

Getting Students REALLY Involved in Design and Construction – Are You Mad?

By Gareth Long and Alison Watson

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Involve students in the design and construction stages of new schools? – “Are you serious?” “Leave it to the experts”, “We don’t have time - the programme is very tight”, “What do they know?”, “They’ll get in the way!”, “It’s not our job!” are still responses from some involved with design and build of new learning spaces. “We have our standard classroom design, we don’t involve staff or students - we know what works” is another comment heard recently from an American University facilities professional.

However, experience shows that many students, of all ages, are very concerned about their learning. They understand how they learn effectively and have clear views concerning in what types of spaces they learn most effectively. If so, why wouldn’t you involve them in the design and construction of new learning spaces, to ensure delivery of appropriate resources and importantly as part of a variety of wider learning opportunities?

In the United Kingdom, the previous Labour Government’s original plan was to upgrade or replace every secondary school in the UK as part of their Building Schools of the Future programme (BSF), at a predicted cost of £45 billion. During this period many local authorities (districts) and schools

started to consider how students and staff could:

- contribute to the design of spaces to enable new pedagogical styles to be developed
- benefit and learn real skills from sessions during the design and building process
- learn how the new building can actively continue to be an ongoing learning resource

The amount and type of stakeholder engagement depended entirely on Local Authorities or more usually individual schools. The most motivated schools were typically led by dynamic head teachers. Many of these head teachers really wanted students to be involved throughout the process and saw the process as a massive learning opportunity. Where students were really engaged, their input was enthusiastic, creative, ambitious but also surprisingly pragmatic. In those schools where students were involved simply to ‘tick a box’ for engagement, the young people quickly, and not surprisingly, viewed their involvement as tokenistic at best. The fact that some students and staff only saw their new school being built next door for the first time when they moved in is, frankly, shocking.



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What surprises huge numbers of professionals is the level of mature and intelligent contributions students make through design sessions, workshops and charettes. On numerous occasions we have heard architects and construction companies be surprised and almost worried about how challenging and sensible students are.



Pleckgate

Leading educationalists such as Sir Tim Brighouse noted:

“I’m very optimistic about student involvement... It’s not as deeply embedded as it should be – but it will be. Student voice is going to have a very powerful impact.” Sir Tim Brighouse

It’s not just about colours and types of furniture that they focus on, but how their pedagogical preferences impact the types of spaces they want to work in and how they are constructed to achieve them. They do talk about light, air quality, temperature, ability to move around, having agile spaces so furniture, both formal and informal, can be moved into a variety of formations, using technology when and where they want to use it and so much more...

Many construction consortia have learnt about the power and value of student voice along with the challenge and creative thinking they bring. They only ever underestimate them once! When construction company representatives arrived at a school expecting to offer some simple description about a new building they were put totally on edge when the first question was not about the look but “Why is your design only going to achieve the BREAM very good grading and what are you going to do about it to make sure it gets an excellent? This was not a planned or planted question – it came directly from the students. The look on the faces of the

construction company representatives was priceless.

The result of this student involvement is that exciting, transformative and effective school design has really begun to emerge. Many new schools and refurbishment projects are learning that, by asking the people who will use them, the students, they have a powerful very knowledgeable and informed voice in contributing to the design of effective learning spaces. Using students helps ensure learning spaces work effectively and sensibly to allow learners to learn, and work together in the way that they want to.

Schools and learning spaces designed in collaboration with students and staff support much greater ownership and enable new pedagogies to work in spaces specifically designed by learning. Almost certainly they will look and feel different to those built to a generic design by facilities management teams for cost efficiency purposes. In the ‘Third Millennium’ learning and expectations of students has changed!

Involving students and staff in design and construction creates whole new curriculum opportunities. Conversations start about curriculum adjacencies, types of activities in spaces, agile spaces for different size groups, selecting appropriate rather than traditional ff&e, the impact of building codes, energy efficiency, sus-

tainability, well being, use of technology, learning from smart buildings and so much more! In some schools students are now helping teachers maximise the effectiveness of new buildings by helping plan lessons and integrating technology.

Not everyone agrees with involving students however, including the new UK Conservative Government. When BSF was stopped last year, they commissioned the James Review reviewing all aspects of the programme. Whilst critical of the procurement strategy and bureaucracy around BSF, the Review findings also included:

“Staff and pupils in BSF schools had an unusually high level of input in the design process. The Review team were troubled by elements of this involvement. While it is clearly right to work hard to get excitement and buy-in from all stakeholders including students, we were not convinced that there should be significant input by pupils ...” James Review, ‘Review of Education Capital’, April 2010

We don’t agree with this, it’s just not about creating excitement about a building but maximising the massive learning opportunities it provides.

The process leading to the development and operating of a new building are part of these opportunities for students and staff. Traditional inclusion has young people present at ‘the exciting bit’. The development of the design at consultation stage may involve fun, productive sessions with architects and other design/creative professionals, but this often only lasts a few days and sometimes, the finished product bears little resemblance to the original ideas but the students have no idea how or why it was altered.

The two year construction process, coming well after the design consultation, is frequently a cursory affair when it comes to student inclusion with typical site visits, hoarding design competitions (which may or may not be used) and maybe a calendar completion or two. Hence this has no lasting impact and ultimately apathy to what goes on behind those very same hoardings which were beautiful-

ly decorated and unveiled two years before, to quote Lauren McGuigan, a Year 9 student:

"Hardly anyone was involved in our new school building. It was just like "don't go near it".

So what about the before during and after? One of the greatest challenges lies in proposing a new school to an established community. That takes communication, organisation, research, delegation, and motivation! It's English, Citizenship, it's absolutely about speaking and listening skills.

In terms of construction professions (and the critical importance of introducing built environment careers as being so much more than bricklaying) the topographical surveyor and ground investigation/environmental assessment team are first on site. The lay of the land and its formation is critical to a new school design and landscape project. In subject terms, it's trigonometry, geography and science. It's learning how to read a tape measure accurately, scaling, contours, levels, gradients. Get students and their teachers outdoors. Don't just talk the talk - walk the walk and FEEL what $dy/dx = 0.33$ is like. Discuss the shallowness, the steepness, the accessibility issues for the less able, and why a picnic table on a 1 in 3 slope just isn't going to work. But maybe you could make it work! Discuss.....!!

Children can understand the importance of a foundation through design technology, science, mathematics, history and more. Of course! After all, 1600 hundred years ago, Venetian architects and engineers were experts in their field, but foundations go back way back beyond this. The Walls of Jericho were constructed some 1100 years before this. History, Technology, Science, Maths, Engineering, Religious Ed, and English: Can the resonance of a horn really make a wall fall down? Could a modern day structural engineer design the walls any better using the same traditional methods (methods which, I hasten to add, are still in use today....)? Discuss!

So why aren't young people introduced at this early stage? Learning can

start with a building that isn't even built yet. All this research, all this capacity to learn, and the architects have barely put pen to paper...

Small wonder that they have little or any real idea of how buildings are designed and developed, and the professionals who make that happen. Research shows that the majority of young people perceive construction as 'building' and generally associate the industry with trade based skills. Perhaps with the exception of an architect, they are usually totally unaware of the diverse range of PROFESSIONS.

Thankfully, UK company 'Class of your Own' (www.classofyourown.com) is pioneering a new curriculum which introduces design, engineering and construction on a whole new level. With support from world class software company Autodesk, they are propelling young people and their teachers into the 22nd century by introducing technology used by some of the brightest, most inspirational designers around the world, from Manchester to Mumbai, Hull to Hollywood. They are using tools that professionals have yet to discover....and are leaving them standing in the race to a low carbon future.

To offer a cliché - a well performing building starts with solid ground and a firm foundation - much the same as a good student. Don't be cynical. Children - and teachers - thrive on 'real' inclusion. Kamila Samin, the 15 year old 'Managing Director' of Roots Accrington speaks of her experience in developing the Eco Classroom programme described in last years CEFPI conference:

"It's great being properly involved - children are leading it. It's a completely different perspective to looking out of the classroom window and seeing builders doing it all instead"

How many contractors get engaged in real detailed conversations about how and why they make the design and construction decisions they do - why wouldn't you? The standard answer of "Well these students will have left by the time it's built so there's no point" is simply an excuse. In fact,

students can have an extremely positive impact on any public building. The interior design of a combined community and health centre in the middle of a multi-cultural, deprived area in the UK became a less clinical, less forbidding place for young people to discuss their personal health problems. The students involved in the design were brought in at a late stage, but given four internal spaces to 'make their own'. Their creations were remarkable and very achievable, but most incredible was their insistence that everything was achieved sustainably. When it came to the environment, they knew their stuff. From engagement of the local workforce, to procurement of locally made eco friendly paint, these kids had this well known global contractor feeling very small indeed. Even having them create a wonderful sensory garden instead of the usual 'security planting' boring green space was wonderful. "After all" said Chloe, 13, "who wants to tell a doctor 'I'm thirteen and pregnant' in a little white room?"

Both the commissioning local authority and the contractor looked at each other. "What a great idea! Why didn't we think of that?" Need we say more? ■

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