

Taking the fear out of using ICT to teach digital natives

Annie Facchinetti



Brad Kendall and students at Yarrambat Primary. He ran the Nintendo DS trial in his grade

At a recent curriculum coordinators meeting, a renowned author, lecturer and researcher from New Zealand was sharing some critical information about the physiology of the brain, when the PowerPoint presentation he was showing ran amok. As it skipped forward several slides, I saw panic momentarily freeze his features. A colleague sitting next to me, leaned across and whispered, “That’s the problem for my generation. It’s not that we don’t like technology. It’s that we are always in fear of it letting us down, and not being able to fix it.”

Digital natives

The incredible advances in technology over the last decade have made devices such as mobile phones, laptops and hand-held gaming units a part of everyday life. The children of Generation Z, who now make up the bulk of our primary and secondary school population, are the first generation that has never known life without this technology. As a result, they are often referred to as “digital natives”.

Few teachers would describe themselves



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as digital natives. The average age of teachers in Australia is now 42, and many modern educators wouldn’t have even had colour TV as children, let alone access to the myriad gadgets that kids have today. There is therefore often a great deal of resistance when new technology is introduced in schools.

Joan Galea and Rose Hitch have seen their fair share of new innovations over more than 30 years working in primary schools. Both are currently teaching prep classes at Our Lady Help of Christians Primary in outer Melbourne Eltham. Although she can see the benefits of modern technology, Galea doesn’t always find it easy to use independently. “It’s extremely frustrating having to rely on other people to come around and fix any problems,” she explains. Hitch finds the pace of technology similarly overwhelming. “It’s too much for me to cope with. There is often no time to practise so I can’t develop confidence in what I am doing.”

Teachers frequently lament that their students know more about technology than they do and many turn to their students to resolve any problems they encounter. Technology also represents a threat to tried and true teaching methods. It can be difficult to accept that something you have been doing for the last three decades may no longer be the best practice. When this is coupled with a fear that the technology may not work properly, it is understandable that some teachers approach hi-tech innovations with trepidation.

On the other hand, technology presents exciting opportunities for learning and teaching. It is essential that today’s students can relate classroom experiences to their everyday lives if their interest is to be maintained. This means that teachers need to be as familiar with technology as their students are, in order to integrate it into the class program in a meaningful way.

Web 2.0 technologies

Many schools are trialling the use of Web 2.0 technologies (web-based software that allows users to interact with each other) as education tools. One example is Yarrambat Primary in Melbourne’s outer northeast. Earlier this year students from a Grade 3/4 class participated in a 10-week project that piloted the use of Nintendo DS units at school. Run in conjunction with the Department of Education, the project aimed to explore the potential of gaming technology in the classroom

by providing students with the opportunity to use DS Brain Training and Maths Training for a period of 15 minutes at least three times a week.

The results of the trial are in some ways unsurprising. The class teacher reported that there were positive impacts on the students' attitude towards learning, with even the most reluctant learners being enthusiastic and self-motivated. Academic achievement also improved. In particular, both accuracy and speed of number fact recall increased.

Interestingly, one of the biggest areas of improvement was in student behaviour. The Web 2.0 technology allowed the DS units to be electronically connected so that students could play games against their friends, introducing a competitive element that can be particularly motivating for boys. With attention firmly focused on winning, or on improving on previous personal results, children were less inclined to misbehave.

The Yarrambat trial has been so successful that the school is now participating in another pilot project using Apple iTouch units in the classroom.

Proponents of gaming technology in schools argue that well-chosen interactive and co-operative activities can also promote social skills. Just as board games help children understand concepts such as waiting and taking turns, so too do computer games nurture these same skills in a way that children see as more pertinent to their world. The key is to select games for their educational value and not purely as entertainment. For many teachers, bringing technology that is traditionally considered as a leisure-time distraction into the classroom represents a major shift in thinking.

Technology training

Schools can, however, take a number of steps to increase the chances of successful implementation of new technology. There is a strong sense of "use it or lose it" when it comes to learning how to operate new devices or software. Both Joan Galea and Rose Hitch suggested that they would appreciate time to practise independently or with a knowledgeable partner before having to use electronic gadgets with their students. This is often difficult to schedule, but is crucial if teachers are to develop the knowledge and confidence to effectively implement the use of new technology.

For example, before the DS units were introduced to other grade 3/4 classes after the Yarrambat trial, the teachers involved were able to take them home over the holidays. This allowed them to experiment and become familiar with the devices before having to deal with them in a public domain.

According to Galea, if there isn't an opportunity to apply skills learned in training immediately, it is often difficult to remember what to do when teachers return to the classroom. "I need a step-by-step procedure



Yarrambat Primary students Aidan, Joshua, Caitlin and Ashley took part in the Nintendo DS trial

written down for me, especially if it's not something I am going to use every day." As well as clear instruction manuals, supplying basic trouble shooting guides can build confidence by giving teachers the ability to fix simple problems themselves on the spot.

Use of an "expert" on staff who is proficient with the technology is another effective strategy. Training from outside companies is usually limited, with a lot of information being conveyed in a short time. Often, staff members with a talent for information communications technology are already used informally as a reference point for their colleagues. Formalising this relationship provides an accessible resource to whom teachers can turn if problems or questions arise. This helps staff to feel supported beyond one-off formal training sessions, with the added benefit of building school leadership capacity.

Technology is certainly with us to stay, and is

an integral part of the lives of our digital native students. Now more than ever, it is crucial that schools reflect and capitalise upon the world of their students beyond the classroom and this necessarily involves incorporating technology into the curriculum in intelligent and relevant ways. It may take a bit of effort to get everyone on board, but it's a journey worth taking. And if it all becomes too much, we can always console ourselves with the thought that by the time the children of Generation Z reach our age, they will be as bamboozled by evolving technology as we are.

Annie Facchinetti teaches Year 1/2 at Our Lady Help of Christians Primary in Eltham. As a teacher in a Catholic primary school with two children in the state system, she sees educational technology from a variety of perspectives.

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