The Learning Garden: Arguing for Schoolyard Change in a Zero-funding Environment

Katie Kingery-Page and Myles Alexander
Kansas State University

Introduction

The Learning Garden is a half-acre play and learning space in an American public schoolyard. Northview Elementary School (Northview) is the largest public school of its kind in the community of Manhattan, Kansas—a small university town with a population of approximately 56,000 people. The school serves more than 500 students of ages five through twelve from diverse socio-economic and ethnic backgrounds. More than half of Northview students live in poverty (as gauged by eligibility for government-sponsored free breakfast and lunch programs); students speak nine different primary languages in their family homes.

The garden’s intent is to provide a place for children to learn out-of-doors, engage in free play in a natural setting, and experience native plants and local materials. Designed and funded by the community and university with grant-writing assistance from the university faculty partners, the outdoor space is composed of crushed limestone paths, raised planter beds, a small grassy area with natural shade, a variety of plantings and designed, stone features. More than one hundred community volunteers and students helped build the garden (fig.1).

Over the course of the project, the university-community team faced political and practical obstacles to change in a public schoolyard. The local public schools have undergone budget cuts, lost teachers, and thus exist in a zero-funding environment for all school projects deemed non-essential. Examining these obstacles illuminates the need for structural change in American schoolyards.

The Learning Garden project differs in a notable way from the two projects’ presented by our colleagues (Wrightsman and Gabbard) as part of the “Going Live: Reconciling experiential learning practices with community expectations” symposium at AAE 2014. Unlike the other two projects, the Learning Garden is not a service-learning project in the strictest sense of the word. It is more accurately described as participatory action research.

Participatory action research, an approach suited to live (or engaged) architectural design projects, is well defined in the engagement literature of education. Kemmis and Wilkinson note that at its most basic, a participatory action research process includes the following steps in an iterative cycle: “planning a change; acting and observing the process and consequences of the change; reflecting on these practices and consequences, and then; re-planning and so forth”.1 Kemmis and Wilkinson also assert that participatory action research should involve a reciprocal sharing of knowledge.2 Others describe shared knowledge occurring through a critical, evaluative process of “reflective dialogue” with stakeholders.3,4

Students have taken part in the Learning Garden, but in a limited way. For example, a variety of students from design and non-design disciplines participated in the community’s installation of the Learning Garden. A landscape architecture graduate student worked as an intern to assist in final installation and planting. And following the Learning Garden’s construction, seven graduate students have completed year-long design studies to address Northview and other public schoolyards’ needs. But the primary exchange of knowledge during the Learning Garden project has been between faculty and community.

Over the course of the Learning Garden project, we (university and community partners) have observed and
reflected upon the process and consequences of change. Until now, however, we had not undertaken a systematic effort to gather reflections on the project from the community point of view. This process is now underway, with a series of community partner interviews planned, and one interview complete. We interviewed a member of the Northview community who voluntarily accepted a pivotal role in the Learning Garden project. This individual is a parent to children in the school and served as landscape chairperson within the school’s Parent-Teacher Organization (PTO) during the garden’s planning and construction.

This paper describes the change envisioned for the Northview Elementary schoolyard as background; presents a reflective dialogue including the school landscape chairperson’s interview responses and our interpretation of this on-going university-public schools partnership in light of his feedback; and concludes with critical issues needing more attention in future design-build projects undertaken in university-public school partnerships.

Background

At the request of a Northview parent and the school principal, one of the authors (Kingery-Page) joined the Learning Garden design committee in spring of 2008. Kingery-Page developed a series of conceptual garden plans based upon the committee’s design program. With committee input from teachers, staff, parents, and administrators, the design slowly evolved into a plan allowing for many educational uses.

Plan for change

At the outset of the project, community and university partners planned for what they understood to be contextual change in the schoolyard (change that can occur within the existing institutional context). Over the course of the project, partners gradually understood and acknowledged that only through structural change (that which requires change to institutional or societal contexts) could we accomplish our goals.

We planned to change the way teachers and students use the schoolyard, aiming for an increase in experiential learning, defined as the process of constructing knowledge through iterative exposure to abstract and applied activities. We envisioned a garden where students could have meaningful experiences with nature, learn about food plants and native plants of the eco-region, and reap the rewards of engaging in hands-on learning activities to meet existing elementary curriculum standards. We also envisioned an increase in unplanned, non-curricular experiences in the schoolyard such as free play in the nature-based Learning Garden.

Literature on children’s access to nature finds a correlation between time in highly green, natural settings and: a reduction in outbreaks of anger and violence; an increase in mental restoration and self-regulation; and an improvement in attention in children with attention deficit disorder. Free play has been shown to be as physically beneficial as structured, physical education and is significant to development of focused attention needed for complex learning.

To be a success, the garden must survive challenges to maintenance and succeed in adoption into the school’s formal learning curriculum. Throughout the process, the partners have grappled with an unresolved need for structural change: a need for funding of increased schoolyard landscape maintenance, funding for garden educators or play leaders, and for re-organization of teachers’ responsibilities to foster lesson planning for schoolyard use.

The process and consequences of change

In late 2008, another university faculty, Jon Hunt, joined the team. Hunt initiated contact with Northview School’s art teacher to organize three art workshops with ten and eleven year-old students, to engage them in design of a second phase of the garden and to build excitement for the garden construction already underway.

Following schematic design of the garden, Kingery-Page developed a series of working drawings to guide volunteers in building the garden, obtained material estimates, procured material donations, placed orders and coordinated delivery of materials to the garden site. Together with community partners, we scheduled and led workdays to build the garden in 2009. The installation process was intense, involving more than fifteen workdays with volunteers from various university and community groups, and a strong turnout of teachers, parents, grandparents, and kids from the Northview neighborhood. In particular, the school’s PTO landscape chairperson volunteered a great deal of time to installing the garden.

Just three months after garden construction, the school principal informed a small group of university and community stakeholders that the school district administration and their consulting architect were meeting to discuss the Northview building expansion. At that time, we all believed that the garden was to remain intact through the construction process. However, the school principal soon informed us that the garden would be removed to avoid increasing the cost of staging construction in the areas around the garden. We supported the principal in a series of negotiation meetings with the district architects, construction manager, and administrators to expressly define the garden as outdoor classroom space, and request that the cost of removal, storage of elements, and reconstruction of the garden be included in the building expansion.
project. The outcome was that by fall 2012, a contractor rebuilt most of the garden’s essential components elsewhere on the school grounds.

Welcome consequences: benefits of the project

To date, benefits of the on-going Learning Garden project can be described in terms of community cohesiveness (of prime benefit to community) and use of the garden as an effective setting for studying the impact of time in nature upon children (of prime benefit to university).

Within the construction partnership phase, community cohesion was demonstrated and strengthened over many workdays. Often, when stopping by to weed or work in the garden on our own, we would encounter school children’s parents and grandparents who would comment on their pride in the garden. Asked why he joined the project, the school’s PTO landscape chairperson replied that he felt it was critical to show his children, “…what it takes to be part of a community, part of being something greater than yourself... something that’s going to be used for the future.” He also simply felt it was important to help build an outdoor learning garden for his children and their peers to use during their time at the school. In the first season of the garden, children of ages five through eleven used the garden for curriculum-based projects.

Community cohesion benefits can also be described in terms of the Learning Garden’s physical impact upon the neighborhood. While the Northview neighborhood has locally interconnected streets, it is disconnected from the larger city due to an arterial highway. This formidable pedestrian barrier separates people from most parks, a zoo, and other amenities for children when traveling from the neighborhood on foot or by bicycle. Therefore, the Northview schoolyard and its nature-based Learning Garden are key destinations for children of the neighborhood, both during the school day and later for informal recreation; it is currently used from sunup to sundown.

As an indirect result of our partnership on the Learning Garden, a KSU landscape architecture student designed a natural playground and trail system for a then derelict field just east of Northview School. In the course of studying the school’s east field, Rebecca Melvin examined pedestrian circulation and documented gaps in the existing neighborhood. Melvin’s proposal included recommendations to extend sidewalks and to add a multi-use recreational trail around the school’s east field. A grant co-written by the university-public school team successfully funded trail construction; the trail now links existing sidewalks to other parts of the schoolyard and provides a safe place to walk, jog, or ride bicycles.

A prime benefit of the partnership for university faculty is use of the re-built Learning Garden as a setting for research of the potential benefits of children’s time in nature. Though other researchers have established benefits of time in nature for typically developing children, very little is know about the potential impacts of time in nature for children with autism spectrum disorders autism. To answer the need for more empirical study of whether playtime in natural playgrounds correlates to improved executive functioning in children with autism, one of the authors (working with multiple colleagues) undertook an exploratory, pilot study during summer 2013. Statistical analysis of the study data is underway, as is an initial manuscript detailing the adaptation of the Learning Garden to serve as a setting for the research.

Reflective Dialogue

During an open-ended interview, the PTO landscape chairperson described his role in the project as organizing community volunteers and helping to build the garden (fig.2).

This individual brought an educational background in horticulture and many years of professional experience in landscape installation and maintenance to his role.

Methods

The interview involved open-ended questions related to the interviewee’s expectations and perceptions of challenges associated with the project. Following the interview, we coded interview responses for four initial (or expected) themes: project organization or timeline; liability and responsibility of outcome; federal, state and local regulations; and fees, budget, and financing. After coding for initial themes, we also sought to identify emerging (or unexpected) themes.

Findings

Responses from the school’s landscape chairperson emphasize that gathering volunteer involvement was a challenge to the project due to project timeline, and almost as a corollary, challenges of budget, since the
lengthy project depended upon almost all community labor for completion. In addition, an emergent or unexpected theme in the stakeholder interview included a concern of communication related both to explaining the project to a broad community and to a concern of communication with the upper administration of the public school district, the body responsible for overseeing operations at all local school sites.

**Project Timeline** The PTO landscape chairperson noted that the garden construction timeline and process itself was well organized. But the fact that all work except site clearing, grading, and some stone construction was accomplished by volunteers necessitated a large number of community workdays, stretching over a six month period. As a result, the landscape chairperson received negative comments from some school parents, who disliked continual email requests for volunteers.

**Budget** Although the landscape chairperson did not explicitly state that the budget was a challenge, a lack of funds for professional installation resulted in the need for many workdays employing volunteer labor.

**Communication** According to the interviewee, communication between team leaders (university partners, school principal, community leaders) worked well. But pre-construction communication with the broader neighborhood was weak. The landscape chairperson regrets that we did not hold a larger community meeting, beyond just the school PTO. He expressed that such a meeting would have been a chance to invite possible volunteers, “…explain to them, this is not going to be a one weekend type of a deal, we have to do dirt work, planting, and hauling, so it’s going to take months…and we need your help.” He feels this might have prevented some community members’ expressions of surprise or annoyance at receiving multiple email requests to attend workdays.

The PTO landscape chairperson emphasized that the school district’s decision to remove the garden so shortly after installation was his largest surprise and disappointment about participating in the project, saying, “…it was such a quick turn around. We’d just installed it and they tore it out” (fig.3).

**Assessment: Critical Issues for Further Reflection**

While design educators often prefer to report on the benefits of their live projects, reflecting upon obstacles and challenges is a critical step within a participatory action research process. Conducting a community partner interview allows us to examine pitfalls in our live project, with a future goal of comparing these pitfalls across several engaged projects.

**Budget**

In relation to the Learning Garden installation, the interview responses implied the need to gather a substantial enough project budget in order to limit volunteer labor to a scope of work that can be easily conceived of and enjoyed by the community. Broadly, the partnership with Northview School has spurred our interest in state legislature and local community budgeting for education and in community attitudes toward outdoor learning. Across the school district, interested individuals and groups have independently created small school garden projects and greenhouses, the Learning Garden being one of the largest designed sites at a local school. However, there is no mechanism to fund maintenance of these projects at the district
level. Kansas school districts face shrinking budgets and rising costs to deliver basic curriculum. The next phase of our advocacy for local schoolyards will include examining case studies of school districts that have successfully funded experiential schoolyard design, installation and maintenance.

**Communication**

Implicitly, both the public school partners and university partners expected one another to take a larger role in communicating the project to a broad community and school district administration audiences. Because partners only outlined expectations for the lines of communication between those directly involved in garden construction, both sides of the partnership overlooked broader communication issues. In future partnerships, use of an explicit communication tree (or similar diagram) would be helpful. The scope of audience for the project should be critically evaluated and re-evaluated by all parties.

Findings of the community partner interview offer insight into the real and thorny challenges endemic to engaged design-build projects. Neither of the final reflections on budget and communication should be taken as absolute rules for best practice. Rather, this reflective dialogue is a small step toward envisioning more effective university-public schools partnership in the context of design-build, live practice. As we gather partner feedback about the Learning Garden project, we move nearer to identifying strategies for elusive structural change in American public schoolyards.

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**References**

2. Ibid, pp. 21-36.
7. Ibid.