



Queensland University of Technology
Brisbane Australia

This is the author's version of a work that was submitted/accepted for publication in the following source:

Bland, Derek C., Hughes, Hilary E., Willis, Jill, & Elliott Burns, Raylee A. (2014) Reimagining school libraries : children's perspectives and new opportunities. In *Australian Association for Research in Education (AARE) 2013*, 1-5 December 2013, Hilton Adelaide Hotel, Adelaide, SA.

This file was downloaded from: <http://eprints.qut.edu.au/65701/>

© Copyright 2013 [please consult the author]

Notice: *Changes introduced as a result of publishing processes such as copy-editing and formatting may not be reflected in this document. For a definitive version of this work, please refer to the published source:*

REIMAGINING SCHOOL LIBRARIES: CHILDREN'S PERSPECTIVES AND NEW OPPORTUNITIES

Dr Derek Bland, Dr Hilary Hughes, Dr Jill Willis & Dr Raylee Elliott Burns

Children & Youth Research Centre, Faculty of Education, Queensland University of Technology

Abstract

The Federal Government's recent Building the Education Revolution program resulted in, among other features, the creation of over 600 new school libraries in Queensland alone. This paper reports on a component of a research project carried out with students in six primary schools and one secondary school that benefitted from the program, investigating the influences of these new physical environments on learning and teaching. In particular, this paper discusses one missing voice from the design process - that of the students who would be key users of the newly-created spaces in those schools. While opportunities for real involvement in design were minimal for most potential users of the new spaces, students' imagined possibilities for school libraries, as submitted to the research project, suggest that students could have contributed different perspectives to enhance learning engagement through imaginative design elements. The findings of the project have relevance for teachers and teacher librarians in reconsidering the ways in which the new learning spaces are used as well as informing school designers in planning engaging school facilities. The findings may be extrapolated to the design and planning of general classrooms and other learning environments.

Recently, many classrooms and school libraries have been built or refurbished through the *Building the Education Revolution* (BER) program (DEEWR, 2011) resulting in the creation of over 600 new school libraries in Queensland alone, contributing much needed facilities and resources to help improve educational offerings to thousands of students and to encourage pedagogical renewal. While it is highly unlikely that schools benefitting from this program would relinquish their new facilities, the *Implementation Taskforce Review* of the BER process highlighted some shortcomings which were clearly influenced by the urgency in the underlying economic stimulus plan for the Australian economy (Orgill & Chandler, 2011). In particular, the Review found evidence that the tight timeline for completion of facilities inhibited the adequate preparation, direct participation and creative professional influence of school communities (DEEWR, 2011; Orgill & Chandler, 2011).

This paper discusses a component of a research program, *Reimagining Schools to inform the design and use of learning spaces*, carried out on behalf of the Queensland Centre for Social Science Innovation (QCSSI). The research team interviewed teacher librarians, principals, other teaching staff and students in seven schools in various areas of Queensland to better understand the influences on learning and teaching of these new physical environments established through the BER. In particular, this paper focuses on one missing voice from the design process: the study found, while opportunities for real involvement in the design of the new school libraries were minimal for all potential users of

the new spaces, students' voices were almost totally absent. The students' imagined possibilities for school libraries, as collected through this project, suggest that students could have contributed different perspectives to enhance learning engagement. This paper will discuss the rationale for the involvement of students in the design of schools, and will consider ways in which school libraries could have been enriched through students' contributions of "ideas that teachers would not have thought of" (Rudduck & Flutter, 2004, 21).

The *Reimagining Schools* project

Using a mixed method approach, the *Reimagining Schools* research project investigated learner and teacher perspectives across three intersecting domains exploring:

- Imagined spaces: learners' and pre-service teachers' imaginative concepts of learning within engaging learning environments;
- Emerging spaces: experiences of teacher- librarians in the transition into new spaces for learning, and
- Established spaces: learners' and teachers' perceptions of ways in which the physical environment influences and shapes pedagogy.

Through investigating responses to the newly-created school libraries and imagined learning environments, the study highlights both creative and grounded possibilities for engaging school design. While the experiences and opinions of teacher librarians were the major focus of the research, students in those schools were also asked to share their ideas for new school library spaces. The findings of the project have relevance school designers in planning new school libraries and refurbishing existing libraries. The findings may be extrapolated to the design and planning of general classrooms and other learning environments.

The study was carried out in Queensland with six primary schools and one secondary school that benefitted from the Australian Government's *Building the Education Revolution* (BER) program. The BER initiative injected over \$16.2 billion in funding for education facility infrastructure to modernise schools of which \$3.6 billion was committed to building over 3000 school library projects nationally (DEEWR, 2011). The BER was an economic stimulus response to the global financial crisis, emphasised in the first policy objectives:

- to provide economic stimulus through the rapid construction and refurbishment of school infrastructure.

The second objective was:

- to build learning environments to help children, families and communities participate in activities that will support achievement, develop learning potential and bring communities together. (DEEWR, 2011)

While the first objective drove the construction of the new libraries, the vision implied in the second objective appears to have been focused on post-construction use of the facilities and the opportunity to enact such participation as an element of planning appears to have been missed.

Reimagining school libraries

Regardless of the economic imperative of BER, the recreation of school libraries is timely, if not overdue, following their evolution in recent decades to become far more than book depositories and resource centres to assume new identities as, for example, learning hubs, iCentres and information or knowledge commons (Hay, 2010). As Todd (2010, p. 18) indicates, school libraries that conform to traditional roles risk becoming unviable in contemporary school settings, proposing the notion of 'knowledge commons' that would be central to the school's learning and teaching practice. As has been observed in many research projects involving children in the design of their own learning environments, school students included as partners in reimagining school tend to produce ideas that echo the knowledge commons notion of learning environments.

While student voice in school decision-making has been established over many decades through, for example, representative student councils (cf., Arnot, McIntyre, Pedder & Reay, 2004; Rudduck & Flutter, 2004; Thomson & Holdsworth, 2003) the convergence of student voice and the design of learning environments is a rare and more recent phenomenon (Flutter & Rudduck, 2005). Decisions about school design are usually made by "administrators, public officials, builders, architects, and others, who, in most cases, will not be the users of the finished schools" (Ghaziani, 2008, p. 226). Children are seldom able to influence the reality of school design although, in many countries, they have proven themselves capable of expressing fresh ideas in relation to learning environments (Clark, 2010; Rudduck & Flutter, 2004; van Wagenberg, Krasner & Krasner, 1981). A number of research projects and design competitions have provided platforms for children's imaginations to offer inspired new possibilities to learning space design (Birkett, 2011; Bland & Sharma-Brymer, 2012; Burke & Grosvenor, 2003; Doherty, 2005). While some of these may not have been formal research projects, the children demonstrated intuitive understandings of "built pedagogy" (Calhoun, 2006, p. 51) and an awareness that "space and learning are inextricably linked" (Thomas, 2010, p. 508).

These understandings were highlighted by Ghaziani (2008) who compared the results of three UK projects involving hundreds of school students, finding a surprising similarity among children's aspirations for their learning environments, regardless of geographic location and climate; features such as natural light and ventilation, soft textures, bold and cheerful colours, gentle music, soft chairs, rest and meditation places, outdoor learning areas, with trees, gardens, ponds, and animals were common desires of children in all the projects. Similar results were obtained in the USA (French & Hill, 2004, p. 37) and Korea (Rieh, Kim & Yu, 2011).

Students' contributions to school design, particularly where they are encouraged to be imaginative, may well be unpredictable and contradictory to the conditions that adults see as 'desirable' (Burke & Grosvenor, 2003; Rudduck & Flutter, 2004). Their perspectives are almost certain to "look and feel different to those built to a generic design by facilities management teams for cost efficiency purpose" (Long & Watson, 2011, p. 15). US architect, Michael Carlton (2010), however, describes real world examples of creative student input that have positively affected learning environments, such tree-houses and window seats that provide fun places for students to read and reflect in the library and other places throughout the school. The examples from the international range of projects suggest that students want schools to be "special places that capture their interest and inspire their imaginations" (French & Hill, 2004, p. 38).

Method

The mixed method approach used in the *Reimagining Schools* research is outlined, along with the findings, in the final report published on the project website, <http://reimaginingspaces.edu.au>, where the seven case studies are complemented by much of the visual data gathered. Interviews with teacher-librarians, principals and other teaching staff were audio-taped with data analysed using an open coding approach that enabled the development of abstract ideas (Charmaz 2006). The themes of creating/designing, transitioning, leadership and policy that were developed from these participants were supported by video and still photographs of the various sites. Not surprisingly, they differed from the themes developed from the data presented by the student participants: peacefulness, connectedness, adventure, and technology.

As well as brief video recordings of students identifying their 'favourite spaces' within their school libraries, student voice relating to school library design and use was sought through further visual data, asking the students to use their imaginations and to draw their ideas of the ideal spaces. The students were also asked to write a brief description as an important aid to later analysis. The written texts accompanying the visual are regarded as essential in avoiding adultist interpretations of the images (Darbyshire, MacDougall & Schiller, 2005). Students were given minimal instruction other than to use the materials present (pencils, coloured felt-tip pens, coloured crayons and white A4 paper).

Visual methods of data gathering have become accepted as a valid means of enabling student voice in school improvement (Barraza, 1999; Buldu, 2006; Carrington, 2007; Schratz & Steiner-Löffler, 1998; Shratz-Hadwich, Walker & Egg, 2004) and can offer an inclusive methodology for young people who may find difficulty expressing themselves through language (Prosser & Loxley, 2007). Image based research combines comfortably with imagination when it is used to "set out to find other possibilities of looking into the 'inner world' of school from the pupils' perspective" (Schratz & Steiner-Löffler, 1998, p.236), resulting in 'a rich source of qualitative data' (Walker, 2008, p. 100).

These drawing episodes took place in the school libraries during school hours with students working in small groups for 20 to 30 minutes. Participating in the project were 44 children (30 female, 13 male, 1 unknown) whose year levels are shown in Table 1.

Table 1: Student participants by school, year level and gender.

| School | Yr 4 | | | Yr 5 | | | Yr 6 | | | Yr 7 | | | Yr 8 | | | Unknown | | | Total | | | |
|--------------|-----------|----------|-----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|----------|-----------|
| | f | m | = | f | m | = | f | m | = | f | m | = | f | m | = | f | m | = | f | m | u/k | = |
| 1 | | | | | | | 4 | 1 | 5 | | | | | | | | | | 4 | 1 | | 5 |
| 2 | | | | 3 | 2 | 5 | | | | | | | | | | | | | 3 | 2 | | 5 |
| 3 | 4 | 1 | 5 | | | | | | | 4 | 1 | 5 | | | | 1 | | 1 | 8 | 2 | 1 | 11 |
| 4 | | | | | | | 2 | 1 | 3 | 1 | 1 | 2 | | | | | | | 3 | 2 | | 5 |
| 5 | | | | | | | | | | 1 | 1 | 2 | 3 | 1 | 4 | | | | 4 | 2 | | 6 |
| 6 | 2 | 2 | 4 | | | | 2 | | 2 | | | | | | | | | | 4 | 2 | | 6 |
| 7 | 4 | 2 | 6 | | | | | | | | | | | | | | | | 4 | 2 | | 6 |
| total | 10 | 5 | 15 | 3 | 2 | 5 | 8 | 2 | 10 | 6 | 3 | 9 | 3 | 1 | 4 | 1 | - | 1 | 30 | 13 | 1 | 44 |

The drawings and texts were analysed following a process established by one of the authors (Bland, 2012). This involved creation of a spreadsheet to record the visual data with supporting evidence from the written texts. The key visual features of each drawing were entered along with the key terms used in the texts. Direct quotes taken from the students' texts were also entered to ensure that the meanings were retained. Major themes were then identified through colour-coding the data. This visual tool enabled a first-level analysis to be performed and aided subsequent deeper exploration.

Findings

Four key themes emerged from the students' images and texts: peacefulness, connectedness, adventure, and technology. *Peacefulness* is accompanied by comfort, with liberal supplies of beanbags and cushions scattered throughout the imagined libraries along with quiet places to read and study. *Connectedness* relates to the outside world where libraries extend to, or are situated in, the natural environment where animals abound and water creates tranquil settings. *Adventure* can be real or imaginary, including the exploration of imagined spaces through stories and the exploration of physical spaces, and is closely linked to the fourth theme, *Technology*, which plays a significant role in both practical and imagined environments. Technology and adventure are central to areas designated for fun and games where children can "learn and have fun at the same time" (year 6 female). Across all the schools, design elements such as bright colours and natural light are seen as important to creating a suitable reading and studying environment. Ideas such as coloured lighting to

designate specific areas of the library, and glass ceilings with UV protection built in are juxtaposed with “little dark spaces” (Yr 7 female) and areas of fake grass to bring the outside world into the built environment.

While the students’ imaginations were mostly restrained to the possible, the most extreme examples involved futuristic technologies, such as rocket-powered elevators, a library that hovers in the air, teleporters, a “room of imagination” and a cupboard that leads to Narnia. These may sound like absurdist ideas, and could be easily bracketed as irrational and irrelevant to the work of school building designers, but behind them are notions about how children can connect to reading and engage in learning. The teleporter and the cupboard entrance to Narnia, for instance, would take readers into their books to develop deeper connections to the content; the rocket-powered elevator would be used to connect to a roof-top observatory where students could study the night sky.

In terms of the possible, imaginative design ideas involved trees and animals, helping to create learning environments that incorporate real-world learning. Some students wanted to abandon buildings altogether and establish their school libraries in trees, such as a “giant fig tree” (Yr 6 female), on a river “like a boat” (Yr 4 male), or in park-like areas. As one Year 5 female student emphatically stated, “My ideal learning space is NOT a classroom”. These ideas replicate those of projects in various countries in which children recognised the negative effects on learning in “stuffy and boring classrooms”, appealing to school designers to consider external environments in developing new school spaces (Bland & Sharma-Brymer, 2012).

Seeing things big

Learners cannot help but be influenced by the physical attributes of learning environments (Jamieson et al., 2000). The *Reimagining Schools* project suggests that the reverse is also possible and that students have both capacity and design concepts to influence the physical attributes of those environments. In many ways, the children’s perspectives of school libraries echo many other examples of student input into school design (see Bland & Sharma-Brymer, 2012). In this project, as in the international range of real-world and imagined designs, they have presented ideas that adult designers and teachers would not have thought of (Rudduck & Flutter, 2004). Free of real world design constraints, such as the economic imperative of the BER, health and safety concerns, building codes, and a restricted budget, the students are able to “see things big” (Greene, 1995, p. 10) rather than having to take a small lens viewpoint of the systems world. While some of these notions could be dismissed as nothing more than fantasy, they also tell us something of the big things the students imagine and their underlying hopes for schools and libraries to be places of imagination and educational adventure.

The themes identified through analysis of the drawings and accompanying texts - peacefulness,

connectedness, adventure, and technology – are not disparate categories and there is a good deal of overlap between two or more themes in many cases. For example, a Year 6 male student whose technologically futuristic library (technology) was situated partly in a grassy area (connectedness) and liberally scattered bean-bag chairs (peacefulness) included animals (connectedness) whose principal function was to hand out books and provide advice on them (technology/connectedness).

In the following sections, examples taken from the students' written texts that accompanied their drawings maintain the original spelling and grammar.

Connectedness

Thomas (2010, p. 503) suggests that more informal spaces can “liberate learning from a form of physical imprisonment”. Although not expressed in such dramatic terms, many of the children who participated in this project have presented concepts of liberating and creative spaces that extend the idea of school libraries into environments that offer physical and intellectual adventures in education.

As one Year 5 student reasons,

I don't see why we sit cooped up in a stuffy classroom all day when the sun is high in the sky (Year 5 female),

while a Year 4 student has drawn

a garden where you can read in the sunshine

and yet another imagines having

In front of the library is a grassy area where you can read and play in the fresh air. Kids can also swing on the tree swings (Year 5 male).

One student's drawing was of a “garden library” where children could read and care for the things growing in the garden:

It would be peaceful and good to learn (Year 6 female).

These notions of real world environments with direct access to nature are typical of students' responses in the UK, USA and Australia (Bland & Sharma-Brymer, 2012, Burke & Grosvenor, 2003; Doherty, 2005; French & Hill, 2004; Ghaziani, 2008). Some students have included particular features such as water to enhance the external learning environment:

ponds make me feel happy and peaceful (Year 6 female);

library is on a river ain is like a boat (Year 4 female);

Gardens and animals to look after, including horses to ride, are also common to many of the project

students' drawings as well as those in other projects:

outside there would be animals and wild life - you could look after animals and the garden

(Year 6 female)

The animals are in a pen outside (Year 4 female).

In an international study, Bowker and Tearle (2007) demonstrate the value of extending consideration of schools' general learning spaces to the external areas available. The *Gardens for Life* project builds on many decades of evidence of engagement of children of all ages in socially constructed learning across all subject areas (Bowker & Tearle, 2007), with implications for school libraries in supporting relevant pedagogy through appropriate spaces and resources.

The above and many more examples, even one student's inclusion of a McDonald's café in his imagined school library, demonstrating the theme of connectedness to the real world (as described in the Productive Pedagogies [Education Queensland, 2011]) that runs through many of the children's submissions, frequently coincide with hopes for a peaceful environment.

Peacefulness

Internal furnishings of libraries should, according to many of the students, be comfortable and soft, as illustrated by bean-bags, reclining chairs, pillows and beds. The items often furnish quiet, sometimes dark, even sound-proof reading rooms, cosy corners, and sleeping rooms. These are not simply for relaxing, but are areas for contemplation away from noise:

reading corner somewhere quiet for people to sit, relax and read a book (Year 4 male);

pillows or bean bags if you like to work in comfort as I do (Year 6 female).

study corner with a sound proof wall so you can think (Year 5 female).

Their libraries are not, in the main, static and sterile but are both intellectually stimulating and active, even when providing spaces for comfort and peaceful reading.

Adventure and playfulness

The children appear to value intellectually stimulating material that can take their minds on imaginative journeys. The idea of entering a story in some physical sense was mentioned by quite a few students, for example:

a cupboard inside the cupboard is all about the wizard of oz (Year 4 female)

telaporter to dream maker playground, tv room, make a books ... that can teleport you in to the book (Year 4 male)

Book entrance has one bed and you fall asleep and you wake up inside your favourite book as the main character! (Year 6 female)

Adventure was also an aspect of many physical spaces in the students' drawings, adding a sense of fun and playfulness to learning, frequently combined with technology:

learn and have fun at the same time (Year 6 female).

If I could build my own library, it would have fun, but educational things like Ipads, ereaders, computers and plasma flat screen tv.s (Year 4 male)

Other suggestions took the form of slides connecting different levels of the building, or fun transport such as roller-coasters to deliver students to various areas of the learning environment:

glass elevator powered by rockets that take you to any place you like in the building (Year 6 male).

Again, these suggestions mirror those of students in previous studies (Bland & Sharma-Brymer, 2012; Ghaziani, 2008) in their appeals for physical adventure as a key component of the learning experience.

Technology

Contemporary and future technologies are often cited as supporting practical purposes, such as transport around the library environment, and simply encouraging reading, but also as meeting the needs of environmental sustainability:

lots of glass to let natural light in (Year 6 male)

roof is made out of glass, so it offers UV protection and there is no need for lights (Year 5 female).

Technology and playfulness are frequently joined:

the games room is a fun place for people to have fun playing games and learning new strategies (Year 4 male)

Empathic imagination

The students' ideas often reflected their individual interests (e.g., horse-riding, ice-skating) but, at times, showed consideration for the needs of other library users, such as teachers and students from other year levels, recognising that a variety of needs and concerns have to be met:

many different learning and reading and relaxing spaces for students of all ages to use (Year 5 male)

[The plasma screen TV room] would usually be a bit quiet because there are different TVs

for different age groups with different games so a four year old doesn't end up playing super Mario brothers with some stranger that's 20 years old (Year 4 male).

I believe that my library plan would cater for students who need hands on learning material plus students of all ages – catering for many different interests and needs in a comfortable and creative environment (Year 5 male).

These considerations emphasise the need to plan for a wide diversity of abilities and interests among students as well as ages.

Other common design elements

As well as the imaginative and sometimes futuristic qualities of the students' ideal library spaces, their drawings included physical design features they thought desirable in their learning environments.

Colour and light

In a US project, French and Hill (2004) found that the young participants' work displayed a “desire to integrate colour, light, and interesting spaces into the learning environment” (p. 37). Similarly, the student participants in the *Reimagining Schools* project believe that these are key features of an ideal school library:

lots of bright colours. Pictures of lots of things painted on buildings (Year 6 male)

creative lighting to separate areas (Year 5 male)

The colours are based on real and fantasy life (Year 6 female)

I also wanted to use creative lighting to separate areas and also use lots of glass to let natural light in using different shaped windows to create a modern feel (Year 5 male)

Colour was also important I thought, a range of primary colours could be used to create a different feel in the various spaces (Year 5 male)

roof is made out of glass, so it offers UV protection and there is no need for lights (Year 5 female)

This area has round windows for letting light in, plus poles separating this area with electric lights creating an interesting environment – especially with night activities (Year 5 male).

It was noteworthy that no student input was requested in relation to the design and colours of the libraries investigated in this project. In fact, when that notion was put to them, two of the teacher librarians laughed at the idea, with one emphatically stating that she chose colours that would create a pleasant working environment for herself and that would not ‘over-stimulate’ the children.

Food and social spaces

All the participating Year 4 students at School 7 included social spaces in their library designs, with cafes or other eating areas so that children and teachers could take breaks from working, use them for lunch-time activities, or even eat and study simultaneously. Interestingly, suggestions about social space came principally from older female students.

Seating area has heaps of seating area and tables to have a chat (Year 7 female)

This library can also be used for other things such as talking to friends (Year 8 female)

it has technology cosy places to read because there is lots of room to move talk play and learn (Year 7 female)

This idea of comfortable social spaces is one that is now being reflected in some of the libraries studied in the *Reimagining Schools* project. Permitting food to be taken into the libraries was not seen by the librarians as an option for students, although one school's original plans included a teacher lounge with food, drinks, and comfortable seating that would encourage teachers to spend time exploring the available resources; this did not, however, eventuate.

New opportunities

The perspective on learning that is evident in the work of the student participants in this project is that it should engage them imaginatively, be flexible, and address the needs of a diversity of learning styles and multiple intelligences (Gardner, 1999). While not expressed in these terms, the analysis suggests that the students possess an intrinsic awareness of this necessity, with their designs incorporating features not only for different ages, but for different interests. As in previous student design projects, the implications for learning and teaching relate to cooperative styles, in which children learn together through discovery and exploration of the imagination, in places and spaces where they are in touch with and learning from the real world. The built environment should enable and encourage such pedagogy. In other words, their ideas resemble the current notion of school libraries as 'knowledge commons' (Hay, 2005), exemplified by one US school library which was designed to anticipate future learning needs through "an array of access points for students such as reading areas, a workroom, a conference room, and even a gaming area, and the need to focus on the power of technology to allow lessons to continue beyond the classroom" (Martin, Westmoreland & Branyon, 2011, p. 15).

Student involvement in school design has been shown to have benefits include improving teaching and learning, and empowering the participants (Wright, 2004). Woodcock and Newman (2010) conducted a two-year project to explore student involvement in the UK government's *Building School for the Future* program. Their findings indicated a range of social and learning benefits for student participants, including the fostering of "a culture of trust and collaboration" (2010, p. 2), increased

self-esteem, ownership, and a sense of pride in the school. It was further observed that low achievers who had the opportunity to contribute their voices to school design improved their academic performance (Woodcock & Newman, 2010).

As was noted by the librarian of a rural school in the *Reimagining Schools* project, the construction of the new building was itself an opportunity for learning with the students recording the various stages of construction through drawings that have been maintained on display:

Then this interesting truck arrived. It had a cement mixing bit - like a small one on the back when they were doing the bricks, but it had all these other bits and piece [...] I did like a creative thinking lesson with the kids - what could that be for? Just trying to figure it out [...] so there were a lot of thinking activities. (TL, School 4)

This insight resonates with that of Long and Watson (2011) who promoted the value of incorporating building construction work into the school curriculum, enabling “new pedagogies to work in spaces specifically designed by learning” (p. 15). They further claim that “exciting, transformative and effective school design has really begun to emerge” (p. 15) through the inclusion of students in the planning process.

The analysis of the students’ drawings and texts indicates a strong desire for such ‘transformative’ places that inspire their imaginations and engage them in learning through intellectual and physical adventure. For these students, while books are still very important features of school libraries, the major purpose is to offer opportunities to pursue this sense of adventure through reading and taking advantage of a wide choice of learning spaces.

If internal spaces are seen by the participants too often as constraining, external environments are liberating. Libraries, although generally seen as physical buildings, should not be static; the physical environment needs to allow for flexibility, movement, fun, and discovery. Essentially, the external world has to be almost seamlessly integrated with the internal spaces of the library. This concept represents a need for “weak spatial boundaries” (Stronach & Piper, 2008) that value internal and external learning environments equally. Features such as walls that can be folded back to share access to decks and other al fresco learning areas help to facilitate this sense of real-world leaning.

External learning areas with natural settings are seen as not only providing quiet space, but offering opportunities to learn about and care for the environment and gardens. Water features, such as ponds and waterfalls can also enhance connectedness of learning to place, with the sounds of running water adding to relaxed and tranquil studying areas, whether inside or out-of-doors. Further, connections to the real world are seen as supporting environmentally considerate internal spaces, through reducing the reliance on artificial lighting, heating and cooling. These ‘low-tech’ features can exist alongside an inspiring use of old and new technologies for learning. Creative lighting can help to delineate

specialist areas, while sound-proofed rooms encourage creative social spaces for Wii-based games and other technology-supported interactive play.

Internally, a key priority for the participating students is comfort. A variety of seating options, from carpets for story-telling areas, to bean-bags, benches and reclining chairs would provide for most children's perceived needs. Recognising the need for time-out from study and play, beds in quiet rooms are also suggested for students to relax, sleep when necessary, or lie back and absorb learning material. Spaces where children can find a degree of privacy should also be incorporated into the building, ideally with limited lighting; perhaps, the sounds of running water could be integrated with such spaces to aid quiet study. Many of the ideas are easily accommodated, such as colour, light, and interesting spaces, while, to some extent, the more imaginative aspects of the children's idealised libraries can be reduced to simple adjustments to physical spaces and integrated through the use of murals and other "appropriate design elements" (French & Hill, 2004, p. 37).

One simple example of the potential of student voice in school design can be seen in relation to the new learning areas funded under the BER scheme: many of these new buildings are, based on the limited BER templates available to schools, stand-alone libraries and stand-alone 'covered outdoor learning areas' (COLAs). Consultation with students could, perhaps, have resulted in an integrated design in which libraries and COLAs seamlessly co-exist. Such a design would not only meet the expressed desires of the young project participants, but could create spaces for more adventurous pedagogy while possibly being more economically and environmentally efficient.

In analysing the design ideas of young people, designers should look for metaphor and symbolism. For example, while bean-bag chairs and cushions frequently appear as classroom seating, they represent a desire for comfort. The idea of such seating should be explored with them rather than dismissed on the basis of health grounds. Similarly, moving water, whether streams or fountains, represents relaxing places and sounds to aid concentration. This may give cause for concern among health and safety professionals but further consultation with the children could result in acceptable ways of creating the suggested ambience.

Maintaining the consultation process from initial design concepts through to project completion ensures that children gain valuable learning as well as continued 'ownership', as they witness their ideas take shape within the constraints of practicality, cost-efficiency and legislative frameworks. Students' imaginations can inspire concepts that adults may not have dreamed of, while student voice in a project of real world school design enables new pedagogies and new curriculum opportunities and promotes positive learning cultures (Flutter, 2004); or, as the BER project set out to achieve, "learning environments to help children, families and communities participate in activities that will support achievement, develop learning potential and bring communities together" (DEEWR, 2011).

REFERENCES

- Annot, M., McIntyre, D., Pedder, D., & Reay, D. (2004). *Consultation in the classroom: Developing dialogue about teaching and learning*. Cambridge, UK: Pearson Publishing.
- Barraza, L. (1999). Children's drawings about the environment. *Environmental Education Research*, 5(1), 49-67.
- Birkett, D. (2011). The school I'd like: Here is what you wanted. *The Guardian, UK* (3 May, 2011). Retrieved from <http://www.guardian.co.uk/education/2011/may/03/school-i-would-like>
- Bland, D. (2012). Analysing children's drawings: applied imagination. *International Journal of Research & Method in Education*, DOI:10.1080/1743727X.2012.717432
- Bland, D., & Sharma-Brymer, V. (2012). Imagination in school children's choice of their learning environment: An Australian study. *International Journal of Educational Research*. 75-88.
- Bowker, R., & Tearle, P. (2007). Gardening as a learning environment: A study of children's perceptions and understanding of school gardens as part of an international project. *Learning Environment Research* 10, 83–100.
- Buldu, M. (2006). Young Children's Perceptions of Scientists: A Preliminary Study. *Educational Research*, 48(1), 121-132.
- Burke, C., & Grosvenor, I. (2003). *The school I'd like: Children and young people's reflections on an education for the 21st century*. London: RoutledgeFalmer.
- Calhoun, T. (2006). Looking forward to the campus of the future. An interview with Richard Katz and Diana Oblinger. *Planning for Higher Education*, 34(3), 49–53.
- Carlton, M. (2010). Give students a say on their school design. *Daily Journal of Commerce*, 22 July 2010.
- Carrington, S. (2007). Real policy, real change. Transforming secondary school cultures through image based research. In J. Moss (Ed.) *Researching Education: Visually – Digitally – Spatially*. Sense Publishers: Rotterdam, The Netherlands.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. London: Sage.
- Clark, A. (2010). *Transforming children's spaces: Children's and adults' participation in designing learning environments*. Abingdon, Oxon, UK: Routledge.
- Darbyshire, P., MacDougall, C., & Schiller, W. (2005). Multiple methods in qualitative research with children: More insight or just more? *Qualitative Research* 2005(5), 417-436.
- DEEWR (2011). National building economic stimulus plan: Building the education revolution guidelines" Version 6, 15 march 2011. Retrieved 23 April 2013, from http://foi.prod.ha.deewr-web.net/system/files/ber_guidelines20110415

- Doherty, L. (2005). The school I'd like. *News and Features, Sydney Morning Herald*, 5 February 2005. Sydney, NSW.
- Education Queensland (2001). Productive pedagogies – Connectedness. Retrieved 13 December, 2012, from <http://education.qld.gov.au/corporate/newbasics/html/pedagogies/pedagog.html>
- Flutter, J. (2004). Student participation and the architecture of change. *Connect*, No. 159 (December, 2004), 9-11.
- Flutter, J., & Rudduck, J. (2005). *Student voice and the architecture of change: Mapping the territory. A Report to Research Committee 07/06*. Faculty of Education, University of Cambridge, February 2005.
- French, J., & Hill, D. (2004). The kid-friendly school. *American School Board Journal*, February 2004, 36-38.
- Gardner, H. (1999). *Intelligence reframed: Multiple intelligences for the 21st century*. New York: Basic Books.
- Ghaziani, R. (2008). Children's voices: Raised issues for school design. *CoDesign*, 4(4), 225-236.
- Greene, M. (1995). *Releasing the imagination: Essays on education, the arts, and social change*. San Francisco: Jossey-Bass.
- Hay, L. (2010). Shift happens. It's time to rethink, rebuild and rebrand. *Access* 24(4), 5-10.
- Jamieson, P., Taylor, P., Fisher, K., Trevitt, A., & Gilding, T. (2000). Place and space in the design of new learning environments. *Higher Education Research & Development*, 19(2), 221-236.
- Long, G., & Watson, A. (2011). Getting students REALLY involved in design and construction — Are you mad? *Educational Facility Planner*, 45(3), 14-16.
- Martin, A., Westmoreland, D., & Branyon, A. (2011). New design considerations that transform the library into an indispensable learning environment. *Teacher Librarian*, 38(5), 15-20.
- Orgill, B. & Chandler, D. (2011). *The BER taskforce seminar*. Brisbane: Association of Consulting Architects, Council of Education Facility Planners.
- Prosser, J. & Loxley, A. (2007). Enhancing the contribution of visual methods to inclusive education. *Journal of Research in Special Educational Needs*, 7(1), 55–68.
- Rieh, S., Kim, J., & Yu, W. (2011). *User participation: A new approach to school design in Korea*. CELE Exchange: Centre for Effective Learning Environments, April 2011, 4. OECD Publishing. doi: 10.1787/5kgdzvm687r6-en
- Rudduck, J., & Flutter, J. (2004). *How to improve your school*. London: Continuum.
- Schratz, M. & Steiner-Löffler, U. (1998). Pupils using photographs in school self-evaluation. In Prosser, J. (Ed) *Image-based research. A sourcebook for qualitative researchers*. Falmer Press: London p.235-251.
- Shratz-Hadwich, B., Walker, R., & Egg, P. (2004). *Photo evaluation: A participatory ethnographic research and evaluation tool in child care and education*. Paper presented at the Australian Association for Research in Education annual conference, Nov 28-Dec 2, 2004, Melbourne.

- Stronach, I., & Piper, H. (2008). Can liberal education make a comeback? The case of "relational touch" at Summerhill School. *American Educational Research Journal* 45(6), 6–37.
Downloaded from <http://aerj.aera.net> at Ebsco Electronic Journals Service (EJS) on 29 May 2010.
- Thomas, H. (2010). Learning spaces, learning environments and the dis‘placement’ of learning. *British Journal of Educational Technology*, 41(3), 502–511.
- Thomson, P., & Holdsworth, R. (2003). Theorising change in the education 'field': re-readings of 'student participation' projects. *International Journal of Leadership in Education*, 6(4), 371-391.
- Todd, R. (2010). School libraries now more than ever: Submission 163. In *Inquiry into school libraries and teacher-librarians in Australian schools*. Retrieved 12 May, 2011, from <http://www.aph.gov.au/house/committee/ee/schoollibraries/index.htm>
- van Wagenberg, D., Krasner, M., & Krasner, L. (1981). Children planning an ideal classroom: Environmental design in an elementary school. *Environment and Behavior*, 13, 349-359.
- Walker, K. (2008). Children and their purple crayons: understanding their worlds through their drawings. *Childhood Education*; Winter 2007/2008, 84-102.
- Woodcock, A., & Newman, M. (2010). *Pupil participation in school design*. Paper presented to the 2010 Design Research Society International Conference, Montreal, Canada, 7-9 July 2010. Retrieved 4 November, 2012, from <http://www.drs2010.umontreal.ca/data/PDF/133.pdf>
- Wright, S. (2004). User involvement in school building design. *Forum* , 46(1). 41-43.