

Green Youth: Helping Children Develop Ecological Literacy

Panelists: Julie Johnson, University of Washington Department of Landscape Architecture; Erin MacDougall, PhD, Public Health - Seattle & King County, Healthy Eating and Active Living Program Manager; Gilda Wheeler, Office of Superintendent of Public Instruction, Education for Environment and Sustainability Program Supervisor; Panelist and Moderator: Jena L. Ponti, RLA, ASLA, Bruce Boody Landscape Architect, Inc. & Chair of ASLA Professional Practice Network on Children's Outdoor Environments.

In a time when children, on average, spend 45 hours a week “plugged in” and less than 30 minutes a week in outdoor unstructured play, landscape architects must solidify our role in the movement to reconnect children with nature. A foundation of ecological literacy is keystone for children to, in the near future, be able to grapple with the complexity of environmental issues and the overall health of the planet. Hundreds of organizations and lawmakers are striving to affect positive change in the amount and quality of environmental education our nation's school children are receiving. This change is showing in policy and legislation from the local level up to the federal level of government.

The No Child Left Inside Act

The No Child Left Inside Act H.R. 3036 and S. 1981, which passed in September 2008, is recognition on a federal level of the movement to uplift ecological literacy in schools through enhanced environmental education curriculum. The NCLI Act requires K-12 school systems to strengthen environmental education curriculums, provide teacher training, and provide federal grant money for schools to pay for environmental education. This Act will provide \$500 million over a period of five years to support this work in participating state school systems.

What does the NCLI Act mean to landscape architects? First, landscape architects are in the position of advocacy for reconnecting children with nature. We can collaborate with educators and administrators in disseminating the information on the benefits of greening schoolyards for children. Second, we must utilize a participatory design approach that encourages students, parents, teachers, administrators and maintenance staff to become involved in the design, construction and maintenance of their outdoor spaces. Every step in the process of creating an outdoor classroom or play garden is a learning opportunity and a way for children to have a say in the spaces that affect them. The NCLI Act will inspire us to look at school property, and other spaces, and evaluate them in terms of its potential for environmental education opportunities. We need to constantly ask ourselves the question “what is the range of experiences afforded to children in nearby nature?” because the answer is one that is constantly changing depending on the site, context and the users.

WA State K-12 Education for Environment & Sustainability & the Sustainable Schools Protocol

Closer to home, Washington State legislature is working to boost environmental education in public schools across the state. Landscape architects should be cognizant of The Office of Superintendent of Public Instruction's (OSPI) Education for Environment and Sustainability program, which provides support to K-12 districts, schools, and teachers in implementing WAC 392-410-115. This law requires "Instruction about conservation, natural resources, and the environment shall be provided at all grade levels in an interdisciplinary manner through science, the social studies, the humanities, and other appropriate areas with an emphasis on solving the problems of human adaptation to the environment." Included in this support are the development of Environmental and Sustainability Education (ESE) K-12 learning standards which describe what a student should know and be able to do in the area of ESE. The draft standards include the three Essential Academic Learning Requirements (EALRs) that address: 1) Ecological, Social, and Economic Systems; 2) The Natural and Built Environment; and, 3) Sustainability and Civic Responsibility.

OSPI, in partnership with Puget Sound Energy and the Environmental Education Association of Washington, developed the Sustainable Design Project. The intent of this program is for students, together with community partners to study, design, implement, and showcase solutions to issues/problems in their community within the context of systems and the "triple bottom line" of ecological, social, and economic sustainability. Additionally, the OSPI Career and Technical Education division recently developed the year-long middle & high school Green Sustainable Design & Technology Course to expose students to career opportunities in the green, post carbon economy (e.g. renewable energy, fuel efficient vehicles, sustainable agriculture, and green building).

In 2005, the Washington State legislature passed the High Performance Public Buildings Act, the goal of which includes building high-performance schools that will improve student achievement and occupant comfort, reduce costs, and preserve environmental resources. The Washington Sustainable Schools (WSS) Protocol explicitly defines a high performance school for the State of Washington. The WSS Protocol is similar to the US Green Building Council's (USGBC) LEED™ NC Rating System. Washington Sustainable Schools Protocol spans a wide variety of areas, from site planning and energy use, to material specifications and indoor environmental quality. For more information about the WSS Protocol, please visit: <http://www.k12.wa.us/SchFacilities>.

Garden-Based Learning Opportunities in the Schoolyard

In the last several decades, the U.S. has seen an alarming increase in the rates of childhood overweight and obesity and public health professionals are actively working within their communities to identify solutions to promote children's health. One

emerging strategy is the implementation of Farm to School programs. Embedded within the Farm to School movement is the element of establishing and sustaining school gardens. The recent revitalization of school gardens is starting to be reflected in the quality and quantity of studies and published articles in the literature. Themes for program impact are beginning to emerge.

One theme is that garden-based learning improves academic achievement. The school garden offers a ripe environment for aligning hands-on learning to student achievement in the classroom. In the garden, students learn about the origin of their food, and observe the inter-relationships between plants, soil and insects. The garden lessons lead to an understanding and respect for ecosystems as well as provide a venue to cultivate community with other students as they work together to plant, grow and harvest their fruits and vegetables.

Another theme is that food creates learning of community values. These days, many children and families have a weakened relationship with where and how food is grown and the cultural value of family time spent together for meals. School gardens offer a renewed sense of wonder and experience for students to connect with their food in its natural, unprocessed form and to experience foods that are the most nutritious for growing bodies and for promoting life-long health.

Another highlighted theme is health and nutrition. Growing food with kids helps kids learn to make healthy food choices. Many children today eat substantial quantities of processed food of low nutritional value. As a society, we are already seeing the negative consequences of this, through soaring rates of childhood overweight and obesity; driven by both poor diets and physical inactivity. One way to begin a revolutionary change to this pattern is to help children grow their own food and to eat these foods directly from the garden. The sensory experience of tasting foods in their most natural state engages all children on some level and can lead to a life-long commitment to nourishing their body through healthy food.

Because school gardens provide lessons for students that align with educational goals in science, math, history, social studies, art and health, they are a productive way to engage students in outdoor education.

Finally, as school gardens become increasingly popular in the Pacific Northwest, a natural migration of like-minded educators, professionals, and school garden enthusiasts to one another has occurred. Groups such as the Puget Sound School Gardens Collective can begin to help align resources, knowledge, technical assistance, and policy/advocacy efforts and the movement gains strength across the U.S.

Ecological Literacy & Design: Concord Elementary & U of W LA 474 Studio Project

Julie Johnson presented an overview of a recent University of Washington Landscape Architecture design studio that envisioned possibilities to improve Concord Elementary

School's landscape for learning and play. This school is located in Seattle's South Park neighborhood, which contains a mix of industrial and community-based uses. Concord benefits from its proximity to Marra Farm, a park with several gardening programs. At Marra Farm, Lettuce Link Program staff runs a Children's Garden that provides wonderful learning opportunities for Concord students, and is featured as one of the Puget Sound School Gardens Collective gardens on the website that Erin presented. While having this wonderful nearby resource, the school's PTA wants to undertake improvements to the school grounds itself. And the studio viewed changes to the school site as opportunities to complement what children learn at Marra Farm.

Concord Elementary School has a play area, not unlike many schoolyards, with a vast scale of space and limited palette of materials. To envision more enriching possibilities for Concord Elementary School, eighteen BLA students in their final year of the program undertook a creative analysis, programming and design process that was informed by a participatory process with school children, staff, and the PTA. The envisioned possibilities begin to move outside the box, and suggest engaging places for learning and play. Some qualities were presented, using particular student projects to illustrate them: places for student art and personal expressions and connections to the school; sensory rich features and spaces; dynamics through elements and the ways the site is used; diverse spaces; native plantings, including edibles; habitat; inviting entries and features that connect the community to the school; and extending connections into the community to other civic spaces.