ubiquitous as language and history and it impinges on our conditions at least as much as politics and science. Yet ancient predispositions towards language and number seem to preclude the taking of architecture seriously in pre-university education. Now, as reported in the last issue (**arq**, 14.3, pp. 267–76), we find that an A-level course focusing on architecture has been in operation and developing at Richmond College for the past few years. Needless to say, this has had to be achieved 'surreptitiously' under the banner of art and design rather than architecture per se. Earlier this year I visited the instigators of the course – Robert Atkinson and his colleagues – to look at what they and their students have been doing. I was impressed. It set me thinking about what schools can contribute to architectural education and how university schools of architecture, in a spirit of mutual support and collaboration, might help.

The pre-university education system in this country does not recognise Architecture as a subject in its own right. Nevertheless it seems that Atkinson and his colleagues have received enthusiastic support from their college and from the authorities that oversee courses. What is more, students, in substantial numbers, want to do the course.

Maybe there are other university courses where the vast majority of incoming students have no previous education in their chosen subject but, certainly, electing to study architecture is often a leap of faith born of indecision as to whether to follow a career in the 'arts' or the 'sciences'. And as soon as a student arrives in a school of architecture, the pressure is on to achieve at a sophisticated level within a few brief years. As the Swiss architect Peter Märkli said in a lecture at London Metropolitan University in 2006, it takes ten years and more to reach the proficiency in language to be able to write a love letter; yet we expect student architects to exceed this level in architecture within three or five years.

The availability of pre-university education in architecture would obviously be of benefit to those who wish to pursue a career in architecture. But surely it would be of value to those with other ideas about how they intend to earn a living. The list of contenders is fairly predictable: planners, building control officers, engineers, surveyors, project managers, those responsible in large organisations for the procurement of buildings (the list is quite long); all would benefit from a general education in architecture. Just as everyone benefits from general education in language, mathematics, science etc.

Robert Atkinson is an architect who has gone into education, so when he teaches architecture he knows what he is talking about and can set up appropriate exercises for his students. Lack of availability of architectural understanding and skill among secondary teachers would of course be a problem in resourcing a widespread A-level in Architecture. But university schools of architecture could help, sharing learning materials and collaborating with local schools.

The first year of the A-level course at Richmond does have a rather traditional focus on architectural history; but, when I visited, it was the content of the second year that excited me. Students at this level are encouraged to explore architecture as it impinges on their lives, as it affects the ways in which they operate in the world, rather than as a branch of art history. This, after all, is the strongest justification for the argument that architecture deserves inclusion in mainstream education. What the students do begins to touch on and reveal the profound conditioning influence architecture has on everyone and why it should not be sidelined as an esoteric concern. Although the success of the Richmond course seems to reside in analysis rather than in design, this focus on architecture as instrument – setting the spatial matrix in which we all live – is an admirable preparation for those students wanting to devote themselves to a career in architecture. It also opens the eyes of those who don't but might be heading for positions where they will be involved, in one way or another, in the procurement of buildings. A rooted appreciation of architecture as more than just a cosmetic art (as it usually seems to be presented in the media) would no doubt be a general good.

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The potential of children's architectural education?

Talk of restructuring and reducing the length of the standard architecture course has been thrown into sharp focus in England, where the country now braces itself for significant university fee rises. Robert Atkinson's paper (**arq**, 14.3, pp. 267–76) suggests one inventive route to introducing a school-based architecture foundation course, offering one means to address what will inevitably be seen by many as a compromise in the standard and quality of architectural higher education (HE). But, importantly, the article also points towards the inherent value in architectural or built environment education for children and young people as members of – and future adults in – society. As Atkinson puts it, 'To see an architectural education merely as a step towards a specialised course seems unsatisfactory and somehow misses the point'. Like Atkinson, educators and practitioners from a range of disciplines have espoused the 'manifest value' of children's built environment education; no matter whether they are to go on to become architects or other kinds of built environment professionals.

Built environment education can take so many different forms that it isn't possible to explore these here. It is testament to architecture's multidisciplinary and flexible nature, however, that it is considered to support the curriculum in a large range of subjects, including Art, Design Technology, Speaking and Listening, Literacy, Drama, Geography, Computer Sciences, Physical Education, History, Citizenship, Science, Mathematics[1] and much more. Introducing design, alongside the built environment, brings a different dimension to school education, which, as Eileen Adams points out: '[...] is usually organised, based on the past and what we already know. Design is about what we do not know. It is about imagining the future and making it happen'.[2]

In addition to specific architectural and disciplinary knowledge, built environment education has, therefore, been attributed with the development of critical skills and critical thinking, communication skills, exploration of ethical issues, collaborative working skills and 'designerly thinking', concerned with 'adaptation, transformation, invention and innovation'.[3] The impacts on students are reportedly

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equally broad, including: increased confidence, increased autonomy in learning, a sense of pride as well as ownership of ideas and products, enjoyment of and increased engagement with learning; even resulting in improved behaviour for some.[4]

In England, the Commission for Architecture and the Built Environment (CABE) and the Architecture Centre Network have been active in architectural education for children and young people. The aims driving CABE's education team have been to encourage young people to: 'understand the value of well-designed buildings and spaces; demand more from their built environment; and play an active and involved role in improving villages, towns and cities that we live in, instilling a sense of pride and ownership of their local area'.[5] These aims are driven by the rationale that, 'The built environment is one of the most exciting, accessible and adaptable learning resources available to young people', and the notion that 'No other section of society is as well informed about their local environment and it is essential that this knowledge and enthusiasm is harnessed.' Similarly, the Architecture Centre Network aims to 'develop children and young people as an expert client group and design advocates'.[6]

Taking an international perspective, PLAYCE – the international association for Children's Architecture Education – developed a series of declarations that underpin its work, with themes that support the aims of CABE and ACN and expand upon some areas. For example, '*the interaction of* architectural and children's culture, in a democratic context' is described as having 'the potential to improve the quality of the built environment'[emphasis added].[7] Links between education and civic, or design, participation are implied in all of these examples, with an acknowledgement that not only can children and young people gain much from engaging with the built environment in the learning process, but that architecture and the built environment (and designers involved in this process) have much to gain from their attention. There tends to be a blurring of the boundaries between education and participation in the field, with participation in design processes being seen as a means to learn and educational processes providing the means and capacity to participate in design. Sensibly avoided are any sweeping statements about the inherent greater creativity of young people in comparison to their elders. However, I would like to unpick this a little further here, as the issue beckons me to explore potential future research territory.

Designers who have worked directly with children and young people in the design process have remarked upon a general difference they see in comparison with working with adults. Alex Mowat of Urban Salon, who worked with young people in the joinedupdesignforschools project, observed:

> [...] *they* [the pupil client team] *were really really good at juggling the high-end aspiration for the project with the day-to-day nitty gritty. They were able to jump from the big end to the little end almost instantaneously, which is what most clients don't do.*[8]

Anecdotal evidence suggests that this is a common reaction. While there is still a need to raise aspirations, inspire, inform and build capacities to allow children and young people to effectively contribute to the design process, the playful thinking process and general aptitude for children (especially those younger children less conditioned to particular ways of thinking) to *play*, could be a factor in these positive design experiences. Research suggests that pretend play activities facilitate various areas of cognitive development in children, including learning strategies for problem solving, developing divergent thinking abilities and a flexibility in shifting between different types of thought (narrative and logical).[9] The latter resonates particularly with the reflections of Mowat and suggests potentially fruitful directions for both research and architectural education.

So, what does, or should, architectural education for children and young people look like? Is it essentially the same as an education for HE students of architecture? And what might each learn from the other?

Surveying examples of children's architecture education suggests that play is a common ingredient. Exploring the built environment and the design process with children often brings a licence to schools to put play at the centre of learning, where it might otherwise falter. Whether by virtue of the novelty of the experience, of working with external professionals and their expectation to *need* to engage children through play, or perhaps as a result of the demands of the design process itself (on time, intensity, inspiration etc.), the conditions for play are often supported. This is something that can be suppressed in the HE architecture design studio, where a culture of justification and rationalisation of the decision-making process can dominate and sometimes stifle.[10] This is not to advocate *products* that have no justification or root in social values etc. It is rather a plea to value the playful *process*. As Jung put it:

> *The creation of something new is not accomplished by the intellect but by the play instinct acting from inner necessity. The creative mind plays with the objects it loves.*[11]

Atkinson's experience also offers some answers. He highlights the potential of a rich architectural education to 'greatly increase its meaning' to young people. However, this is not some externally constructed meaning that the students are supposed to drink in and accept, it is a meaning that they co-construct; with the sources that they are exposed to and the social, cultural, historical and economic context of the architecture that they study. Meaning, in this case, comes through the raising of awareness of one's *own* perspective, as well as the received intentions and narratives of designers, historians and critics. Atkinson therefore emphasises the importance of starting with 'the meaning that the built environment has to teenagers', to inform the learning and teaching approach – 'how it can best be presented and explained to them'.

This is also a common principle in children's architectural education. An acceptance of prior knowledge and experience of the built environment as an important and valid *departure* point is reflected in a range of projects and their titles; from 'Me! In my Home' to 'A Strong Sense of Me'.[12] This is in sharp contrast to the normative architectural education of higher education which has traditionally sought to treat day one of an architecture course as day one of the architecture student's life.

Taking Atkinson's lead, what if the re-construction of history (by every individual, according to his own culture and experience) and the study of everyday places (local and familiar), for example, were to feed playful design processes in the architecture design studio? Of course there are many efforts by individual architecture educators

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to support just this kind of shift, driven by the intent of architectural transformation rather than reproduction and diverse futures for architecture.

If children's architecture education in schools were to become the norm, along the lines that have been briefly explored above, then these efforts would be greatly reinforced – school students equipped with a greater awareness of the built environment and its meanings, greater understanding of its relationship to people, society, the economy, the environment; and greater familiarity with their potential role as shapers of the built environment.

However, the future for children's architecture education in England is not looking healthy. Funding is being withdrawn from major relevant projects such as Engaging Places and their supporting bodies like CABE. Architecture and the built environment are not core subjects within the national curriculum and they are still rarely vehicles for study of other subjects, despite the resource-base that has been built by bodies like CABE and the ACN.[13] Looking around the globe, the story is not dissimilar. However, some countries like Finland and Norway embrace architecture within the curriculum. In Norway, it is one of four main subject areas in the core subject 'Arts and Crafts', along with Visual Communication, Design and Art, and is studied by all children from the age of six to sixteen.[14] In Finland, Architecture is similarly included in the national core curriculum of Arts education, both at elementary and secondary levels (indeed, in 2004 the Finnish Government even appointed a 'Children's Architecture Education Consultant' in southern Finland). It is clearly possible that architectural education could become mainstream in schools. Whether it should be a distinct discipline or an integrated component remains a subject for debate in the field. Either way, this letter suggests that the built environment is an under-used resource for learning, with endless potential to support engaging, inclusive approaches to education in schools. Not only would this education have value in its own right, it might also feed the profession with demanding clients and 'users' and architecture schools with students who challenge and ultimately transform architectural culture.

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Notes

1. See, for example, R. Parnell, J. Torrington, L. Procter, N. Ward, and C. Elliott, 'The Change Project: Engaging Children and Young People with Architecture and the Built Environment. Executive Summary', Report for the Paul Hamlyn Foundation, 2008. Retrieved 3 December 2010 from: http://www.shef.ac.uk/architecture/theschool/people/staffpages/r_parnell.html
2. E. Adams and The Kent Architecture Centre, *Shaping Places: Built Environment Design Education* (Chatham: The Kent Architecture Centre, 2006), p. 9.
3. Ibid.
4. See for example, A. Harrison, *Building for the Future: How Built Environment Education can deliver the Every Child Matters Agenda* (Bristol: The Architecture Centre, 2008); S. Kendall, J. Murfield and A. Wilkin, *Engaging Places: Teacher Research. Final Report* (London: DCMS, 2007), pp. 17–18; S. Kendall, J. Murfield, R. White and A. Wilkin, *Bridging the Gap: A Synthesis of Research into the Supply and the Demand of Built Environment Education in Schools (Engaging Places Research Summary)* (London: DCMS, 2007).
5. CABE, Education at CABE [online]. Retrieved 3 December 2010 from: http://www.cabe.org.uk/education/about
6. Architecture Centre Network, Work With Us, http://www.architecturecentre.net/docs/learning/workwithus/ [accessed 03.12.10].
7. E. Laaksonen, and J. Räsänen (eds), *Play+space PLAYCE: Architecture Education for Children and Young People* (Helsinki: Alvar Aalto Academy, 2006), p. 97.
8. J. Sorrell & and F. Sorrell, *joinedupdesignforschools* (London: Merrell, 2005), p. 60.
9. Singer and Singer, 1990, cited in S. W. Russ, 'Affect & Creativity; the Role of Affect and Play in the Creative Process' (London: Lawrence Erlbaum Associates, 1993), p. 33.
10. R. Sara, 'Sharing and Developing Studio Practice: a Cross-Disciplinary Study Comparing Teaching and Learning Approaches in the Art and Design Disciplines', in A. Davies (ed.), *Enhancing Curricula: Contributing to the Future – Meeting the Challenges of the 21st Century in the Disciplines of Art, Design and Communication. Proceedings of 3rd International Conference. Lisbon, April 2006*, Centre for Learning and Teaching in Art and Design (CLTAD).
11. C. G. Jung in J. Jacobi (ed.), *C. G. Jung: Psychological Reflections: A New Anthology of His Writings 1905–1961* (London: Routledge and Kegan Paul, 1971), p. 200.
12. These particular projects were devised by CUBE – Centre for the Urban Built Environment. A gallery of projects including these can be found at: CUBE, Education, Gallery, http://www.cube.org.uk/education/gallery.asp; see also PLAYCE, Art and pro: http://www.playce.org/index.php?page=art-pro [both accessed 03.12.10].
13. See The Architecture Centre, Useful links, 2010 [online]. Retrieved 3 December 2010 from: http://www.architecturecentre.co.uk/education-teaching-resources-useful-links.
14. The Norwegian Directorate for Education and Training, Arts and Crafts subject curriculum: http://www.udir.no/Artikler/_Lareplaner/_english/Common-core-subjects-in-primary-and-lower-secondary-education-/ [accessed 03.12.10].
15. (de Graft-Johnson et al, 2001; de Graft-Johnson and Manley, 2006)

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