Landscape Learning: Some of the world’s best classrooms are out of doors
By Susan Black

Black, 2006.

NOTE: Denver’s Bromwell Elementary School Learning Landscape is referenced in this article as a model for design.

March 2006: Vol. 193, No. 03
American School Board Journal
RESEARCH

I studied several schools in England, but the one I remember best was a primary school in a low-income neighborhood in the Oxford countryside.

The school was a low-slung yellow brick building, indistinguishable from many nondescript American schools. But the grounds were magnificent. Entering through the schoolyard gate, I followed a path that wound around a rose garden and past a courtyard surrounded by shade trees and ivy-covered rock walls.

Over tea, the headmistress explained that she’d recruited a local garden club, a stonemason, and a woodworker to help landscape the school grounds. “I believe children benefit from beauty,” she said, “and I believe we should strive to create indoor and outdoor settings where children live well and learn well.”

Many American schools are incorporating schoolyard gardens into their site plans to make their grounds more attractive and to help children learn. In California, for example, the Department of Education intends to establish a “garden in every school,” an initiative that’s gaining ground across the state. Five-year-olds now study botany while tending a “kinder-garden” near her school’s entrance, Carol Van Vooren, principal of Carlsbad’s Jefferson Elementary School in San Diego County, told me.

At Berkeley’s 900-student King Middle School, the principal and a local restaurant owner spearheaded a project to convert an asphalt lot into an “edible schoolyard.” Sixth- and seventh-graders helped design and now maintain a half-acre organic garden. And they bring their outdoor learning indoors -- to their science, math, and social studies classrooms and to a student kitchen where they learn about cooking, nutrition, and a variety of ethnic foods.

Asphalt and chain link

Such developments are encouraging, but derelict schoolyards are still all too common, says landscape designer Cheryl Corson. Many aging schools have “harsh outdoor environments,”
including weed-infested grounds, broken playground equipment, and play areas filled with potholes.

Some new schools have abandoned the idea of playgrounds and outdoor learning sites altogether. Recently, for instance, an elementary school was constructed in Georgia without an outdoor play area. School leaders eliminated recess to extend “seat time” for classroom lessons and practice tests.

Many school leaders don’t appreciate the “learning potential in outdoor spaces,” says Julie Johnson, a landscape architect at the University of Washington. In a 2000 study of school landscapes, Johnson and her colleagues say most educators associate learning with indoor spaces, such as classrooms, gyms, music rooms, and computer labs. School grounds are rarely thought of as learning sites, they report.

And many school leaders overlook the symbolic messages their school grounds convey to students and the neighboring community. Johnson contrasts the not-so-subtle impressions suggested by landscapes surrounding two Seattle schools. One has an attractive garden and a courtyard with benches where students study and socialize, similar to an Ivy League college campus; the other has a meager asphalt play area surrounded by a chain-link fence, similar to a prison yard.

**Natural schoolyards**

School sites should be “green, not gray,” says landscape architect Randy White, CEO of the White Hutchinson Leisure & Learning Group in Kansas City, Mo. They should be “planted, not built.”

White advises school leaders to provide children with “naturalized playgrounds” -- spaces that include water, trees and flowers, insects and animals, grass, stones and sand, and other elements that encourage inquiry, exploration, and discovery. The best playgrounds, he says, have diverse colors, textures, and materials; nooks and crannies for socialization and privacy; versatile equipment with movable and interchangeable parts; and places to observe elements of nature, such as wind direction and cloud formations.

The naturalized school landscapes I’ve investigated are engaging and lead to spirited play for kids and adults alike. (I admit to climbing on huge round hay bales with second-graders and floating sycamore-leaf boats down a shallow stream with fourth-graders.)

But do these schoolyards contribute to students’ learning? Ron Israel, with the Education Development Center, and Kirk Meyer, with the Boston Schoolyard Funders Collaborative, say most studies that attempt to answer this question are “impressionistic,” relying mainly on observations, interviews, and small-scale surveys. These studies indicate that well-planned school grounds raise students’ academic performance and enhance their social and physical development.
White agrees that more rigorous and extensive research is needed, but he urges school leaders to consider these reported relationships between natural playgrounds and children’s behavior and classroom learning:

- Children with ADHD are able to concentrate better when they return to their classrooms.
- Children acquire better physical skills, such as coordination, balance, and agility.
- Children who play with natural items, such as pebbles and water, are more imaginative and creative and are better at observing and reasoning.
- Children show fewer antisocial behaviors, such as bullying, vandalism, and fighting.
- Children are absent and ill less often.

For many students, natural schoolyards are their only opportunity to run on grassy slopes, observe animal tracks in snow, or build shelters from stones and branches. Children who spend most of their time indoors understand the natural world through “mediated images” on TV, in movies, and in storybooks, White says. In a 2004 essay on children’s relationships with nature, he writes, “The virtual is replacing the real.”

Some principals and teachers I’ve talked with say they haven’t given natural playgrounds much thought. Several teachers told me that they resent recess duty, and that they mostly stand on the sidelines while their students “run off steam.”

The “surplus energy theory” put forth by psychologist Herbert Spencer more than 150 years ago continues to have an “unfortunate influence on schoolyard design,” White contends. This misguided concept of play disregards possibilities for outdoor learning and contributes to designing “lackluster school grounds with little value,” he says.

The complexity of play

When it comes to playing, children are the real experts, and designers are coming to realize that playgrounds should be designed from a child’s perspective.

Children in Yorkshire, England, helped University of Leeds researcher Catherine Burke put “play in focus” at two primary schools. Burke gave 32 children, ages 7-11, cameras to create photo diaries of the places they preferred to play. At both schools -- one affluent and one poor -- children recorded sites “invisible to the adult eye,” Burke reported.

Many sites that adults discounted as eyesores and nuisances, such as puddles and sandlots, were the kids’ favorite places. In these areas, kids’ play was unusually detailed and complex, Burke discovered, noting that the children constantly invented and reinvented games and engaged in dramatic play, such as pretend housekeeping and shopping.

The children also photographed secluded places, such as hedgerows and areas bounded by fences. They described feeling “cozy” and “private” in these spaces, and they commented that
they felt safe when they were partially hidden. Several children photographed a lamppost, a structure that teachers and other adults never imagined the children would consider significant. The children told Burke that the lamppost was where they arranged to meet their friends.

Teachers and other adults seldom notice or comprehend the complexity in children’s play, a finding Sue Parrot reported in “Games Children Play: Ethnography of a Second-Grade Recess.” In her now-classic study, conducted more than 30 years ago, Parrot observed that teachers thought their second-grade boys were rowdy and disorganized on the playground.

But through observations and interviews, Parrot discovered that the boys organized their play into three specific categories: games, goofing around, and tricks. Games such as relay races and keep-away were rule bound, the kids explained. Goofing around activities, such as somersaulting down a snowy hillside, were invented on the spot and usually don’t have specific rules. Tricks, such as tapping a friend and running off to hide, were spontaneous.

Parrot’s research shows that the teachers consistently misread the boys and their play. They incorrectly assumed that the games were unstructured, and they mistakenly believed that the boys played without pressure. But the 7-year-olds confided to Parrot that they often felt pressured, particularly when their games were competitive, involved new rules, and required negotiating with their playmates.

**Living and learning well**

I’ve kept my photo diary of the British primary school and often share it with teachers and administrators.

Their reaction is invariably mixed. Most agree that the school grounds are beautiful, but they’re quick to defend their own lackluster schoolyards. Predictably, they worry about liability issues associated with natural playgrounds and outdoor learning sites. And they fall back on the assumption that the most important purpose of playgrounds is to have kids burn off their pent-up energy.

In fact, many schools -- hundreds around the country -- are redesigning their school landscapes, making them more attractive, safe, and suitable for play and learning. These schools have found both the will and the way to improve their school grounds.

I like to think that children in their schools are living well and learning well.

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In an article for the National Clearinghouse for Educational Facilities, Cheryl Wagner (now Corson), a landscape designer and certified playground safety inspector, wrote that she hopes the term “outdoor learning” will soon seem as normal as “indoor learning.”

As the following examples from that article and other sources show, schools can design a model for outdoor learning that suits their site and their educational goals.

• At Maine’s 1,200-student Brunswick High School, landscape architects and engineers turned part of the school’s 50-acre coastal watershed site into an environmental laboratory. Students study science and environmental issues outdoors, monitoring nitrate absorption and the percolation of pesticides into groundwater.

• At Maryland’s Hollywood Elementary School in St. Mary’s County, students helped convert one-third of the school’s grounds into a wildflower meadow where they study plants and wildlife.

• At the 35-student K-5 Chilmark School on Massachusetts’ Martha’s Vineyard, designers developed a flexible outdoor space where children perform in a small three-tiered amphitheater and meet for “shared classroom learning.”

• At Denver’s Bromwell Elementary School, a landscape committee and university architect created a master plan that transformed the school’s playground with a new gateway, outdoor solar system plaza, grassland garden, outdoor stage, and weather station.

• At Seattle’s T.T. Minor Elementary School, school grounds now include a promenade with shade trees, a small amphitheater set into a hillside slope, an open play field surrounded by a running track, native plantings, and learning gardens. Plans include installing public art works and theme gardens.

Selected references


