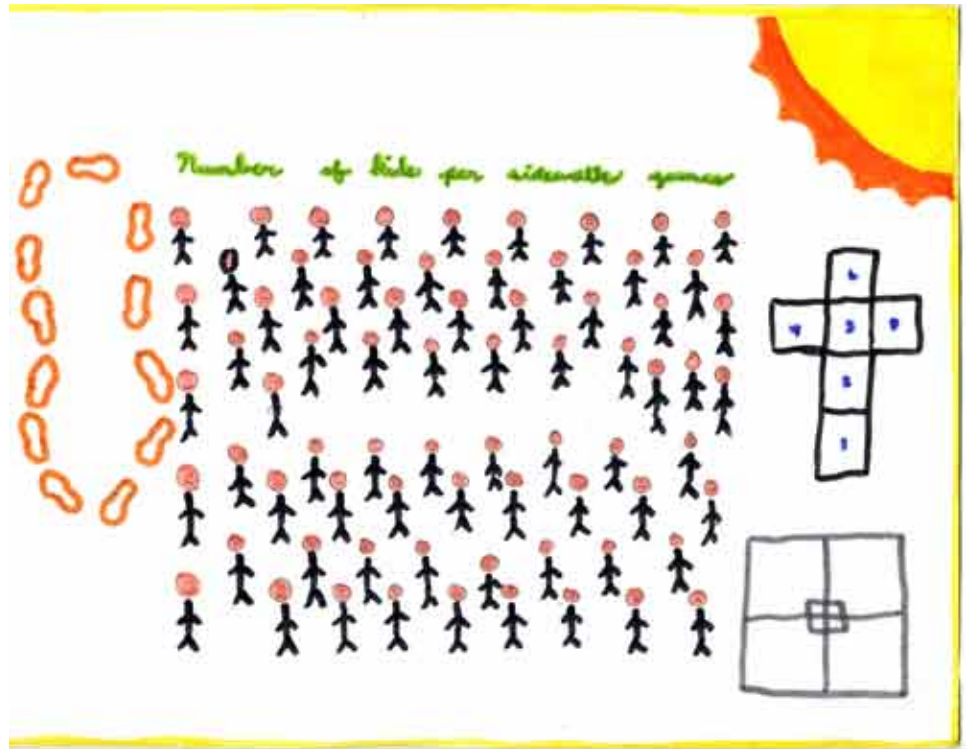


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Free-Run Children

Scott McIsaac

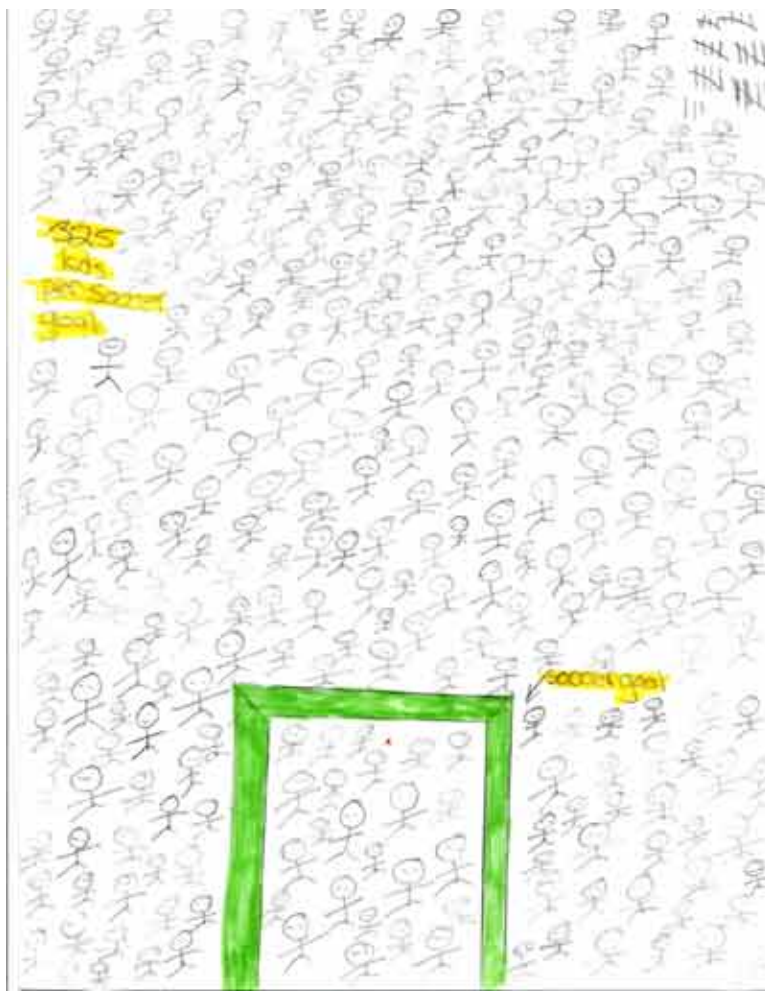
Vancouver, British Columbia



I teach Grade 7 in a large inner-city school in East Vancouver. There are 650 children in my school and they come from a rich variety of cultural and socio-economic backgrounds. If you come for a visit to the school during class time, you will see a remarkable collection of teachers, working hard to help children learn about the world and themselves. You will see children engaged and having fun. They feel safe in their classrooms. But if you come to the school during recess or lunch you may see something much different. On some days, you will see violence or bullying or excessive noise or confusion or anger. You might see blood. You might see a line-up of kids at the principal's office, waiting to be disciplined. You might see children breaking rules that they clearly understand and have agreed should not be broken. They may be sneaking into the school and hiding in quiet, dark, and peaceful places. You may see torn clothing on the playground or school supplies smashed and left in the hallways. Forty to fifty children will be trying to play a basketball game on the outdoor court and as many as a hundred will be trying to play soccer on the one outdoor gravel field. There will be dozens of children trying to get turns on the tire swings. And you will see that the majority of outdoor spaces are gravel, asphalt, concrete, or mud.

It is a much different place than the school I taught in before coming here. My former school had half the number of children in it and more than twice the amount of playground and recreation space. There was significantly more playground equipment and green space, covered outdoor space, gardens, and trees. There was enough space for kids to play six or seven different soccer games. There were dozens of trees to sit under or lean against. There was space for teachers to come outside and read with their kids in the shade in the twelve acres of park land that surrounded the school property. Children seemed to be happier and safer and more engaged outside the classroom.

Thinking of these two schools, I wanted to know more about the relationship between space and healthy learning and growing environments. I wanted to know more about why these schools seemed to be so different and yet still be in the same city.



Background Reading

I began this project by investigating the relationship between space and healthy learning and growing environments. I looked at studies about green space in the healthy development of pre-school children, elementary-aged children, and teenagers, and at work done related to the role of playground design in the healthy development of children. Susa and Benedict (1994) have shown that cognitive development and social development can be influenced by playground design. Studies have also shown that divergent play and creativity can also be influenced by playground design and green space. As well, Taylor and Wiley (1998) report that a number of studies have been done that suggest that barren, inner-city neighborhood spaces compromise the everyday activities and experiences necessary for healthy development.

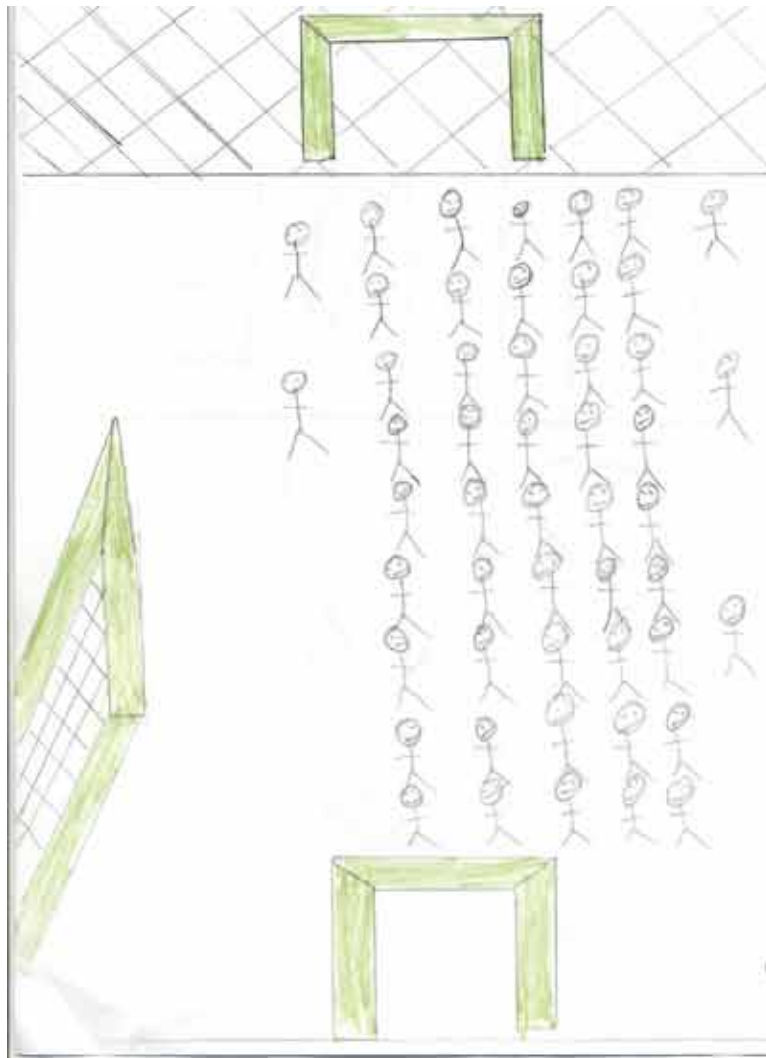
Deasey and Lasswell (1985) report on research that suggests that children become more engaged in imaginative play when they are active in places that have a variety of vegetation, slopes and elevations, playing surfaces, and green spaces. I also tried to find studies done regarding the relationship between space and resources available to children and conflict and aggression among them. While there has been a great deal of research done on this topic as it relates to adults, especially those in prison populations, I couldn't find anything on the issue as it relates to children.

As well, there has been a substantial amount of research conducted into the relationship between space and livestock. Take, for example, the following very detailed findings on the relationship between space and the behaviour of chickens:

Studies of chicken behavior have determined that the absolute minimum area required for a hen to stand comfortably is 72 square inches. Battery cages do not allow hens to express any normal behaviors such as dust bathing, nesting, or foraging (60% of an unconfined hen's day consists of foraging). Without the outlets for these instinctive behaviors hens become stressed, lose their feathers, and begin to peck each other excessively.

—Engerbretson, 2001: 4.

In short, while lots of research has been done to suggest that space can play a role in the healthy development of livestock and in the reduction of violence amongst prisoners, when it comes to children, there is still much work to be done.



The Project

Wanting to begin to address this unfortunate gap in the research, I finally came up with a project that I thought might work. I wanted to learn about how the children in my school would respond to a comparison of spaces and resources between their school and other schools in Vancouver.

The project took place in the classroom, in the hallways, and on the playground and was done by the students in my class over a four-week period. Basically, students completed all the steps that would be required in an architectural design project for the creation or renovation of a public building. They did a careful assessment of both the interior and exterior of their school and thought about what they liked and disliked. They surveyed staff and students to determine what these stakeholders felt were positive and negative features of the school and what they would like to see in an “ideal” school. Then, students compared their present school with other schools in the district and thought about things such as acceptable ratios of space and adequate resources. Comparing their school with other schools gave them the opportunity to reflect on issues of inequity and healthy learning environments.

After these steps, students were asked to write a design brief in which they presented their conceptual views of an ideal school for the community. And finally, students created a scale model of their “ideal” school.

What follows is an explanation of each step of the project, responses that students made along the way, and some analysis of what was learned in the process of conducting this project.

Procedure

Students first learned about interior design concepts such as natural lighting, vibrant and tranquil colours, artistic features, and ergonomic spaces. They were then given a small group assignment to consider these concepts and to have a really good look at their school in light of them. Our school completed a renovation five years ago which added natural lighting and open hallway spaces to the building. Many students noticed the natural lighting and enjoyed the open spaces created by this renovation.

When asked, the children had a great deal to say about which spaces were and were not their favourites in the school. (Note: In the comment excerpts below and elsewhere in this study, all student names have been replaced with pseudonyms.):

My favourite places in the school are the computer lab because I can play games. My second favourite place in the school is the gym because I can let off some steam...I do not like the Principal's Office...I would have more paintings around the school and add more gyms so the kids can have P.E. once a day.
—Freddie

At lunch time it's very hard to walk up and down the ramp...I don't like the ramp because after lunch and recess, it's hard to get back to class. It is also hard to get to the lunch room at lunch time. —William

My favourite place in the school is the library because it is warm and quiet. In there, you can just relax and read a book on a rainy day...To make the school a better place, I would add lots of colours, decorations, furniture. —Laura

The cafeteria is one of the places that I don't like because it is stinky and dirty. —Tony

Many students said that their favourite place in the school was the library and they explained that their reason for this was because it was quiet and peaceful. It is the only place in the school where students are expected to be silent during non-instructional time. As well, many students commented that the lunch room or the activity room was their least favorite place in the school. It is this room that is always the most crowded. At lunch hour, students are expected to line up for as long as fifteen minutes to eat their hot lunch. It is a noisy and messy place. As such, many students associate this room with overcrowding.

After we dealt with interior design concepts, the students learned about exterior design concepts such as green spaces, vegetation, playground designs, view corridors, slopes, and elevation changes. They then completed a small written evaluation of the exterior of their school:

There isn't enough room on the soccer field because when we kick the ball it can nearly reach the other goal. —Marla

I think we should use something else besides rocks on the soccer field. We could switch it to something safer so if we fall we won't get hurt as much. —Chris

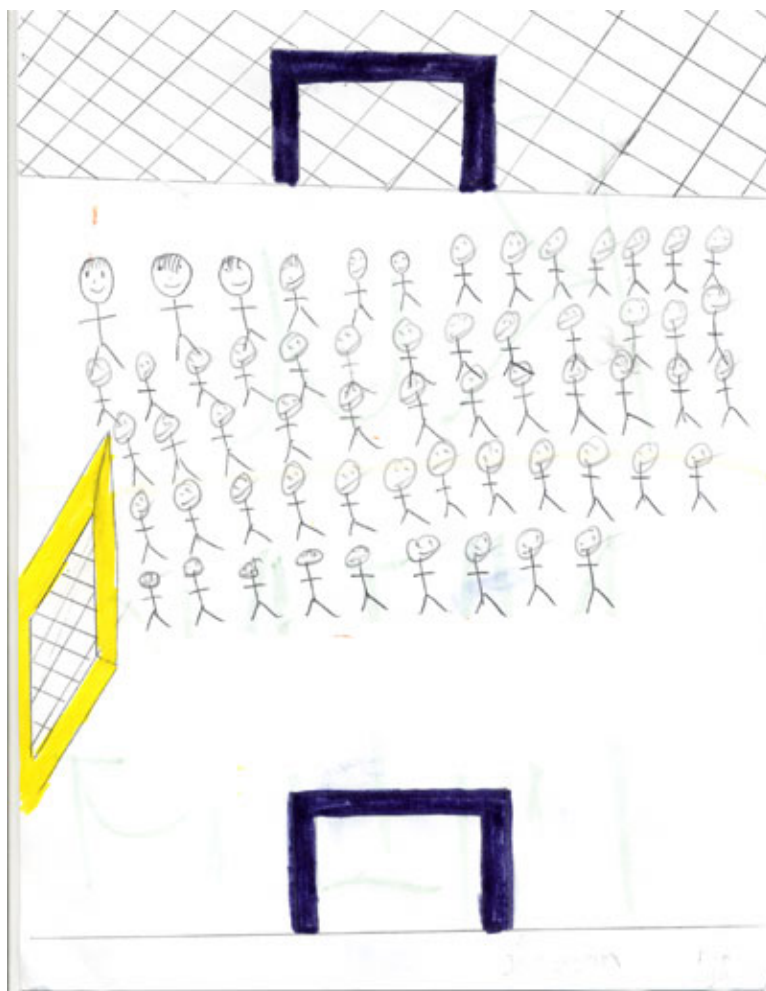
I don't think there's enough space for all the things that need to happen because sometimes the basketball courts are all full and there's not enough equipment for all the things that need to happen. —Minh

There is enough spaces for everyone on the field but on the basketball court we have to sometimes fight for the courts. —Neil

A majority of students mentioned the gravel field and its problems. Many students felt it was dangerous and too crowded. As well, many students felt it would work better as green space because it would reduce the number of injuries and because it would feel better to play on it.

Our next step as a class was to measure the outdoor areas of the school. These areas included the total amount of space on school property that was available for student use: the amount of green space; the amount of space available for gardens and plantings; the amount of green space available for children's activities without crossing roads; the amount of designated play areas for primary-aged children; and the amount of covered space for playing under on rainy days. I chose these outdoor areas because all of them are relatively easy to measure and because I believe that they are all important in the design of healthy learning environments.

Students also counted the number of ladders, slides, seating areas, soccer goalposts, painted sidewalk games, baseball diamonds, and free-standing playground apparatuses on the school property. These outdoor playground resources all play an important role in the over-all design of a school and they play a role in the creation of an active and fruitful landscape for play and recreation. Students then took their measurements and divided them by the number of pupils in the school (650) and came up with a variety of space and resource ratios. For example, students found that each student has 16.06 square meters of total outdoor activity space, 0.27 square meters of covered outdoor play area each, and 1.85 square meters of green space each. Further, for every painted sidewalk game, there are seventy-two students; and for every seating area with benches, there are one hundred and eight children; and for every goalpost, there are three hundred and twenty five children.



Afterwards, students compared this data with two other schools in Vancouver. One was the school that I taught at before coming to work at my present school. It has 470 students and is located in a wealthy and stable neighborhood in Vancouver. Two sides of the school property border a twelve acre city park with playing fields, picnic areas, and a public art walkway. In short, it is not an inner-city school. The other school I chose is located in Point Grey, one of the wealthiest neighborhoods in Vancouver. It seems to have generous amounts of outdoor play spaces and plenty of outdoor play and learning resources. There are about 440 students at this school. There are dozens of varieties of trees, remarkable gardens, excellent primary playground spaces and structures, a significant amount of natural “bush,” lots of clean, well-lighted play areas. In addition, the school’s property borders a large park with many grass soccer fields, baseball diamonds, and picnic areas.

My school is much different than both of these schools. Our community has a significant amount of low-income housing areas, a higher crime rate, and a much higher level of social density than is found at either of the other two schools. My school does not border any parkland and the nearest open area to us is a large parking lot behind Hastings Street.

In the calculation of space and equipment to child ratios, only school property and facilities were included (i.e., any land or facilities associated with adjacent city park spaces were not). After comparing these ratios numerically, students completed two activities to better show their understanding of these ratios and to get them thinking more about what these comparisons meant. For the first, they were asked to represent each school’s space-to-child ratio for particular space categories.

Using chalk, they constructed rectangles on the pavement at our school with each rectangle providing a full-scale representation of the average amount of space each child had at each of the three schools. For example, a group of students measured out the category of Total Outdoor Play Area per Child and constructed a rectangle that was 16.06 square meters for their school, and 34.34 and 34.68 square meters per child for the other two schools. Each category was completed by a different group of students and when everyone was finished, students did a walking tour of the rectangles. When represented in full scale, next to each other, the ratios became startling for the students. Many students were shocked by how different they were. One group mentioned that a child at their school does not have enough space to sit in an outdoor covered area while at both other schools there is enough room for a child to lie down.

The class then went on to represent the ratio of children to various outdoor design features and resources. In groups, students were asked to draw stick people that represented the number of students per playground resource. For example, 108 stick people were drawn gathered around a seating area with a bench at their school, while 15.7 stick people were drawn around a seating area with a bench at the school from the Point Grey Community. The most startling of these sketches was for soccer goalposts: 325 stick people for their school, and 55 and 58 for the other two schools.

After these activities, children had a very good sense of the differences in spaces and outdoor resources at these three schools. Students then responded to a series of open-ended questions related to these comparisons. They were first asked what the comparisons showed:

I think the space ratios there are so different because the adults there are really rich and they donate cash to the schools. Our neighborhood is also really poor. A few years ago, I heard that our school had so much students they had to make Tillicum School. —Minh

I think the space ratios are so different because they are probably more wealthy. —Olivia

They have more of everything than us, but there is one thing we have more than them: students. —Katherine

They must have a lot more space if they have so many soccer goalposts and basketball hoops. Those two things do take up a lot of space. —Lina

Compared with others, it shows that we need more space to play other games instead of just [a] whole bunch of kids playing only one soccer game and it ruins it. —Jacky

Students were also asked why they thought the space and resource ratios of these three schools were so different:

Because our school is located in the city and the other two are probably close to the woods. In the city there are lots of people so it is crowded. The woods are open and they can have as much space as they want. —Teresa

It is interesting to note that thirteen out of twenty written responses to this question mentioned that the inequity was related to wealth. While they seem unclear about how schools are funded, many felt that poverty played a role in their school not having as much space or as many resources.

Students were then asked whether they thought these space ratios were important. As well, they were asked to think more about what resources and spaces are most important to them and to their success and well-being at school:

Yes, I think these space ratio are important because if students feel more relaxed at recess and lunch they will do better in class. —Wade

If everybody has more space they wouldn't feel so squished up. If it was less crowded there won't be as much fights and if there isn't a lot of fights more kids would want to go to school and if they come to school they would learn more. —Cam

Afterwards, students were asked if they thought there was any relationship between space and learning. While little research has been done related to this, these inner-city children were able to make some interesting and valid comments about this issue:

We don't have as much as they do and it's not fair!!! —Crystal
I think there is because if we had lots of space to run around and play, we would have lots of energy to do work. —Mandy

I think the space had something to do with the learning because there is more space and the students could find a quiet spot to relax at during recess or lunch before going back to class. The nice rest probably helps them to be more awake and alive in class so they could absorb more information from their teacher. —Teresa

I don't think there is any relationship between spaces and learning because the people there probably hired tutors to help their children get smarter. —Dennis

At this point, it became clear that the issue of inequity had been raised, that students had been intrigued by it, and that it was now time to respond to it in a positive way. It also became clear that the children needed to respond to the inequities they had found with imagination and hope. By having children design their “ideal school,” I believed we would be able to move beyond what we had learned about the inequities that exist; to think constructively about space, not to be left feeling powerless in the face of the unequal ways in which it is currently distributed. As well, students would be able to show an understanding of healthy learning environments in their “ideal” school designs. And finally, students would be able to create a school that was better than the three schools they researched.

At this point, students were finally given their major model-making assignment. They were asked to write a design brief explaining their views about what an ideal school should be. They were asked to think about designing a school that every child in Vancouver would want to attend, that every parent would want their child to go to, and that every teacher would want to teach at. They were asked to think about inside and outside features, public art, green spaces, ergonomic design, and space ratios:

My school is going to look like a normal school but it's going to have a pond with a big playground and swings with lots of trees and grass. It won't have parking for the kids' safety and fish in the pond and a boat and the kids could have boat rides at recess and lunch and it will have two gyms and water fountains with freezing cold spring water...we will have a school bus, a big one, so the whole school could go on a field trip...and a horse to ride around on and a huge trampoline to bounce on and 200 basketball hoops. —Linda

It would have a big grass field about 14400m so kids can play all sort of sports like football, soccer, or baseball...There will be a Staples store or Office Depot so teachers can easily buy supplies for their classrooms. —Koji

I'm going to make a man-made lake with live Koy in it so kids can study the lake's ecosystem without going to the P.N.E. There will also be a nice sandy beach beside it so people can have picnics. When winter comes, the kids can skate on the lake. In the summer, you can even swim in it if you don't mind hungry Koy's... I'll plant some edible berry bushes to grow all year round so if the kids forget to bring their lunch, they can just pick berries to eat. —Minh

There will be no hallways. You have to swim from class to class. —Cass

After sharing their design brief thinking, students were asked to form groups and to share their ideas and then come up with a paper draft of their “ideal school.” Discussions were intense and all students became engaged in lobbying for their particular design. Students lobbied their group members for swimming pools and libraries and tinted glass and roller skating rinks and statues of great teachers and beaches and boats and rocket launchers and observatories and fish ponds and horses and stables and laptop computer rooms and skylights and waterslides and go-kart tracks and many other things. In the end, all groups had created excellent drafts on large architectural draft paper of their “ideal school” design.

Students were given large plywood bases and paint and wooden blocks and glue and sand and a large and varied supply of other model making materials and were given two weeks, for two periods each day, to complete scale models of their “ideal school.” Their models were remarkable. There were islands connected by footbridges. There were hockey arenas and swimming pools on every floor. There were beaches and trout ponds and Koy ponds and water slides and wave pools. There were classrooms with invisible walls so parents could watch without going inside and so kids who couldn't go to school could listen in anyway. There were greenhouses and gardens and orchards and zoos and horse barns and video games rooms and libraries on every floor. There were wheelchair ramps and anger management centers and detention lounges and telescopes and climbing walls and skateboard parks and lots and lots of green spaces and gardens and playground equipment. There were AstroTurf playing fields and scuba dive centers and boats and rafts. For the teachers, there were Starbucks coffee shops and banks to get money for field trips and buses that were free. There were large classrooms with less than twenty students and lots of gymnasiums and rides from the P.N.E. and statues in honour of the great teachers. There were skylights and retractable roofs. There were tiles and stained glass windows and yellow and green and black and red and blue and orange walls.

When complete, students presented their models to the rest of the class and other grade seven classes. They were asked to explain their school design features, including those that could not be seen with the model, and to explain why they felt all students, teachers, and parents would be interested in attending their school. Students were very proud of their models and gave wonderful presentations about why they designed their schools the way they did. They talked about green space and playground space and ergonomics and elevations and natural lighting and trees and water and positive learning environments. They talked about school needing to be fun and needing to be filled with resources. In the end, they were proud of their models; they were able to respond to inequity in a positive and creative way; they were engaged in clear and complex thinking about learning and space; and they were solving problems in group settings in ways that they had not been able to before the project began. In short, they were engaged in the act of learning.



Summary

It is difficult for me to summarize what I learned from this activity. I think I learned that children are capable of recognizing the importance of good school design in creating a healthy learning environment. I think I learned that children are able to recognize the role that space and resources play in making a healthy learning environment.

Further, despite being over-crowded and poorly served by space and resources, children are able to construct meaning and to create and to celebrate learning in dynamic ways. That is to say, despite the landscape they find themselves in, children are capable of learning. For me as a teacher, this was the best and most important finding of my project. I sometimes think that I would like to teach at a school like the ones we compared my school to because there are so many more resources and so much more space and so many less-troubled children. But then my students get engaged in a project like this and the classroom turns into a beautiful and fruitful space. And, for me, there is one specific student comment that highlights this very clearly.

It was made at the point where students were asked why they thought the space ratios were so different. It was an important point in the project as they were just coming to recognize the inequity of spaces. And it was a difficult point because I was trying to get honest responses, but I didn't want to leave the students demoralized.

Most of the students were thinking carefully about why the ratios were different and commenting on things like neighborhoods being in the country instead of the city and neighborhoods being richer or there being fewer children in other parts of the city.

One of the students in my class is a gentle and well-liked boy named Kenny. He once wrote in his journal that he was excited about meeting his Dad for the first time. His father lives in another country and is having difficulty getting to Canada. His mother, who is working very hard to raise a caring and thoughtful child, is alone, unable to speak English, and living in poverty. When asked why he thought the space ratios were so different, he made the following comment: "Well, as long as I have friends around I don't care where we are because my friends make me feel safe everywhere."

In other words, Kenny has been able to find good in the world, and to construct important meaning for himself despite the landscape he finds himself in. This project reminded me of the resiliency that children like Kenny have and of the learning that can take place even in impoverished spaces, when imagination and hope and the encouragement to use them are present.

References

Deasy C. M., & Lasswell, T. (1985) *Designing places for people: A handbook on human behavior for architects, designers and facilities managers*. New York: Whitney Library of Design.

Engerbretson, M. (2001). Battery chickens. *Animal Issues*. 32(4).

Susa, A. M., & Benedict, J. O. (1994). The effects of playground design on pretend play and divergent thinking. *Environment and Behavior*. 26(4), 560-580.

Taylor, A., & Wiley, A. (1998). Growing up in the inner-city: Green spaces as places to grow. *Environment and Behavior*. 30(1), 3-28.

About the Author

Scott McIsaac teaches Grade 7 at an inner-city elementary school in Vancouver. He has taught school in Vancouver for nine years and is a former blacksmith and reporter.