Interview with Greg Adams of Interface (New Zealand), 04 February 2008

How important is the physical space where teaching and learning takes place?

Most people will agree that it's better to put a good teacher in a cow-shed than a bad teacher in a classroom. That said, many good teachers hamper themselves by choosing identikit classroom layouts, in which only a few teaching and learning styles are ever deployed.

A couple of years ago I did a rough and ready survey of the amount of 'stuff' in a classroom that could be moved, and how often it actually was moved. Over 80% of the contents of a typical classroom can be moved and reconfigured, but hardly any of it ever is. We have a 'set and forget' mentality when it comes to classroom layout. This finding underpinned the design of the '360 degree flexible classroom' as part of a project I ran for the UK Design Council. Elements of this classroom are now commercially available and allow teachers to change room formations at will.

We would do well, in designing future learning environments, to ask the same questions as the Victorians when they invented our own, now outdated, system. What needs are we addressing in providing our educational service? What easily recognised and popular formats do we have available to us? What devices and equipment do we have on hand that might assist us with this task? If we did that in a genuinely open way, listing as many ideas as possible, we would soon realise that the 'modern' classroom design is totally archaic.

What impact is ICT having on this environment?

The main issue with ICT in schools is that it tends to be accepted only when it makes the job of teaching easier. An interactive whiteboard, at the end of the day, is a blackboard that remembers everything ever written on it and never needs to be cleaned. iPods, on the other hand, threaten the teacher's position as monopoly provider of information. Mobile phones challenge old conventions about everyone sitting silently in one place.

It really is to all our shame that we have allowed Victorian notions of how teaching should be done to get in the way of really amazing projects that captivate and challenge learners. 90 per cent of everything we know about how the brain works has been discovered in the last 20 years, so it is a big mistake to bias almost all our educational practice towards the other 10 per cent. If you want a good example of how it could be done, check out Futurelab's Savannah project – GPS enabled PDAs that allow children to use the school playing fields to mimic the hunting patterns of lions.

What are schools/teachers doing wrong? (generally and technology specific)

I'm just back from speaking at BETT – the world's biggest educational technology show. There really is nothing like watching thousands of teachers dragging suitcases full of ICT freebies to make you question the point of our existence.

It always amazes me that so many teachers venerate technology as an object of worship or self-justifying acquisition. Great technology is bog-standard and provides support without drawing attention to itself – like a lightswitch or a fridge. We should make our purchasing decisions on the basis of what the technology allows us to do – like see in the dark or keep food fresh.

At BETT it was clear that a large number of visitors were trying to get ahead of the game by ordering the very latest technology. With a few, very specific, exceptions I would argue that this is a mistake: the cost-benefit of the very latest technology versus cheaper, cooler, proven and more robust products is weighted firmly in place of the latter. Almost any piece of technology launched in the last five years (wifi being an exception) is already powerful enough to support almost any activity that might happen in a school. Replacement models, as well as being overly powerful, tend to be more expensive, smaller and trendier – which also makes them much more likely to be stolen.

A final mistake that I see being made is that many teachers try to maintain a position as most knowledgeable person in the classroom. Unless you are under 30 you simply won't be able to. If you are under 30 the idea probably seems silly anyway.

If they get it right, what sort of increase in performance and effectiveness can they achieve?

I'm lucky in that one of my clients is a former UK Headteacher of the Year. His school has moved from what we call 'special measures' to 'outstanding' and has achieved 40% improvements in the pass rate in each of the last four years. A big part of the improvement is down to developing a culture of end-user participation, which translates as allowing students to make decisions as opposed to being consulted.

Setting aside the idea that technology equals laptops, I recently built an intelligent fountain (one that can see and hear using stereo microphone and motion detectors) with staff and students at Luckwell Primary School in Bristol, England. The entire school cohort (206 children) were given control of the design development process, with teachers having to develop a new role for themselves as facilitators of the children's learning process. The fountain is being installed this term, but already the school has reported that children's focus has improved across the board, as has their ability to collaborate and problem-solve.

What would be your advice to teachers wanting to make the most of ICT – but not knowing the best way forward?

Ask the children how you could structure your lesson using their favourite technology. Then do it.

What new ways of learning/teaching do you think schools should be considering?

My own view is that, given the way in which technology makes it easier for us to communicate and to stay safe, we should be looking at distributed learning. Here in the UK we have something called Notschool, an online school exclusively for children who have been excluded from 'mainstream' education. Whereas the overall number of excluded students achieving five GCSE passes (our national minimum target) is around 1%, Notschool is achieving over 50%. If some of the worst performing students in the country can achieve improvements like that, we ought to ask why more schools aren't looking to copy the good practice.

What ICT development is having the most effective impact in the classroom – and why?

I am a fan of wireless projectors. Linked to a wireless laptop they allow teachers the ability to range across the room while remaining in touch with their laptop. They can then continue to show a presentation while helping a particular student or even switch the source image to a student's laptop. Djanogly School in Nottingham is a leading exponent of this approach.

What do you think will be the next major disruptive technology to hit the classroom?

I think the classroom is the disruptive element, preventing street technology and modern working methods from being used effectively. If I could invent a disruptive device for schools it would be something that linked level of interest to the school bell, preventing it from ringing if people were really making progress.

Last time I was asked this question, I suggested creating an employee congestion zone at work. After 6pm, people would be made to pay to stay at work. This would encourage them to go home and spend time with their children. I'm sure the effect on performance in the classroom would be profound.

What do you think the future holds for ICT in the classroom?

I think the future is about ICT inside, outside and alongside the classroom. Classrooms are just an early form of the mass communications device, allowing one person to share their views with the many. Sitting alongside it we now have email, TV, conference calls and Second Life. While there will always be a place for classrooms, I think that technology will lead us to reappraise the role of the classroom, identify what it is really good at, and value those aspects as part of a bigger picture. Inside the classroom, I would expect to see technology fading into the background while enabling much more satisfying learning experiences – imagine pulling a piece of cloth out of your pocket, drawing on it and watching as the sketch appears on the wall. The cloth would, of course, be powered by wireless electricity. You would then point your drawing tool at the printer and a 3D model of your sketch would be built before your eyes. Every single thing I have just mentioned already exists.

Links:

Stakeholder Design:
www.stakeholderdesign.com
info@stakeholderdesign.com

Podcast of Sean giving a talk on the future of education:
http://feeds.feedburner.com/~r/ULSSeminars/~3/132693854/ULS070524_sean_mcdougall_part1_edited.mp3

The intelligent fountain:
http://www.luckwell.bristol.sch.uk/projects/futurelab.fountain.html

The story of the 360 degree flexible classroom:
http://education.guardian.co.uk/newschools/story/0,14729,1426539,00.html

Flexible furniture:
www.glearn.co.uk