



Imagination in school children's choice of their learning environment: An Australian study

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ABSTRACT

A visual research project addressed school children's concepts of ideal learning environments. Drawings and accompanying narratives were collected from Year 5 and Year 6 children in nine Queensland primary schools. The 133 submissions were analysed and coded to develop themes, identify key features and consider the uses of imagination. The children's imagined schools echo ideas promoted by progressive educators. The results of this study suggest benefits for school designers can emerge from the imaginative contributions of children in creating engaging environments, while educational policy makers can benefit from children's ideas in the promotion of engaging, student-centred pedagogies.

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1. Introduction

A close relationship exists between children's learning environments and their learning outcomes (Department of Education and Early Childhood Development, Victoria, 2008; Woolner, Hall, Higgins, McCaughey, & Wall, 2007) yet classrooms and schools are largely conceived to suit adult and professional needs (Halpin, 2007), prioritising operational matters of efficiency and economy (Halpin, 2007). Indeed, children, the main stakeholders of education, are rarely consulted on the issue of school design (Ghaziani, 2008; Rudduck & Flutter, 2004) and, with no 'say' in the design process, they are passive recipients of adults' decisions. Education authorities may encourage student-centred pedagogical approaches, such as collaborative learning, team-teaching and peer tutoring; **however, the spaces where such innovations should occur do not always provide the necessary enabling features.**

The research study reported here, *Imagine a School...*, investigated Australian school children's choices of ideal school features and learning spaces. The participants, from the state of Queensland, were encouraged to engage their imaginations in exploring possibilities. **Findings suggest that children's ideas could result in the creation of spaces where more engaging pedagogical relationships and student-centred pedagogical styles could exist.** This re-affirms ideas promoted by many progressive educators such as John Dewey's experiential learning in the USA (1897, in Provenzo, 2006), A.S. Neill's Summerhill School in the UK (in Cassebaum, 2003), Rabindranath Tagore's *Shantiniketan* ('Abode of Peace'), India (Pridmore, 2009), and Ivan Illich's deschooling movement (1970, in Botsford, 1993).

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In more recent times, these innovative pedagogies have been carried forward by educational activists such as Lawrence Cremin in the US (Ravitch, 1992) and through the Steiner alternative model of schooling, adapted in many parts of the world (in Ullrich, 1994). Within the US, many alternative educators have advocated the necessity of moving beyond the traditional approach to school education, not only in curriculum but also school facilities design (see for example Kohn, 1999; Meier, 1995). Further, Maxine Greene's (1995) educational philosophy of "releasing the imagination" has inspired many to consider a progressive approach to education (Miller, 2010; Zacharias, 2004). With reference to mainstream formal schooling, however, the question here is whether children have agency to make choices related to their learning environments and whether their views can contribute to learning space design.

1.1. Children's participation in school design

The voices of end users are increasingly considered essential to the planning processes in the design of educational spaces (Woolner, Hall, Wall, & Dennison, 2007). While children's perspectives may contradict the conditions that adults see as 'desirable' and are often unpredictable (Burke & Grosvenor, 2003; Rudduck & Flutter, 2004), students as young as first grade involved in imagining educational spaces have been able to contribute "ideas that teachers would not have thought of" (Rudduck & Flutter, 2004, p. 21). Their insights are able to assist educators and planners to see things that are important to students but that adults generally overlook. Where included, children have contributed significant insights and innovative ideas to school design. For example, Sack-Min (2008, p. 48), reports on a US school design competition led by architects to encourage student inputs. The finalists' designs included features such as "floors that house fish tanks, rooflines that resemble boomerangs, glass walls and ceilings, and walls covered with vegetation". In Kansas City, French and Hill (2004) worked with children's drawings identifying aspects of educational spaces to inspire creative planning and to ignite innovative ideas. The ideas included motorised desks and ice-skating rinks as well as outdoor classrooms.

Although there are many studies around children and their engagement in artistic expression regarding their school (Bryant & Gallen, 2003), the actual involvement of children in deciding matters of their school is rare (Flutter & Rudduck, 2004). One incident of student involvement comes from Melbourne, Australia, where children worked with a school designer to refashion a major part of a primary school building (Mary Featherstone Design, 2006). Although more conventional in its approach than some of those examples reported above, a visitor noted that the result was an environment that was more like home than a school.

Elsewhere, however, some education authorities prefer to collaborate with global corporations in planning the educational future of children. The West Philadelphia "School of the Future" demonstrates the incursion of the corporate world into school design, with plans of the Microsoft Corporation to export their model worldwide (School District of Philadelphia, 2004). Regardless of ideas coming from children or the corporate world, the design of learning spaces embodies specific pedagogical strategies (Thomas, 2010). Teachers and learners cannot help but be influenced by the physical attributes of classrooms (Jamieson, Taylor, Fisher, Trevitt, & Gilding, 2000) and Thomas (2010, p. 503) suggests that more informal spaces can "liberate learning from a form of physical imprisonment". The children who populate our schools may envisage the most liberating and creative spaces as represented by the imagined schools of children who took part in this research study.

These liberating ideas have also been demonstrated by children who participated in competitions run in the UK by *The Guardian* newspaper in 2001 (Burke & Grosvenor, 2003), repeated in 2011 (Birkett, 2011), and in Australia by the *Sydney Morning Herald* (SMH) and *The Age* newspapers in 2005 (Doherty, 2005). The competitions in both countries were run under the title, *The School I'd Like*. The Australian competition asked school children of all grade levels to send in expressions of their imagined dream school (Doherty, 2005). Their expressions could be a painting, a poem, a multimedia presentation, a drawn plan, an essay, a song or a documentary film and were required to show their creators' imaginings of schools as best possible places to learn. Among the responses on the theme, 'A Beautiful School', were bright sunlight, yellow walls, 'a pretty creeper' and so on, indicating children's preference for colour in classrooms. The dullness in their schools, it was claimed, decreased their interest in learning. Children also preferred the calming effect of trees, grass, water and gardens as opposed to brown, dark, dusty and drab school spaces. Although not a formal research project, the children's responses demonstrated their awareness of the impact of environments on their learning.

Nair (2002, p. 11), a consultant on school facilities design in the US, notes that "research is still sparse when it comes to evaluating the benefits of non-traditional learning spaces on learning outcomes" but asserts that only the active participation of the user community and the stakeholders of a school community will create a successful school. He recommends that an innovative school for student success must have learning studios instead of classrooms, atriums and learning streets instead of corridors, and learning outside school. Most importantly, as Nair emphasises, the school building itself needs to be designed as a "living space" (p. 12).

2. Theoretical framework

2.1. A theory of imaginations

Theories proposed by Greene (1995) and Egan (2003), both of whom cited the deployment of critical and empathic imagination in addressing issues of education reform, were used in the *Imagine a School* project research. Their theories

contributed to the typology of imaginations used in the analysis of the data from this study. Existing research points out the increasing importance of visual literacy and imagination in children's representation of their thoughts and ideas in the 21st century. Bleed (2005) points out that literacy of the 21st century will increasingly rely on text and words, and also on digital images and sounds. Children will be influenced by digital forms and media in their imaginations.

Trotman (2006) draws attention to the increasing awareness of imagination and emotional intelligence among school children. He argues for a deeper understanding and evaluation of students' creative, imaginative and emotional development. As these gain more significance, Trotman emphasises, teachers need to remain acutely sensitive to the sparks of creativity and imagination that students reveal in everyday educational environments. Imagination has been described as the "hard-working core of children's thinking" (Egan, 2003, p. 444) and it is this core that the study explored through the drawings and narratives of the participants. Thus, the processes of this research were consistent with what Greene (1995, p. 5) called "social imagination: the capacity to invent visions of what should be and what might be in our deficient society, on the streets where we live, in our schools".

2.2. Image-based research and student voice

Schratz and Steiner-Löffler (1998) supported image-based research strongly, while Rudduck and Flutter (2004) worked extensively towards student participation in school improvement. Student voice and participation in school review and development have been extended through image based research (Carrington, 2007; Carrington, Allen, & Osmolowski, 2007; Prosser & Loxley, 2007), contributing to change and progress in schools. 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). Such images have been called 'a rich source of qualitative data' (Walker, 2008, p. 100). Visually based data gathering has, then, become accepted as a valid method 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 a more inclusive methodology where students find difficulty expressing themselves through language, such as those with special educational needs (Prosser & Loxley, 2007).

3. Materials and methods

This research study was partly inspired by the *School I'd Like* competition (Burke & Grosvenor, 2003; Ghaziani, 2008) mentioned above. While the children's ideal schools as reported by Burke and Grosvenor (2003) and Birkett (2011), and by the Australian competition (Doherty, 2005), demonstrated significant similarity with those of the *Imagine a School...* project that is the focus of this article, the methodologies were quite different. Firstly, *Imagine a School...* was a non-competitive, formalised research project. Secondly, it was restricted to a more limited age range of school students (Years 5 and 6). And, thirdly, participating children were requested to produce their work on white A4 paper to facilitate computer scanning. Submissions could be in black and white or colour, and could be annotated to help explain any aspect. The research also built on processes used in earlier students-as-researchers projects being carried out by the researchers in which visual narrative has been successfully employed to elicit young people's views on issues of school engagement.

Importantly, students were asked to write up to 200 words to supplement the visual product with their thoughts on what was ideal about their imagined learning environment or to explain their drawing, their choice of colours or shapes. Their written text helped to ensure that the children's meanings contained in their images were made clear and, as suggested by Prosser and Loxley (2007, p. 56), "combinations of visual and text-based qualitative approaches are often fruitful and potentially insightful".

3.1. Research questions

The key research questions that were asked in the study were:

- How do children's images depict their perceptions of an ideal school?
- What implications are there for the design and use of educational spaces?

The term 'educational spaces' was used in the research information supplied to participants and their schools to avoid restrictive notions of the concept of 'school'. This was to encourage thinking about real and imaginary spaces in which teaching and learning may occur or "the shifting imagery of education" (Ferguson & Seddon, 2007, p. 111) that includes the physicality of red brick schools and the virtual reality of dispersed learning networks.

3.2. Participants

Year 5/6 (10–11 year-old) students in nine primary schools in Queensland, Australia, were invited to submit drawings and their text. The age group was considered appropriate for this study, recognising Vygotsky's fourth stage of "symbolic representation" in the development of imagination (Valett, 1983), generally reached in late childhood and characterised by

Table 1
Participating schools.

School code	Region	School type	Submissions received: female	Submissions received: male	Total No. of student submissions
School A	Urban	Independent school	3	5	8
School B	Urban	Faith school	12	3	15
School C	Rural	State school	5	2	7
School D	Coastal urban	Faith school	8	8	16
School E	Coastal urban	State school	17	16	33
School F	Coastal urban	Faith school	11	5	16
School G	Coastal rural	State school	11	4	15
School H	Coastal rural	State school	6	1	7
School I	Coastal rural	State school	8	7	15
Total			82	51	133

“awareness, insight and ingenuity” (p. 23). Studies have shown that by ages 7–9, “children have developed a graphic language. . .including specific symbols and rules of spatial organisation” (Walker, 2008, p. 97) and at around age 9–11 they strive for greater accuracy (see also Barraza, 1999).

Areas ranging from inner urban to rural-remote and northern coastal strip were chosen to promote diversity in responses. Upon invitations to the principals of state and private primary schools in those regions, nine positive responses with 133 student submissions were obtained (Table 1). A classroom teacher nominated by each school was provided with a package of information about the study, including an optional lesson plan to allow for the study to be included as part of regular classes. The 30–60 min lesson plan, used to some extent by all participating schools, included sample stimulus questions to help to get the students thinking about the general concept of ‘educational spaces’: e.g.

- What does the idea of ‘school’ mean to you?
- How, when and where do you learn best?
- Do schools need to have classrooms, buildings, etc.? Why?
- What things help you to learn?
- If you could choose to do school lessons anywhere, where would you choose?
- If you could design a school, where would it be? What shapes would you use? What special areas would you include?

All the submitted drawings and paintings were created during class time under the supervision of the nominated teacher. Formal consent to participate in the project and for the use of the images was given by the school principals, the children and their parents. Other than the children’s year levels and gender, no information was collected on student background. The schools they attended, however, can be classified by geographic location (e.g. rural, coastal, suburban).

3.3. Methodology

We live in a visual culture in which a “wide variety of visual and verbal representation systems are coming together” (Horn, 1998, p. 5). Indeed, today’s living environments are full of visual stimuli. Writing on children’s perceptions of their environments, Barraza (1999) states that “children’s drawings are useful tools in providing valuable information for the assessment of children’s environmental perceptions” (p. 49). Haney, Russell, and Bebell (2004) suggest that drawings have “unusual power to document and change the educational ecology of classrooms and schools” (p. 242). This study used children’s drawings as the primary data source to re-imagine school from a student perspective (Schratz & Steiner-Löffler, 1998). The accompanying texts were used to provide elaboration and clarification of the visual work. The following sections detail the methodology used in this study.

3.4. Coding and analysis

Although there was wide variation in the artistic abilities of the participants, this was not a consideration in the analysis of the children’s work, with the written text provided sufficient explanation of the visual material where necessary. Each drawing and its accompanying text was coded by content to identify common features among the 133 submissions and themes were developed through this process. Key elements investigated included the students’ choices of general environment, types of buildings and grounds, environmental considerations, and any special features, such as lakes and fountains, solar power, farms and gardens.

The uses of imagination were also coded and analysed using the typology of imaginations developed by the principal researcher (Appendix A). From the four major categories (fantasy, creative, critical and empathic) and further sub-divisions, an analytical tool was developed for this study. This enabled the analysis to be based on dimensions of empathy and criticality as well as creativity.

4. Interpretation of drawings and texts

The drawings provided the major vehicle for the children to express their imaginative ideas; their written statements provided crucial information about what they had drawn, greatly assisting understanding and analysing the visual data. One potential problem in analysing visual material was interpretation from the standpoint of the viewer whose age, background, social relations and culture, may be different to the artist thus giving rise to incorrect assumptions and interpretations. One example of the potential for adult misinterpretation from the study is the work of a Year 5 female student from a faith-based school who drew a girls' school. The researcher's initial assumption was that gender segregation was an essential aspect of the student's ideal learning environment, a view supported by the religious culture of the participating school. The student, however, in her written text, stated that she had chosen to draw a girls' school "because I'm a girl and it's easy for me to draw a girl" (Year 5 female, School B).

At times, a supervising teacher's intervention was noticed in terms of advice or ideas given to the participants about ways to proceed with the work, resulting in a 'house style'. For example, one school's submissions mostly met the category of 'fantasy', providing some of the more extreme imaginative concepts, while another school's submissions were mostly floor plans. In the written texts, most of one school's participants used the suggested questions as sub-headings. A further contributing teacher effect was clear in the observation that some of the supervising teachers were generalist primary teachers while others (mainly in private schools) were specialist art teachers. Some teacher effects may be more subtle and harder to detect, so for the purposes of this study, identification of such factors has been through observing repetition of particular ideas and styles in the children's work that are unlikely to result from sharing among close friends. In future studies, the researcher would ensure a more direct interaction with the children to ensure greater consistency of input and to limit teacher influence.

4.1. Interpretation of content features

The themes developed from the submissions showed strong groupings in a number of key areas:

- Animal-related features, including farms and petting zoos.
- Trees and plants, particularly food-producing varieties, many linked to curriculum as well as healthy eating.
- Water in the form of waterfalls for comforting sounds, duck ponds, and creeks; being on a beach, on the ocean, or under the sea.
- Environmental awareness, with solar power and the use of direct sunlight.
- Technology combined with environmental sensitivity through wind and solar powered computers and climate control.
- Colour as a vital component of the school environment; rainbows as essential features of buildings.
- Sport, particularly among male participants.

The geographic locations of the schools appear to have little influence on the general ideas submitted by the children, although there were some individual drawings that represented the school areas. For example, one student from a rural area submitted a drawing of a farm school. On the other hand, a student in a tropical area submitted a drawing of a school in a snowfield where children travelled to school on skis.

4.2. Results by imagination type

Greene (1995), Wright Mills (2001) and Egan (2003) cited critical and empathic imaginations as key tools of education reform and these notions contributed to the typology of imaginations constructed by the principal researcher (Bland, 2006) which also includes fantasy and creative imaginations (Appendix A). In the themes that follow, quotations are taken directly from the participants' narratives, *without spelling or grammatical corrections*, where they describe their drawings.

4.2.1. Fantasy

The range of ideas emanating from the children's imaginations is vast; being in a flying carriage drawn by a dragon, in a hot air balloon travelling the world, and inside a video game as a virtual avatar are some of the more fantastic means of learning that have been conceived. One student imagined an entire town as the school with this town being in a snow-covered country where students travel on skis (Fig. 1). Interestingly, this participant's school is in a tropical area of the State's far north, thousands of miles from any region where snow falls. These and the following extracts are some of the more extreme examples of fantastic environments:

My drawing is an aeroplane school where you can go anywhere. You can go to Rome if you're learning about Roman numerals. (Year 6 male, School D)

My drawing of a school is in space. And it's called Station 1000. There is a place called Mercury Mania, which leads to the rest of the school. . . There is a milky path which leads to playground Pluto. And right at the bottom is the tall toilets. (Year 6 female, School D)



Fig. 1. "My drawing is on a snowy hill up in the mountains. It is a town but a school as well" (Female, Year 6, School F).

Many participants suggested more realistic environments such as beaches, rain forests and tree houses as school sites, while some participants in specific schools appear to have restricted themselves (or have been restricted) to more traditional environments that include individual classrooms and fairly conventional styles of building.

4.2.2. Empathic imagination

Among those who considered the needs of others from an empathic point of view are a number who suggested protecting younger children through the provision of segregated areas. Two children also considered the needs of school office staff. The few who made specific reference to people with special needs were mostly male, one of whom proposed a fruit and vegetable garden

for kids that don't have any lunch and the food is used into the food court. (Year 6 male, School G)

Only three students included facilities for people with mobility difficulties:

a wheelchair which has hydraulics for the disabled to get up the many stairs of the school (Year 6 male, School D)

I would like to see a lift to classrooms so people with broke legs and knees can get to class and don't have to club up stairs with crouches. (Year 6 male, School H)

There are railings so people don't fall. (Year 6 female, School D)

Two male students also considered the needs of "mums" who make lunches (Year 6 male, School D; Year 5 male, School B).

Some of the participants demonstrated a deeper level of empathic imagination through considering how the social environment of school affects the feelings of others:

This is my dream school you can have so much fun! Because people are never mean to you. They share their ideas with you and you can play games with them. (Year 5 female, School B)

Nobody cries or get hurt. (Grade 5 male, School C)

i have thought of a way so younger and older kids can buddy up. I think that each teenager should have at the most one or two younger kids as buddies. The teenager would have to pass a test to get a licence and they would be allowed fifteen minutes between classes to get their little buddy to their next class. This idea will teach road safety and responsibility. (Year 6 female, School H)

Nobody is loathsome here! (Year 6 female, School C)

No one ever hated this school. (Year 5 male, School B) (Fig. 2)

Fig. 2

4.2.3. Creative imagination

A number of children displayed creative imagination in considering alternatives to, and improvements to, the more familiar style of school. For example, one student considered the advantages of learning in a shopping mall based on her own experience:

I would learn best in a mall. I'm not very good at maths but shopping helps me by allowing me to add up price tags, learning what the defferance between 50% and 70% is in a real world environment. The mall is a great place to learn new words. I

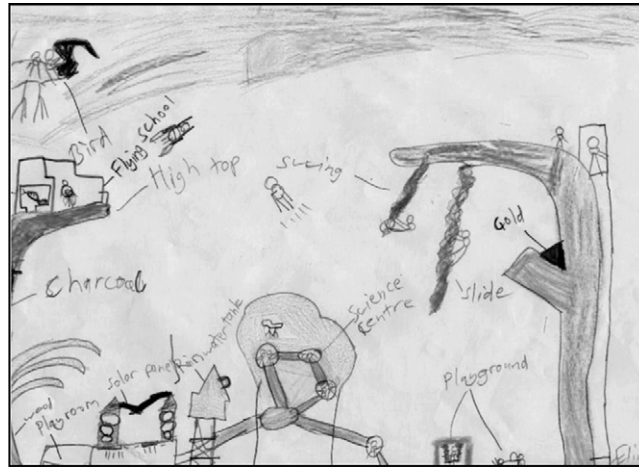


Fig. 2. "No one ever hated this school" (Year 5 male, School B).

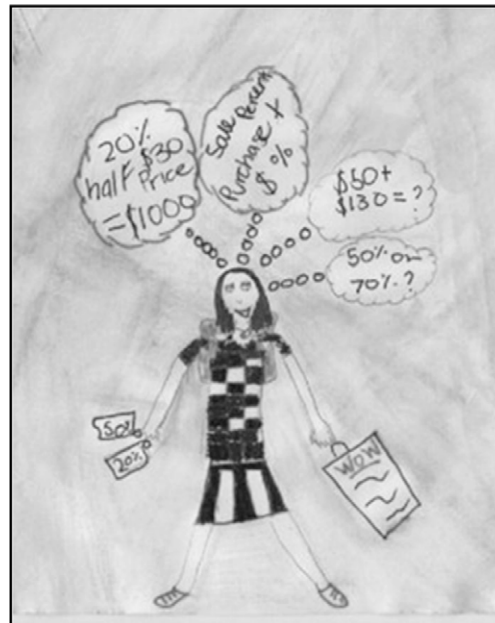


Fig. 3. Detail. Learning in a shop would be awesome (Year 6 female, School F).

learnt all these words at the mall - purchase, sale, and percentage. I also learnt the meaning of those words. . . Now that is cool. (Year 6 female, School F) (Fig. 3)

Fig. 3

Creative imagination, in this context, differs from fantasy in that the ideas are more grounded in reality and are potentially achievable. The school for vegetarians (Fig. 4) is a further example of creative imagination based on the values of the designer, a Year 6 female student.

4.2.4. Critical imagination

Creative imagination converts to critical imagination when it disrupts existing models or challenges the power structures inherent in them. In this study, there are proposals to reduce the school day and the school week and some instances of indirect criticism of teachers who yell and who are boring. **No participant, though, directly challenged the authority of schools or the very idea of attending some kind of school, although one suggested that schooling should be for teenagers only and another stated that his ideal school is his own bedroom so that he would not have to get up early each day.**

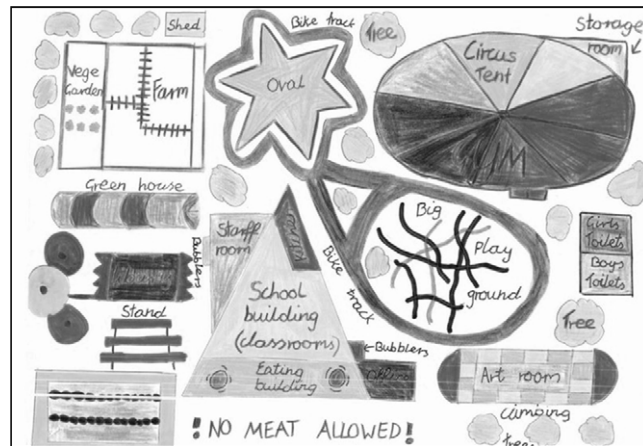


Fig. 4. “No meat is allowed in the school” (Female, Grade 6, State primary school in a coastal town).

5. Discussion of themes for innovative educational spaces

Interpretation of the students’ work reveals that, overwhelmingly, they want learning to be fun, taking place in environments that are eco-friendly and imaginative (Fig. 5). They emphasised the need for colour and excitement; places where their imaginations can be engaged; but also places where they learn from and are in touch with reality:

I think a bright and colourful school would make the students enjoy coming to school. (Year 5 female, School G)

It would be good to have rainbow Library with lots of bright colours that cheered up everybody. (Year 5 female, School G)

Clearly, the participants do not want ‘boring’ classrooms. These results parallel the findings of similar research with children (Birkett, 2011; Burke & Grosvenor, 2003; Doherty, 2005; Pointon, 2000) that highlight their requirements for light, space and colour. From the UK 2011 *School I’d Like* competition entries, Birkett (2011) constructed a ‘Children’s Manifesto’ that included key features of the ideal school such as:

- playgrounds with climbing frames and tree-houses where children could learn about nature;
- calm – with a ‘chill-out’ room; music instead of bells, and a quiet place inside at playtime for drawing, reading and board games;
- animals to look after like chickens, sheep and horses
- greenhouses to grow fruit and vegetables to eat at school and sell to raise funds;
- creative and colourful.

These appeals, paralleled in the very different physical climates of the UK and Queensland, for external learning environments that are active and populated by animals and gardens and internal environments that are calming and creative, demonstrate a desire among both groups of children to be taught away from drab and uninspiring classrooms.

In this, the children’s imagined schools echo ideas that have been promoted over many decades by proponents of progressive education, such as John Dewey’s experiential learning (1897, in Provenzo, 2006), A.S. Neill’s Summerhill School (in Cassebaum, 2003), and Ivan Illich’s (1970) concept of “deschooling”. Indeed, one female participant in the Australian



Fig. 5. Detail. “The first thing that came to mind was an eco-friendly school. My ideal school is awesome fun” (Female, Grade 6, State primary school in a rural town).

School I'd Like competition was affected to the extent of dropping out of school when she was in Grade 10, voicing her deep interest in alternative education while finding mainstream education bizarre and irrational. This girl spoke directly about the educational philosophies of Illich, Steiner and Neill.

A vast majority of participants in the *Imagine a School* project suggested that, wherever possible, learning should take place away from classrooms and in environments where direct, hands-on learning can occur. They are, perhaps, reflecting what Holt (1972) intuited four decades ago, that their lives are over-structured and that they are looking for a “chance to get away from it all – more solitude, time, and space” (p. 19). Again, the ideas are far from new, with Tagore’s *Shantiniketan* school in India in the early 20th century founded along the lines of an *ashram*, or “ancient forest sanctuaries of India where, beneath the trees, the wise taught the young” (Pridmore, 2009).

I would like to learn around a lake [...] On the jetty you can stick your head in the water and look at the fish up close. The learning space would be a great idea for kid or any student doing a study on water animals and birds. You can also camp over night and observe the night animals and see what they eat and what sort of bugs live where. (Year 6 female, School I)

Maria Montessori’s (1936) long-term documentation of her careful observations of young children’s learning established how children’s creative imagination, as pointed out in Section 4.2.3, above, is grounded in reality. Simple activities such as everyday home chores or scenarios of everyday life, when offered to children in Montessori centres, engage their imagination through realistic connections and meanings. Notably, educational philosophies and methodologies that celebrate children’s imagination in their learning environments give less importance to the stringent curriculum of literacy and numeracy. This approach (with progressive educators’ observations) has resulted in remarkable educational theories founded on collaboration, passion and equal participation in teaching and learning processes.

5.1. Implications for the design of innovative educational spaces

As Greene (1995) stated, “the role of imagination is not to resolve. [...] It is to awaken, to disclose the ordinarily unseen, unheard and unexpected” (p. 28). As the children were free of real world design constraints, such as health and safety concerns and a restricted budget, they could “see things big” (Greene, 1995, p. 10) rather than use the small lens of a systems world viewpoint. These children’s messages could result in the creation of learning spaces where more imaginative pedagogical relationships and student-centred pedagogical styles can be implemented (Fig. 6).

Participants of this study did not directly challenge notions of structured learning, unlike A.S. Neill’s Summerhill School. Similar to Neill’s methods, though, school is seen in general as a social environment where friends gather to learn, play and have fun, with the main emphasis on fun and well-being. This is the most frequent message presented, whether in relation to the school environment, the primary features and facilities, or pedagogical aspects. The message of fun and playing together continues into proposals relating to class work.

The findings and features are comparable to a US study (French & Hill, 2004) in which the authors conclude that the participants’ work displayed a “desire to integrate colour, light, and interesting spaces into the learning environment” (p. 37). French and Hill (2004), however, reduced the participants’ imaginative concepts to simple adjustments to physical spaces, suggesting that the more imaginative elements, such as theme parks, could be integrated through the use of murals and other “appropriate design elements” (p. 37). Similarly, while Shaw (2009) suggested that school designers should stay away from industrial age “egg carton” design which has students isolated in small classrooms, her solutions are tied to ideas of formal physical spaces for learning that then constrain and, to a great extent, define pedagogy.



Fig. 6. “It is placed in an apple tree because I love to climb things and apple trees are cool” (School A, female, Year 6).

Although specific curriculum matters were not sought in this study, the participants frequently offered ideas about what should be taught and how. One participant, for example, suggested a farm school would provide the basis for learning and socialising while another believed all children should learn circus arts:

Fun and hard all round farming school. My farming school would be great for teenagers and grades 6 and 7 students to learn about growing crops and running sheep, goat and cattle farms successfully. It will cost \$350 for 3 months, \$250 for 2 months, \$150 for 1 months and \$80 for 2 weeks. Each and every group of up to 13 people will have up to 4 or 5 guides with them. You will make friends for life. If you are wanting to get down and dirty come to my fun and hard all round farming school. (Year 6 male, School C)

There is a gym/circus tent so you can learn circus arts and keep fit and healthy. It will make you feel good about your self being able to do circus tricks. A vege garden and a green house so you can grow food used for the School, and grow plants for fun. It would be a great way to introduce gardening to young people. [. . .] An art room allows you to be creative and study the arts. (Year 5 female, School G)

John Dewey was an early advocate of imagination in education, seeing education as a “work of art” requiring “qualities of personal enthusiasm and imagination” (Dewey, in Simpson, Jackson, & Aycocock, 2005, p. 3). Like Dewey (in Provenzo, 2006), the participants believe that the boundaries of school can be extended and that learning can take place away from “stuffy” and “boring” classrooms:

I love to fly around and watch animals tall and small crawling around so I decide to have my concept as a carriage being pulled by dragons. It would be ten times beter than learning 7 houres a day in a stuffy old classroom. (Year 6 female, School F)

My favourite place to learn is where the wind blows in my face and the trees sway side to side slowly and steadily. I sit in the warm soft sand watching the bright yellow sun glmer across the was. I wake up every morning and watch the sun rise as the beautiful coulours mix. this is my place I like to learn in and I think its better than a stuffy class room. (Year 6 male, School F)
My learning space concept is an untouched, secluded, unreal rainforest. I like learning in a peaceful environment away from all the noise. I would like to be able to wakt outside with a book, sit in the flower beds and read. . . I think the classroom is too crosed and inclosed. It feels good to be outdoors. (Year 6 female, School F)

Instead of learning inside, I'm on a picnic blanket. . . I learn best in a tropical enviroment. It's refreshing. (Year 5 female, School B)

The idea of school to me usually consists of classrooms and offices. Why can't we have an outdoor school? We can learn outside. My idea of school changed from this study. It seems better to learn outside in a good environment. It is better for us as there is oxygen everywhere and no electricity is being used as we could be using sunlight. (Year 5 female, School B)

These suggestions of weak spatial boundaries can be seen in the way that A.S. Neill's Summerhill School is constructed (Stronach & Piper, 2008): “The classrooms are inside but the outside woodland is accepted as an equally important learning area. . . Summerhill also appeared to staff and students as a place of necessary risk. The grounds were open to the students, tree-climbing was permitted” (p. 20). Greene (1995) also recognised the need to dissolve the “artificial separations of the school from the surrounding environment” (p. 11), and discussed making use of community facilities, while Illich proposed doing away with school boundaries altogether. Illich suggested using community facilities as sites for education; this ‘deschooling’ included sites such as public libraries, laboratories and “showrooms like museums and theatres” (in Hart, 2001, p. 72). Influenced by both A.S. Neill and Ivan Illich, David Horsburgh, a British Air Force officer who later became an educator, built his school *Neel Bagh* (Blue Garden) near Bangalore city in South India based on similar perceptions and insights. He combined many features that children liked to have in their school such as a pottery unit, carpentry unit and many small buildings that were learning stations. Children wondered about their world, imagined and experienced their learning in their small village school (Wilson, 1983). The schools started by Horsburgh's ‘interns’ across India were developed, remarkably, from children's observations, needs, choices, preferences and decisions (see Mahapatra, 2004). Like Rabindranath Tagore's *Shantiniketan*, a learning culture developed that respected learning taking place in any space that children and adults liked. Their mutual passion for learning together was the central focus and this model has influenced many current alternative and democratic schools across India.

Likewise, the study participants frequently refused to acknowledge boundaries between purpose-built school enclaves and their hinterlands, or even the wider world. Shopping centres, as mentioned earlier, can provide essential learning in mathematics and language skills, while mobile observatories aid study of the global environment:

I've only ever been in a hot air balloon once, so I would love to travel around the world in one. . . You could travel anywhere you want. Instead of looking at pictures of the places and learning, you could go there and learn there. It's also much more exiting than sitting in a classroom learning. Thats the school I would wont to be at. (Year 6 female, School F)

Holt (1972), when asked what message he would give to educators in a developing country, stated that “you don't have to have school buildings in order to have schools and. . . you don't have to have schools in order to have education” (p. 119). Indeed, in the children's work, it is the natural environment that features most strongly. Many participants imagined being taught in the rain forest, on a beach, or in ‘the bush’ (an Australian term for rural areas that are not so remote as to be considered ‘the outback’) so that they could have direct experience of dealing with creatures in their native habitat. This, they

claimed, would lead to learning about animals' habits as well as useful information about dangerous creatures and first aid. These environments would also provide quiet and peaceful places to learn for many participants:

I would like to learn in a peaceful place where you could hear the birds whistle. I would also like to be working alone, so I could concentrate. The reason there is a waterfall is so you can hear the relaxing sounds. (Year 6 female, SCH)

My future school is located near a beach [. . .] I think a quiet and peaceful place is a great place to work. (Year 6 female, School E)

My learning space concept is an untouched, secluded, unreal rainforest. I like learning in a peaceful environment away from all the noise. I would like to be able to wakt outside with a book, sit in the flower beds and read. (Year 6 female, School F)

I'd like to be taught some where where it would be nice and calm were birds are constantly singing like a wind up music box a peaceful place were my imaginings come true. Where you can lay back, relax, feel the cool breaze tikle youre skin as you dream a dream away upon the tree top's were you can fly like a bird and when you wake up you can do it all again. (Year 6 female, School I)

Concern for the environment, coupled with experiencing the natural world, was joined with ideas about technology with environmental protection awareness.

This is a good place to learn with solar panels to collect electricity for the fans and lights. The running water below is a peaceful sound, the electric windows on the roof let in just enough light when needed. (Year 6 male, School I)

For my ideal school, the first thing that came to mind was an eco-friendly school [. . .] Learn about animals healthy or sick & learn to look after them. (Year 6 female, School C)

Elsewhere technology featured in the form of computer 'labs'. There were also more futuristic and fantastic proposals for the use of technology, such as vibrating heated chairs in the classrooms and shrink rays to allow micro-exploration of different environments.

I love finding out what things look like inside so I thought a shrink ray would be good so you could shrink yourself and go inside things to see the bio structure of a psp or a human or bug or anything it would be a great learning experience on how to build things. (Year 6 male, School F)

Thomas (2010) suggested that such applications of computer technologies represent further dissolution of the traditional boundaries of learning environments. Virtual spaces should thus be regarded no differently to physical learning environments, and perhaps reflect Illich's vision of a de-schooled society through employing the "anarchy of the web" (Hart, 2001, p. 75).

While some of the children's more futuristic notions may be unrealisable, they represent creative ways of thinking about education and schools. Even A.S. Neill, however, at times proposed seemingly absurd ideas in consultation with children at Summerhill School to help to develop their thinking (Appleton, 1992). This technique, and at other times taking a non-participant position, allowed children to guide the direction of the school in their preferred ways and permitted Neill to observe aspects of the nature of children that would otherwise be lost in an adult-controlled environment.

Presently, educational planners and policy makers of several countries across the world seem to be taking note of children's preferences in deciding their learning environments and how they learn. The International Democratic Education Conference (IDEC) of 2005 agreed on the following statement:

We believe that, in any educational setting, young people have the right: to decide individually how, when, what, where and with whom they learn to have an equal share in the decision-making as to how their organisations – in particular their schools – are run, and which rules and sanctions, if any, are necessary. (IDEN, 2010)

In recent years, a steady rise in the participation of many governments' representatives has been witnessed at IDECs. Over a 100 school principals and 25 school superintendents attended the 2012 IDEC held in Puerto Rico where the Mayor of the City of Caguas underlined his government's support for democratic education processes (Torres, 2012). Speakers from Israel, India and Europe and many democratic educators and students from different parts of the United States, shared their ongoing work in democratising schools, educational processes and content across the world (<http://idec2012.org/speakers.html>). Through such conferences, democratic educators from many continents showcase their ongoing partnerships with mainstream and public education systems in their countries, influencing policies and practice elsewhere.

6. Conclusion

Through the University of Chicago-based Laboratory School, Dewey developed and promoted the ideals of democratic education, engaging children in the learning process (Engel, 2008). His later observations led him to a view that schools have an obligation to help young people to apply their imaginations to the ideal ends that are pertinent to personal and environmental conditions (Cunningham, 1994). Further, Dewey believed that all students, regardless of class status, should be able to escape the limitations of their backgrounds to enter "new, broader, and liberating" (Simpson, 2006, p. 77) education environments in which students, and teachers, learn from each other. *The Imagine a School...study has shown a desire among children to learn in cooperative and friendly social environments.* A good number of students have specifically

mentioned this in relation to ways of learning, showing classroom arrangements that support group work. Both Dewey (1897, in Provenzo, 2006) and Neill (in Cassebaum, 2003) promoted such social environments as essential to the basis of educational experience, demonstrated through Dewey's 'model school' and Neill's Summerhill. Hytten (2000, p. 460) has pointed out that Dewey promoted a curriculum developed around activities from real life with experience as the anchor for learning while Moore (2000) wrote of Neill's vision as a similar one of children working and playing together to find things out by themselves.

Visiting 'alternative' schools in London and Paris, Holt (1972) was aware that education would not have to be compulsory in such environments as the students were "absorbed, alive, active, happy, at peace with each other" (p. 138). The alternatives envisioned by the study participants are also places where "people are never mean to you" (Year 5 female, School B), and "nobody cries or get hurt" (Grade 5 male, School C). The participants' imaginations emphasised that learning environments should be fun, eco-friendly, imaginative, and full of colour and excitement. As French and Hill (2004) stated, such themes "show that students want their schools to be special places that capture their interest and inspire their imaginations" (p. 38).

Although Rudduck and Flutter (2004, p. 11) lament that "most children will continue to be educated in buildings where the messages of the architecture need actively to be neutralised", the imaginations of the study participants are an exciting source of ideas from which school designers can draw. The methodology employed in this study provided a means for the Years 5 and 6 students to express their imaginations. Their expressions relating to their learning environments were fantastic and innovative, able to contribute to school design that promotes innovative pedagogy. In their bright and colourful learning spaces, filled with creative possibilities, interacting with the natural world away from drab classrooms, students are likely to feel a greater sense of belonging and engagement. Halpin's (2007) vision of the physicality of education expressed in school architecture and its environments, combined with an engaging pedagogy that significantly increases "the limits of what students know in fresh and exciting ways" (p. 244) can begin with the imaginations of young people.

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Appendix A. Typology of uses of imagination

This typology was an original contribution to the literature on imagination developed through the principal researcher's PhD studies (Bland, 2006).

A.1. A typology imaginations

Type	Sub-type	Attributes	Theorist
Empathic		<ul style="list-style-type: none"> • Questioning from the point-of-view of marginalised others • Voices of the marginalised • Empowering 	Grundy (1996) Greene (1995) Wright Mills (2001) Kearney (1988)
	Ethical	<ul style="list-style-type: none"> • Inalienable right of the other to be recognised and heard 	
Critical	Reflective	<ul style="list-style-type: none"> • Unsettling • Disruptive • Challenging 	Fine (1994)
	Sociological	<ul style="list-style-type: none"> • Investigative • Hermeneutic 	Wright Mills (2001)
	Disciplined	<ul style="list-style-type: none"> • Restrained • Rigorous 	Giddens (2001)
	Utopian	<ul style="list-style-type: none"> • Trying new ideas • Radical 	Giddens (2001) Halpin (1998)
Creative	Critically pragmatic	<ul style="list-style-type: none"> • Tempered by reflection 	Maxcy (1991)
	Poetic	<ul style="list-style-type: none"> • Inventive • Increased empathy 	Kearney (1988)
	Pragmatic Grounded	<ul style="list-style-type: none"> • Problem-solving • Theoretical and practical 	Maxcy (1991) Fielding (2001)
Fantasy	<ul style="list-style-type: none"> • Daydreams • Reverie • déjà vu • Remembrance 	<ul style="list-style-type: none"> • Unproductive 	Maxcy (1991)

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