In many classrooms, we observed children undertaking online searches using Google or other search engines. For example, one child shared at group time his book on endangered animals from home, which led to discussions of which animals were endangered, and an online search later that day. In that same classroom, others became interested in what animals ate and, with the teacher, undertook a web search to find out what tadpoles ate and, along the way, engaged shared conversation about pets and what they ate. Integrating information

seeking and inquiry-based learning with technology expands the potential of children's knowledge creation.

4.  *Using technology to support home and school relationships.* In one classroom, a family brought in a link to a video of their weekend four-wheel driving adventure that they had uploaded onto YouTube. Together, the class and teacher watched the video. This lead to discussion about what had happened and the experience was continued in outdoor time when some children built roads for their trucks.  In another classroom, one child kept in her pocket a toy dolphin from home, leading to the teacher initiating a web search for videos about Sea World, leading to discussion about holiday trips.

5.  *Using technology to move from technology into play-based activities.*  In one classroom, two boys engaged with the teacher in a search and discussion of army tanks, prompting a collaborative enterprise building their own tank using cardboard boxes and tubes.

As the children undertook their real-life explorations using web searching, they were introduced to, and engaged with, tools and techniques to develop and practise their skills. The experiences happened in a number of classroom and outdoor spaces:

* using the interactive white board during whole group to find a YouTube video;

* looking at Google Earth to locate their centre on the map,  and researching lady beetles, in small groups or in pairs;

* engaging in real life activities  such as online shopping;

* creating digital books and digital storytelling with photo and audio files;

* taking the mobile device (the iPad) outdoors to compare the butterfly found in the yard to those illustrated on a web site that named and described butterflies

* extending the experience from the computer screen to include real-life props.

These opportunities extended learning about interests beyond the classroom, where there

were enhanced opportunities for teacher-child and child-child interactions.

While the experiences discussed above are associated with web searching, there are many other ways that technology-related interests can incorporate real and imaginary contexts and props, and become an integral part of classroom life to support children's engagement and learning (Fleer, 2013):

- mobile telephones in dramatic play area for taking photos;

- the GPS (Global Positioning System) navigational tool;

- Apps that measure the distance walked, and route taken;

- the Quick Response (QR code), a bar code that is a previously downloaded app that gives information about the product such as cost.

Here are some final thoughts for educators when considering technology in early childhood classrooms.

1. Children have different preferences for using different forms of technologies (Plowman & McPake, 2013) and interests, just as they do with the traditional experiences of the classroom.

2. Different forms of technologies offer children social interaction and opportunities to think in new ways about their own lives, as well as at neighbourhood, national and global levels.

3. The contexts of the home and community contexts are important early experiences that very often introduce children to technologies, and capitalizing on these experiences is productive for all classroom members.

4. Technological skills are best learned when used in an integrated way. Successful interactions with technology and with others (e.g. parents) focus on what is being discovered (e.g. the results of the search), and the technical skills are developed along the way (Danby et al, 2013; Spink, 2010).

Using technologies in classrooms is much more than games and software programs used for entertainment. They are important resources for children to communicate with the world, extending beyond the classroom. Finding out new knowledge, exploring and making sense of worlds, along with having fun and developing confidence, are just some advantages of 'going online.'

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