

not
white

diversity in beginning design education



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Enabling Diverse Populations to Transform the Near Environment

Inner city schoolyards offer opportunities to connect diverse populations of youth to the environment and allow a blank canvas for instruction in the design arts. Schoolyards are potent voids for students to discover design with the natural environment and to use this knowledge to transform the common landscape with the mind and the hand. To engage middle school youth in the design process on such sites enables them to view the urban environment with a new lens, to understand nature's processes, and to build confidence as the shapers of their own community.

This paper will review the methods by which two dysfunctional schoolyards in historically African-American Washington, D.C., neighborhoods challenged youth in public middle schools to transform unused space into innovative garden spaces for the school and the neighborhood. The process featured an enrichment course in landscape architecture, which allowed students to discover the built environment while they ripened their design abilities. Students examined and documented natural and built environments, visited landscapes of cultural significance, and were introduced to the methods by which design is studied: drawing, sketching, studying scale, building models, designing details, and publicly presenting their work. Students also met with public and private sector design professionals working in their community.

The two schoolyards included murals and mosaics from parallel courses in the visual arts. The students, as well as community members, designed and installed gardens in patterns that reflected their cultures, which they incorporated into the master garden plan.

This paper will review methodologies in instruction, funding, design curriculum, community involvement, and installation for their potential to instruct diverse populations in the design arts, using a focused design methodology. In such settings, students can learn of their roles as stewards of the land and instruments of change in the city. The design experience in the middle school years also promoted continued study in high school, as well as for focused study in college for several students who began their design discoveries within the cultural garden initiatives.

abstract
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Brian P. Kane, ASLA, has designed school campuses, historic sites, and public housing communities throughout Washington, D.C. His built work include Mary's Garden at the Basilica of the Immaculate Conception and historic Aldie Mill in Loudoun County, Virginia. His interests lie in the potential intersection of cultural landscapes with ecological restoration, design instruction in disadvantaged communities, and campus design. He teaches regularly in the Washington, D.C. public schools and has taught design courses to high school and junior high school youth.

He holds masters degrees in Landscape Architecture and Urban and Environmental Planning from the University of Virginia.

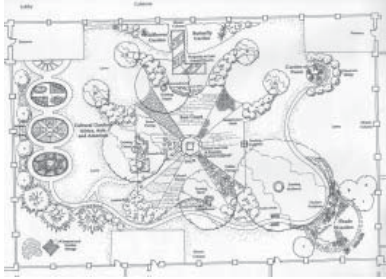


Figure 1

The dysfunctional urban schoolyard appears an awkward place to engage beginning design students. In many urban schools, schoolyards have become places for temporary building expansion or storage of deficient school equipment. Their plans are frequently poorly functioning spaces on the school grounds: drainage is inadequate, plantings haphazard, and spaces are disconnected from the school's functions. Little inspired space is offered to the school community.

The case studies in this paper demonstrate that these spaces offer fertile ground to begin design study with urban middle school students. Through the examination of the degraded site, students gain understanding of natural cycles and user needs, and are able to address each of them through design solutions. Keeping these design solutions at a conceptual level in a student's initial design study appropriately addresses the challenges of neglected urban open space. Design implementation of such design plans can be realized through the expertise of outside partners and community members, as well as from within the school community. In this learning model, students nurture their design intuition, they demonstrate their abilities to their peers and community members, and they become experts in a particular problem. At the same time, the schoolyard allows students to better understand their site's environmental constraints; the ecological context of their school; and, as in the examples discussed here, the cultural heritage of their community.

This paper describes the design instructional method used to teach two groups of Washington, D.C. middle school students about landscape architectural design and environmental awareness. Methods of teaching design, models of study, as well as the factors required to implement design will be addressed, as will several shortcomings of the instructional and implementation processes.

Two schools were sponsored by a program of the Corcoran Gallery of Art, a private art museum in Washington, D.C, which engages several schools annually in its programs. Corcoran staff and volunteer instructors visit the schools and offer art instruction to complement the curriculum over the course of the academic year. The primary goals of the program are to develop a visual awareness in the youth of the city; to encourage their creativity, self-esteem, and self-expression; and to teach young people art skills and the ability to think creatively.¹

The CANVAS (Corcoran Art; New Visions at Schools) in-schools program occurred as enrichment at the two sites discussed in this paper, with the students meeting at lunch or after school. In each case, the students in the curriculum had been identified for their artistic abilities and/or desire to be involved in the garden projects. Landscape architecture was not the sole design discipline introduced to the students in the in-school program, but was viewed as the broadest of the canvases to which the other arts would contribute. Thus, the schoolyard became the focus of the introductory design curriculum.

The first of the two projects occurred in Lincoln Middle School, which lies approximately two miles directly north of the White House. Lincoln Middle School is located in Ward 1, where 25% of the households are of Hispanic/Latin origin.² The students at Lincoln equally represented three minority groups: African-American, Vietnamese, and Latin American. These three groups of students had interacted infrequently, due primarily to language barriers. The garden project engaged them in weekly design collaboration over a period of sixth months to assess their school grounds, to design a site plan, and to install the garden they designed.

The students were first introduced to landscape architecture by examining Lincoln's central courtyard: a 19,000 square-foot opening in the school center, which offered a testimony to the current cultural landscape: abandoned school furniture and office equipment filled the void, overgrown volunteer trees shaded much of the space, storm drains were clogged, and wind-blown debris hung from the tree branches. The students expressed concerns about this wasted resource in the center of the two-story school, although few had ever ventured into the space, despite its adjacency to the cafeteria and two primary hallways through the school.

To initiate the design process, students were presented with a visioning exercise, in which they were given a sketch of a hypothetical walled garden. One window and two doors were its sole features and a human figure was shown for scale. In one class period, students were asked to design a secret garden, using a medium of their choice. The results represented the range of cultural groups known at Lincoln: one student designed a curvilinear maze woven around a central pool, while another designed spaces for producing flowers, herbs, and vegetables. Water and fountains were typical in many of the students' designs.



Figure 2 - Mosaic column, Lincoln Middle School, Washington, D.C.

Their design drawings were complemented by continued study of other gardens and sites through slide lectures and photographs. Particular focus was given to the evidence of cultural symbols in landscape architecture, as the students were tasked to bring their own cultures to the Lincoln courtyard. Students viewed images of urban plazas, waterfront parks, and botanic gardens, and viewed images of places such as Peter Walker's Tanner fountain at Harvard and EDAW's riverfront park in Chattanooga, Tennessee, which delighted the students with its paving that features Coca-Cola bottles imbedded in the concrete paving.

In addition, the instructor discussed and showed the students designed spaces within the city of Washington, introducing several potential organizing principles in a design composition. Examples included the National Mall and the open space plan for Washington, D.C., as well as several examples at the garden scale, such as the terraces between the National Galleries of Art, gardens at Dumbarton Oaks, and the recreational areas along the Potomac River near the Tidal Basin.

To become intimately familiar with their project site, the students spent two afternoons in the courtyard, and broke into small groups to analyze the site's components. Each team was given one focus of study: drainage patterns, soil quality, building materials, tree species and sizes, solar angle and position, and the relationship to the adjacent indoor spaces. Students took notes on a 1/16" scale plan of the courtyard prepared by the instructor. The students synthesized their findings into a plan that demonstrated the courtyard's strongest features as well as its inadequacies.

Using the knowledge gained from their site analysis, the students began designing a plan for the courtyard, borrowing some of their ideas from their individual garden designs. Despite the lack of instruction in scale, the students' understanding of scale and composition was intuitive. The desire to place their concepts into the real condition of the site was the greatest challenge, and the site's functional uses became a major guiding principle in design organization. The instructor guided decision-making and worked to achieve consensus. Some students strongly advocated large floral letters spelling the school's name, or representation of the school's mascot. Other students were directed by a desire to evoke a mood, such as peacefulness or happiness. Design concepts included a peace garden, a composting garden, and a geometric division of the garden into rooms for reading or outdoor performance areas. Gardens to attract butterflies and birds, and to cultivate fruits and vegetables were also envisioned by the students.

The students assigned a hierarchy to the Lincoln courtyard's component spaces. The garden contained one primary gathering space for instruction and social events and was supported by several secondary gardens: a shade garden, a peace garden, produce gardens, a butterfly garden and spaces for composting and potting. A proposed walk wove these gardens together through the courtyard.

The necessary translation of the students' concepts to a built reality required an understanding of scale, as well as consolidation of the concepts. Given the limited number of weekly meetings, as well as the students' limited experience in drawings at scale, the instructor prepared a consolidated garden plan in one afternoon session with the students and then prepared a drawing to guide the construction process. Meanwhile, some instructional time was spent executing exercises to construct and measure objects using an architect's scale.

The students also found that each of their component pieces needed to be located in the appropriate quadrant of the courtyard: the peace garden of roses required the maximum southern exposure, as did the gardens for produce, and each of these needed to be far out of the reach of the existing canopy trees. The resulting design demonstrated the synthesis of the students' cultural heritage with the courtyard's particular requirements. (See Figure 1.) Lincoln Cultural Heritage Garden Composite Plan, drawn by Brian Kane.

The garden project would not have been possible without a planned implementation phase prior to beginning design instruction. Community involvement outside the immediate school community was tantamount to the completion of the garden at Lincoln. Outside members of the community offered expertise, labor, and local knowledge to the project. In addition to the volunteer instruction from the Corcoran's CANVAS programs, several teachers committed to the project at the outset of the design project and reinforced it in social studies and math courses in the regular seventh and eighth grade curriculum. Teachers participated in the after-school and lunch hour instruction. Lincoln School also benefited from the presence of an Americorps volunteer, who started a garden club to assist with the installation and to



Figure 3 - Fletcher Johnson Education Center site prior to garden design.

gather and cultivate seeds for many of the plants that were installed in the garden, many of which were obtained from the students' families.

As the garden design developed, mosaic artist Jorge Somarriba began to design large tile mosaics for each of the 24 eight foot high concrete building columns spaced along the courtyard's perimeter. Each column was to represent a plant, fruit, or flower from the students' countries of origin. Students first worked on templates and ultimately tiled the columns in mosaics that filled the courtyard, a process that took 18 months, and which was ongoing after the garden's initial opening. (See Figure 2.)

Garden installation, due to its physical labor and time requirements, was the most difficult portion of the design project. Students worked regularly to haul debris from the garden, and to lay out the beds using tape, strings, and rods. One student's uncle, a National Park service employee, tilled planting beds for each garden and incorporated organic matter into the soil. This was an arduous task, given the hard urban fill that made up the courtyard, a site condition encountered in three successive schoolyard installations. Over 40 hours of volunteer labor was required to prepare the beds as laid out by the students. Students excavated hundred of concrete pavers and reset them with a proper setting base, while incorporating patterns depicting cultural symbols in contrasting dark bricks. The bricks were donated from a local manufacturer. Two local nurseries donated trees, shrubs, and groundcovers as specified on the plans.

As important to the project as the installation, the celebration of the design's completion called the community to witness the work of its students. The Lincoln Cultural Heritage Garden was dedicated during a school-wide ceremony on Earth Day. The student designers presented their concepts and drawings to the student body to explain its inception. The following fall, a Harvest Day celebrated the fruit of their labors, completed with salsas made from tomatoes, okra, yams, herbs, and peppers produced in the garden. In addition, a contest was held to carve several of the gourds grown in the garden.

The Lincoln garden project enabled middle school students to transform a degraded site in the center of the school's daily life. They received instruction in the fields of landscape architecture, mosaic, and sculpture, as well as in the skills of plant and hardscape installation. Several of the students in the cultural heritage garden project continue to pursue their design abilities in other forums. Upon graduating from Lincoln, ten of the 12 students in the Lincoln School CANVAS program gained admission to art focus schools in the public school system: the Duke Ellington School for the Arts, School without Walls and Wilson Senior High School.

The CANVAS program approached another compromised schoolyard at the Fletcher Johnson Education Center (middle school), located on the east side of the Anacostia River in the community of Marshall Heights. Marshall Heights contains the largest percentage of African Americans living in Washington, D.C. and is located in Ward 7, which has the District's second-highest percentage of families living below poverty level.³ The Anacostia River is the area's most prominent natural feature, although it is one of the nation's most polluted rivers, and is today the focus of an ambitious renewal plan by the District of Columbia's Office of Planning to use the river's natural and cultural resources to bridge the divide between the city's east and west sides.⁴

The school sits on a ridge, with no ground floor windows and a daunting twenty-foot ascent from the parking lot to its main entry, which overlooks the proposed garden space on the level of the parking lot. The trees in the area were planted with no apparent pattern, trash and debris blew across the grassed area, and windowless concrete walls bounded three of the four garden boundaries. The southern prospect offered a view of the succession of ridges that run through the region. The school's situation on one such ridge, offered the opportunity to discuss landforms adjacent to the Anacostia River. (See Figure 3.)

Fletcher Johnson was constructed on the site of the former Payne Cemetery, a pre-Civil War burial site for the area's earliest African American residents. Given the site's rich history, and its prominent topographic location in the community, the research phase of the project was extensive. This allowed the students to understand the school's social and ecological context, and to render them local experts in the cultural heritage of their school grounds. Students researched the background of the neighborhood, heard oral histories from local residents, and learned of Marshall Heights' relationship to the Anacostia River, the re-engineering of the river for flood control, the compromised state of its tributaries, and the

persistence of some of the region's plant and animal species.

Staff from the District of Columbia's Environmental Health Department led students in an ecological analysis of the site. This examination included a soil test to learn the pH of the soil, as well as its mineral and organic content. The staff from EHD also raised student awareness of the issues of stormwater management and the benefits of using native plants. The Earth Conservation Corps (ECC) conducted a workshop for the students about the Anacostia River's ecosystem, and led them on a boat tour along the river to discuss the renewal efforts, and the cumulative effects of ecological design. This approach created a level of expertise among the ten Fletcher-Johnson students so that they would comprehend the status of the ecological systems within the Marshall Heights community.

The design phase of the Fletcher-Johnson garden focused on sensitivity to the ecology of the Anacostia River, and its past ability to support the inhabitants of the region. The students began their garden design with a similar secret garden design exercise as their peers at Lincoln, as well as by viewing and studying other designed public urban spaces.

Given the steep gradient of the school's site, and its elevation above street level, the students proceeded to design the garden in model form. This method also worked well for students who were not versed in the use of architectural scale, and maintained design focus on architectural organization and composition, rather than focusing unnecessarily on drafting or drawing to scale.

The instructor prepared a foam-core model at 1/16" scale for the students to use as they designed their gardens. A charrette challenged each student to prepare a model of their idea for insertion in the frame of the prepared model, followed by discussion of each design's merits. A final synthesized model was prepared to show the students' collaborative design intent. (See Figure 4.)

Simultaneously, in their arts curriculum, the students had started designing five 30-by-10-foot murals along the school's ground floor walls. These panels depicted cultural symbols of the settlers of the Marshall Heights neighborhood and were rendered in brilliant colors to address the many passersby of the Marshall Heights neighborhood. The garden design presumed that the garden would follow soon after the murals were completed.

As with Lincoln School, community partners outside of the school were essential to allow the garden to reach its installation phase. The non-profit community development agency for Marshall Heights assisted with purchase of supplies for the garden, as well as with labor during the garden's installation. The Earth Conservation Corps and staff from the District of Columbia's Environmental Health Department also installed the garden. Local residents, parents, and volunteers from the Corcoran Museum of Art also worked during the initial installation, which was conducted on Earth Day and which received coverage from CNN and two local television stations. (See Figure 5.).

Conclusion

Schoolyards in city schools offer opportunities to challenge students to think about their cultural heritage, to respond to user needs, and to address ecological issues as they generate designs for a particular site. The students become experts in the requirements of their own schoolyard, as well as in the cultural and the natural heritage of their communities.

The schoolyard garden offers the beginning design student an opportunity to problem solve in three-dimensions and to celebrate the heritage of the landscapes in which they live daily. Students grow in their understanding of self, learn of their place as artist within the community, and to become transformers of the places in which they stand and live everyday. Design ability, critical thinking, and knowledge of the means of construction and implementation were cultivated during the design and installation processes.

The difficulties faced in each project included the lack of sufficient resources and labor to implement the full extent of the garden design. Additional labor from community members who had contracting or building associations may have improved the quality of both installations, and ensured a longevity to each garden. The full commitment of the principal and several staff members was also essential, and in some cases, wavering support placed more burdens on outside sources.

Strong governmental support from local watershed or environmental divisions strengthened and validated the instruction and implementation phases. The agencies cited in this paper continue to be involved in the current schoolyards undertaken by CANVAS in the District of Columbia Public Schools. The successful collaboration of private, public and

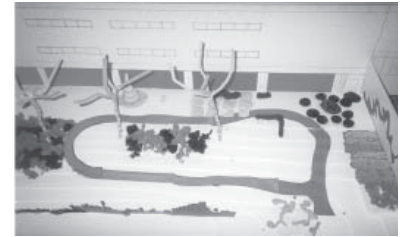


Figure 4 - Student model of Fletcher Johnson Cultural Heritage Garden.



Figure 5 - Fletcher Johnson Cultural Heritage Garden upon completion.

community members in the first several CANVAS sites has led to the granting of significant sums of money from outside sources to continue work throughout the District, with a particular focus on schools in the Anacostia watershed. This year, CANVAS students are designing a 200-foot mural along a major commuter artery at its interchange with a historically African-American community in the Anacostia watershed.

Realistically, there is no guarantee that these gardens will be retained in successive phases of the institution. Schoolyard gardens are not legacy places but instead offer opportunity for design initiation. In the case studies discussed, the first shoveling of earth or laying of brick marked the initial gesture towards transformation of forgotten and underutilized urban space. The process chosen enabled change to begin from within, rather than from an outside source, and also demonstrated design's role as the critical first step towards enabling a positive change in the community.

NOTES

¹ Corcoran Gallery of Art, "Visual Arts in the Community," printed brochure, 2002.

² District of Columbia Office of Planning, 2000 Population by Single Race, 2000.

³ District of Columbia Office of Planning, 2000 Population Figures, 2000.

⁴ District of Columbia Office of Planning, "Anacostia Waterfront Initiative," 2003.