

CLICKS AND BRICKS: How School Buildings Influence Future Practice and Technology Adoption

By Ewan McIntosh

*Digital land knows no boundaries of space, time or geography. The effect on learning in the past three years, in particular, has been profound, though not necessarily on learning **in schools**. More have arguably expanded their horizons through 20 minutes of TED Talks than 20 minutes of most chalk-and-talks or classroom activities.*

Apply the principles of digital development – how we attract attention, retain it and turn that attention into some kind of learning value – to physical learning spaces, and we can imagine a totally different means of designing and constructing new schools, where the physical space is not designed as a copy of the spreadsheet used to work out the surface areas required. Rather, might digital approaches to engagement within the building space help promote teaching and learning practices in schools by leaps and bounds?

The media world has worked out how to harness the user - education's got a thing or two to learn from it

The media world has been able to move from its equivalent of concrete foundations – the broadcast television show – to create new forms of interactive, co-created, crowd-sourced cohabiting with professionally-produced content. Aleks Krotoski's treatment of the BBC's Virtual Revolution is a textbook model of how a professionally produced documentary is made better by giving all its ingredients away to the audience/users.

The approach of those schools who are able to “professionally produce” student-driven learning shows the same adaptability of pedagogy. This was clearly demonstrated on my recent trip to Albany Senior High, Auckland, where students are entirely in charge of inventing, managing and recruiting peers to deliver Impact Projects. Gever Tulley's Tinkering School and the kindergarten kids in Lanarkshire, Scotland are further examples of what's possible when you reverse the point of the professional in the room. As Gever puts it, the professional is there to “tilt projects towards completion,” not professionally produce the learning and ‘deliver’ it to learners. When Tim Rylands was sitting with his students rather than leading them from the front of the room, in his immersions into the world of *Myst* he was also changing the model to empower the user/customer/learner to create great things for themselves.

The Seven Spaces

Matt Locke kicked off with six spaces of digital media that provided a framework for thinking about the media without having to refer to

brands. This structure helps avoid what I call “The Hoover of the Internet” problem – when we hear people talking about Facebook when they really mean social networks, or talking about Google when they really mean... well, it could be anything! Last year, I added a seventh: data spaces.

When we look at the digital media we interact with, with whom we interact in each space and what that looks like in a physical environment, we start to see that these seven spaces provide a fresh format for asking teachers, parents, students and others what they would like to do in a new building allowing us to design a flow between the right mix of spaces for the projects they will undertake.

Secret Spaces

Examples: SMS, IM

Think about how you sit when you're texting someone. How do you sit differently when you start looking up a webpage on your mobile phone? When we're engaged in secret spaces sending text messages to one other person as opposed to public publishing spaces, like a webpage or even send-



Saltire Centre Moveable, Inflatable Igloo

ing a 'text' to our hundreds of Twitter followers, our body language is totally different.

Therefore, the consideration of physical space has to be addressed. In schools, where are the private, secret spaces where we can curl up to text, read a book or perhaps read material that we wouldn't want our peers to see us read -thick books when our friends think it's "uncool" to read 'proper' books, sex education materials, advice books or websites? Privacy is hugely important to teens in particular, more than adults tend to comprehend.

Maybe we need to think about temporary secret spaces, like the inflatable igloos of Glasgow's Saltire Centre? Or how about spaces that can be totally revamped according to the theme of work that term, perhaps resembling the exciting nest room in W+K's offices.

Secret spaces needn't be unsafe, either. Take the most secret space we currently have, the WC. By allowing the doors to open into a communal area, we swiftly turn secret into public without compromising either space's feeling and purpose.

Group Spaces

Examples: Facebook, Myspace, etc.

Digital group spaces work because they're engaged around one thing, and one thing only: how can we help people find their

friends, converse and share information? Facebook's features, for example, all are designed to achieve this goal - from the wall of friends' post on login to the advertising.

In school, it seems like most spaces, indoors and out, make this virtual "gathering around the fire-side" hard or impossible to achieve. Most school spaces are generally designed to stop people from collaborating or talking with each other - whether it's the distinct lack of out-



door seating areas; available seating set to face at opposing angles, discouraging conversation; desk and seating arrangements contrived to make us all face one way or to make it difficult to shift around; or the reasoning behind having 25-year walls separating classroom spaces.

The d.school at Stanford is one place that realizes less is more. When trying to connect the existing groups and communities in our schools, leave the space as wide open as possible and place the furniture, objects, lighting or moveable, hanging walls that are required on the side, and on. Want a wall? Take one. Need to gather folk around? Bring your own seat. Want a 'secret' space in which you can hide a bit? Make one. Need more whiteboard? Paint some (Ideapaint.com).

The Glasgow Saltire Centre continues this idea with its on-wheels moveable Palm Tree lighting, moveable inflatable igloos and little niches.

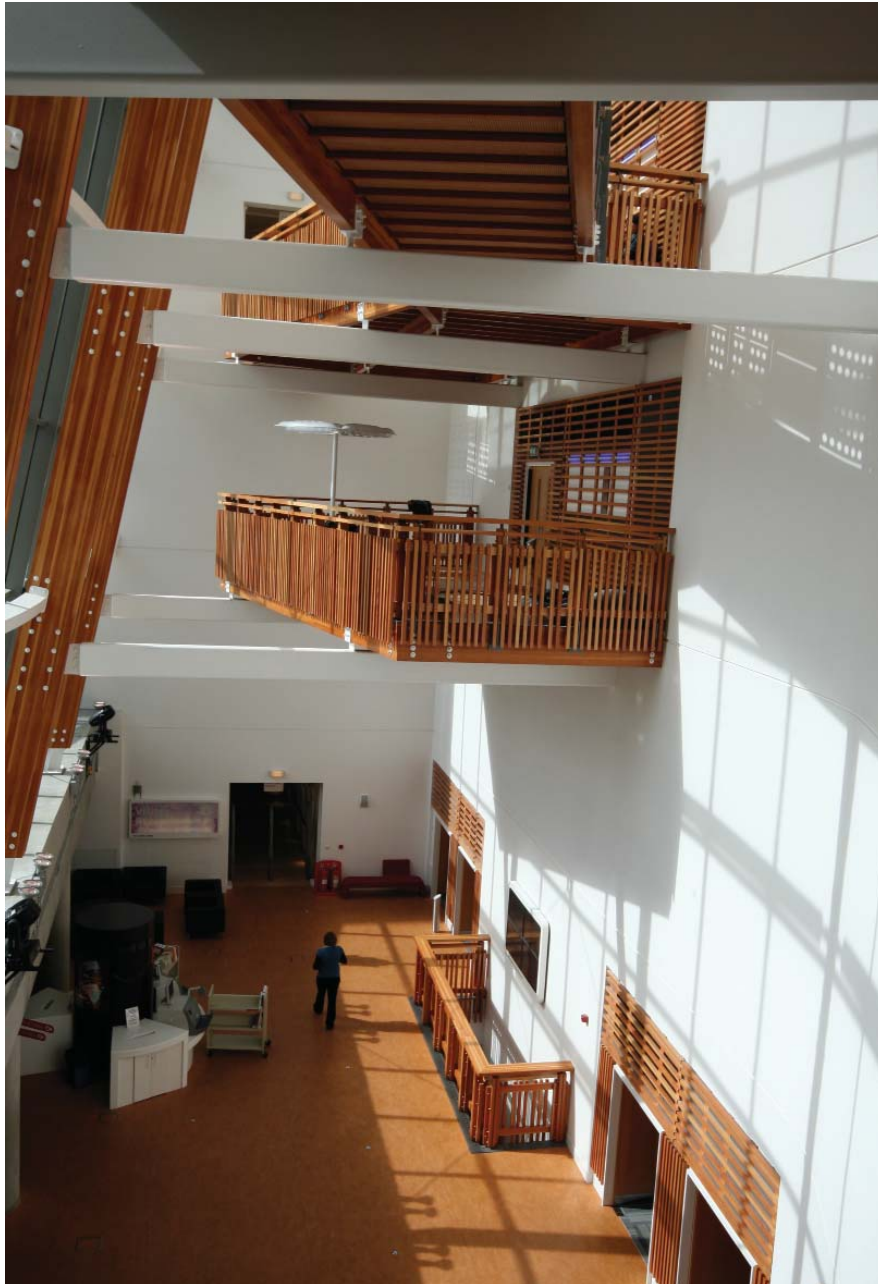
Publishing Spaces

Examples: Flickr, Youtube, Reverr

Online, when we publish a blog post or put a photo on Flickr, we



Learning Spaces at the d.school at Stanford University



Saltire Centre Secret Balcony

hope that people might find it. We're publishing, flinging it out there and hoping it sticks. Over the years, the providers of publishing spaces have done as much as they can to help this information leak into other spaces, or transgress, so that blog posts are sent out to Twitter with ease, which in turn sends them to my friends' groups on Facebook and into individuals' RSS readers. Schools' physical spaces should demonstrate how

digital artifacts of learning can be shared through the building space, much like the video referred to above where Tweets from within a building are broadcast to its shell and viewed through mobile phones.

Performing Spaces

Examples: MMORPGs, Sports, Drama

Performing spaces allow people to be someone or something they are not. In World of Warcraft you can be grouping with hundreds of

other warriors to win battles of epic proportions, while by day you're a computer science teacher.

These performing spaces are traditionally seen as epic concert halls. Stanford's latest addition in Bing Hall is one such epic extension to the learning environment. However, these spaces tend to be reserved for those who are not performing in a way that allows them to be something they are not - these spaces are about encouraging and showcasing those who have already discerned that they can be what they dreamed of being.

Imagine the opportunity to transform learning spaces into temporary universes where we can immerse ourselves in a "imagine if" environment. It could be the nest room example, above, or buildings that enhance what great language teachers have always done - create a feeling of entering into a parallel, slightly exotic French, German, Spanish or Chinese environment.

When colleagues from one U.S. firm explained how they created 5, 10 and 50 year walls in their latest schools, each designed in a different way to be altered at those periods, I wondered what this might look like on more of a micro level, within one particular learning space. What are the 6-week, 12-week and one school year learning spaces we want to create for our student-led, project-driven work and how would that be accomplished?

Maybe it's about turning school buildings into more of a game, especially for those who are new to them. I wonder what inspiration could fill a school built by drawing on the experience of the father who, when refitting his Manhattan pad, placed scores of quizzes, nooks, crannies and secret spaces within it for his daughters to discover in their new home.

Participation Spaces

Examples: Meetup, Threadless, CambrianHouse.com, MySociety

In school buildings, what might participation spaces look like?



Saltire Centre Palm Tree Lights & Niches

Following the MySociety fascination with open data, it might be in providing relentless data points where current energy consumption and production of the school can be monitored and added to or acted upon by any student. Some schools

such as Gullane in East Lothian display the data of their energy consumption and production, but few have gone as far as creating a participation space where the community can interact, using the data to change their actions or realize the

impact of their actions on the environment.

Maybe it's as simple as looking to the creative industries' working spaces and how they link them. When IDEO employees meet to solve a problem, it's not clear where the boundaries of certain space and employees' ownership of that space lie. Why are we not turning our school yards and grounds into Edible Schoolyards providing a lesson in sustainability? Organic food can be raised for the school in a community garden and groundsmen will no longer be needed to mow immaculate lawns.

Or how about showing the data of the school - from energy use to what children have learned that day - through external "virtual displays"? How could augmented reality turn a blank wall into a webpage, into a video or into the view outside? Imagine a school whose best work and most intriguing learning successes and failures could be viewed by passers-by through their mobile phones - a living- learning building.



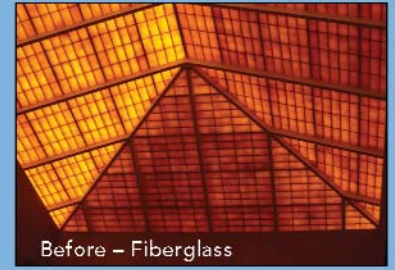
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Watching Spaces

Examples: Television, Cinema, Sports, Theatre, etc.

Finally, watching spaces. These are the ones schools are probably most geared up for at the moment. However, if we change everything about the school from the front of the classroom focus to having no 'front' in the classroom, then we have a wonderful opportunity to really celebrate the great lecture for what it is. TED Talks have proven the global appetite for superb, but short, lectures. And yes, even youngsters are blown away by the performance of an amazing speaker.

By making the norm in schools one of collaboration with the teacher as a guide, "tilting towards completion", then we can afford to create genial spaces for lectures, spaces that thrill and delight and celebrate those occasional moments of lone insight that only a real, living, flesh and blood teacher or visitor or student could ever offer.

Changing our approach to building school spaces in this way isn't easy, and it's a real chicken and egg as to "what comes first". The fact is, we need to consider building our bricks and building our curriculum at the same time. We need to be constructing learning walls with our teacher and student peers, but also with our architects and builders. We need to be looking at how our timetables can move from 45-minute, 90-minute or 2-hour chunks into something more akin to the flow we have when in the midst of a longer project or blog post. How could a building redesign bring us closer to the kind of learning flow achieved at the Stovner school in Oslo with a timetable where no lesson is less than three hours long?

In order to make this happen, perhaps school architects should answer their phones, "You want an architect firm? I'm sorry... you have the wrong number. We're a learning company." ■

Ewan McIntosh

Ewan is one of Europe's foremost experts in digital media for public services, particularly in education, the voice of popular education blog edu.blogs.com and the founder of NoTosh, who take startups through from ideation to execution to investment. Having founded NoTosh Limited in 2009, he has now led investments in startups and education projects of nearly \$5m on behalf of public and private investors. He was a key player in setting up one of the most ambitious investment funds from a public service broadcaster in the UK, the \$100m 4iP Fund. He is also the founder of 38minutes.co.uk, the creative industries platform for the North of the UK.

Ewan is passionate about the meeting point of entrepreneurial startups in digital media and the significance of new literacies, skills and opportunities afforded in education. He was Scotland's first National Advisor on Learning and Technology Futures and a member of the Channel 4 New Media Education Advisory Board. He is currently on the Board of Interactive Ontario's INplay conference, showcasing where play, video games and learning meet. He was originally a French and German teacher, amongst the first educators to harness blogs, wikis and podcasts for learning.

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