Technology for learning: personal, portable and sociable

According to a recent Horizon Report (New Media Consortium 2008) the major trend likely to impact on education in Australia and New Zealand in the next five years is the use of smart portable devices to expand authentic, active learning, with people connecting and collaborating globally. We certainly have the devices: personal items such as mobile phones, iPods and netbooks are getting smarter all the time. Multimedia phones with camera functions are proving popular and useful in Victorian schools, particularly to develop literacy skills – both verbal and visual.

Students at Flora Hill Secondary College use them to create short movies. At Shepparton High School, students use iPods to search the web, do classroom quizzes, hand in homework assignments and collaborate online with students in Singapore. Geocaching (http://geocaching.com.au) is part of the curriculum at Healesville High. A location-based activity, it involves thousands of people across the world hunting tagged items.

The report also notes critical challenges for the region, including excessive security policies and firewalls, teachers’ skill levels, assessment and the quality of broadband, which limits options at school and home. The recent improved broadband access announced by the Commonwealth Government is a step towards greater connectivity across Australia, while the assessment project reported in Maureen O’Rourke’s article, titled ‘Harnessing technologies for quality teaching’, also addresses a major challenge. As well, Building the Education Revolution will result in new learning spaces with ICT infrastructure to connect students across Australia and the world.

Learning theorists from Dewey to Vygotsky and John Seely Brown see learning as a personal process in a social context, and ICT has a role to play in personalising learning as well as connecting people. Personalisation is a philosophy that puts learners at the centre (DEECD 2007). It includes designing adaptive software that responds to the learner’s changing ability, to providing teachers with timely information, through formative assessment, to plan for students’ needs. But as Leadbeater (2004) argues, personalisation isn’t just about learners choosing between a range of pre-existing options, but more about them becoming co-producers, involved in the design of their options, or their curriculum. The processes for involvement are sometimes called ‘student voice’.

Watch any teenager at home viewing multiple screens (perhaps games and school work), instant messaging with friends and watching YouTube at the same time. Is this really a transformation of learning?
Having a personal online learning space is quite common in the UK, and has been policy for four years (DFES 2005). One teacher commented:

*For me it's about allowing children to express themselves however they want, and it's about giving them chances to let their learning go in the route that is natural for them. Sometimes you do it in a structure and sometimes you say, 'OK, go for it'. And this gives them an opportunity to say, 'Yes, I can do that'.*

Learning spaces often enable students to conduct forums with external experts, collaborate with students in other schools, and reflect on their past work and their progress. Parents can log in to see what's happening at school and what their students are learning. Associated with personal spaces on learning platforms, the UK has placed a strong emphasis on long-term eportfolios for students at all levels from school to university, and in some professions. In Australia, eportfolios of this type are also becoming popular in schools and universities.

Some of the best personalisation occurs when technology is designed for students with special educational needs, and the functionality would often benefit learners in other settings. For example, online spaces that use integrated symbols and sound recording, and login options based on a sequence of images instead of a text string for a password, are solutions for particular needs.

Personalisation also acknowledges what learners bring from their rich and diverse experiences of informal learning and takes account of their current access to technologies and the skills they have acquired outside school (Green et al. 2005). Anywhere anytime learning blurs the distinction between school work and home work and encourages parents’ involvement in their children’s learning (MacFarlane, Triggs & Yee 2008). It also offers new opportunities to learners on the margins of the formal system, such as families, low-achieving students, people in employment and those who have retired.

These new approaches to learning require flexible approaches to assessment of both readiness and achievement, including ways to identify evidence in a range of formats, and to store it over long periods, perhaps in web-based portfolios. Researchers at La Trobe University have developed a way to capture the thinking when students use PDAs for calculations and writing, using internal video capture technology. Teachers can then review the conversations between students and their attempts to complete the tasks (Ng and Nicholas 2009).

Sociability is supported by many ICT tools, including social networking, blogs and wikis. Many students are already skilled in networking online, displaying the critical literacy to ensure their safety. Yet when in a recent report about Web 2.0 (Lemke et al. 2009), school district administrators in the US acknowledged the need to use Web 2.0 tools to transform teaching and learning, yet few had systemically begun to research, plan, or implement effective uses of Web 2.0, nor had they used these tools to restructure their schools into more participatory cultures. The Department’s recent Innovation Showcase highlighted some excellent Victorian examples of connecting and re-connecting students to school through these tools.

However we cannot assume that all students are natural users of all digital technologies. Some are familiar with play stations, but not mobile phones. Others use computers for games and instant messaging, but cannot use a word processing package. Like adults, children and young people have different experiences of, and attitudes to, ICT.

What impact does ICT really have on learning, and how can we measure it? Many have tried to answer this complex question, with mixed results. In the UK, Becta (www.becta.org.uk) has conducted many research projects to identify the relationship between ICT use and learning, and has concluded that motivation, engagement, collaboration and personal organisation are particularly supported, with some evidence for improved test performance.
It seems that the processes of learning itself might be changing due to the use of ICT. Professor Roy Pea of Stanford University (USA) suggests that we need to get inside the experiences of learners, because ICT changes how things are represented and how learning systems are organised. Just watch any teenager at home with multiple screens (perhaps games and school work), instant messaging with friends and watching YouTube at the same time. Perhaps this really is a transformation of learning.

**Bibliography**


Leadbeater, C. 2004, *Learning about personalisation: how can we put the learner at the heart of the education system?*, Department for Education and Skills, UK. http://www.innovation-unit.co.uk


