

College students and youth collaborating in design: research on the design studio

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LANDSCAPE ARCHITECTURE IN THE UNITED STATES has traditionally been dominated by white middle-class professionals in service to clients with backgrounds and values similar to their own. This paper looks at a design studio in which landscape architecture students from white middle-class suburban backgrounds work with Latino children and youth in a low-income urban neighbourhood. The community service learning studio is looked at as one method of introducing students to working with populations quite different from their own. It examines the problems and benefits for both the community youth and the college students, and makes recommendations for studios that follow this same model.

IN THE UNITED STATES, landscape architecture has long been dominated by white middle-class professionals in service to clients with backgrounds and values similar to their own. As the population of the United States changes, landscape architects may be called upon to address the needs of an increasingly diverse client group (Owens 1997). Three professors at the University of Massachusetts (UMass) conducted a landscape architecture studio that explored collaboration in the design process between Anglo-American middle-class students from small towns and suburbs, and low-income Latino children and youth living in an urban neighbourhood. In this studio, community service learning methods were used to help students take the first steps toward working with populations quite different from their own in unfamiliar communities.

The role of community service learning in academic fields has attracted much interest. In general, such activities provide valuable services to communities, give students a sense of professional relevance, and provide a profile for the university in the community.² But within the broad category of community service learning come a variety of placements and clients who can be served by the process. This paper discusses a design studio project – the ‘YouthRAP Garden’ – that involved collaboration between college students and youth in a low-income urban community in western Massachusetts. In this paper we look at the impact of the project on landscape architecture students, their reaction to working in this environment and with this client group, and the benefits of students working with youth in a community, particularly when it involves the participation of low-income children and teenagers in the design process.

The paper begins by laying out the objectives for the design studio within its context as a research project. Second, the paper places environmental issues within the general context of collaboration between college students and young people. In particular it examines issues of environmental education and awareness among children and youth. Third, the paper describes the YouthRAP Garden studio project, including the process and outcomes. Because this design studio was a pilot project for similar future studio work, this paper draws on the development of the YouthRAP Garden studio as a case study to examine two key

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RESEARCH

questions raised by these kinds of community service learning projects involving young community members. First, what are the potential problems arising from design projects which involve both college students and low-income children and teenagers? Second, what are the main benefits of these kinds of activities? These questions are answered from the perspectives of both children and college students, with some additional comments about the experiences of adult group leaders and faculty, and about the garden itself. The paper concludes that the problems arising from college students working with youth in these kinds of participatory designs are generally not due to the interactions between the two groups, but rather to a number of factors that occur outside of the collaborative process such as cost constraints and turnover among the low-income renter population.

Studio objectives

The studio had three major areas of concern in terms of products and outcomes: outcomes for college students, benefits to neighbourhood children and youth, and impact on future design studios. The primary educational objective of the studio was to help university students develop an understanding of working with cultures other than their own. Through being involved in service learning that used community participation in the design process, a group of predominately white, middle-class, suburban students could begin to see their profession as providing social benefits, particularly to low-income Latino children and youth, and to understand the values of this client group. The studio was based on a body of literature suggesting that service learning improves the educational experience of college students (Bringle and Hatcher 1996; Kahne and Westheimer 1996). Further, within the range of possible service learning experiences, working with various sections of the public improves the ability of landscape architects to work with diverse populations in the future.

A second objective was to examine the effect of the garden project on neighbourhood children and youth, and to involve them in the future of their neighbourhood. The design studio included no instrument to measure the ongoing success of the project in terms of the children's participation beyond the project itself. However, a large body of existing literature on children and their environment – which will be discussed later in this paper – indicates the importance of children's roles in the decision-making process for their overall development.

The third objective was to evaluate this studio as a pilot project for ongoing studios that work with diverse populations. Future design projects could draw upon these findings in order to accomplish the objectives of introducing university students to diverse groups and involving children and youth in the future of their neighbourhoods. Therefore, this design studio was examined for its successes and failures in these terms.

Educational issues

Because of the history of the landscape architecture profession in the United States, students entering undergraduate programmes often have fairly homogeneous backgrounds. Students at UMass have little experience of working either in urban areas or with low-income and ethnically diverse populations. The underlying philosophy of the studio was that landscape architecture students

would be more open to working with diverse populations if they had more interaction with them. By working with children and youth, and therefore gaining a sense of involvement in their future, these students would be more likely to feel positive about their experiences of working with diverse populations and cultures other than their own. This positive attitude and openness to other cultures may be the first step toward students seeing their profession as an instrument for future social change, and their eventual willingness to take on more complicated tasks, such as fund raising and political reform.

Although the faculty supervising this studio project had on several occasions worked collaboratively with the community in which this project was located, this was the first time a project was directed almost entirely by and for a group of children and youths. A preliminary review of the literature established a framework for the project and helped faculty understand environmental issues as they relate to young people, the process of design involving children, and the importance of including them in decision-making which relates to their environment.

Children's awareness of their environments, even at a very early age, has been demonstrated through their ability to use cognitive mapping, that is to acquire and recall mental maps of areas known to them and to represent them through drawings or descriptions (Downs and Stea 1973). Even with limited language and motor skills, children at the age of three have demonstrated the ability to use cognitive mapping to navigate and build models (Blaut 1974). Preliterate children from different cultures have demonstrated similar levels of environmental awareness and learning through cognitive mapping, with each child's level of cognitive development determining their ability to represent and organise their environments (Blaut et al 1970; Blaut and Stea 1971; Stea and Blaut 1973b; Dandonoli et al 1990; Hart 1987).³ Of course environmental awareness is fairly rudimentary in these younger children, meaning their involvement in participatory design processes is likely to have a number of limits.

In addition to cognitive levels, awareness of the environment and ability to visualise it is shaped by one's experience of it. Therefore, cognitive mapping also demonstrates differences in ability to map, and differences in environmental cognition based on cultural factors such as social position and gender (Orleans 1973; David and Weinstein 1987; Lynch 1977).

In the United States, much of the attention paid to the need for urban children and youth to be involved with the environment has emphasised the benefits of understanding nature (Moore 1995; Wals 1994). However, interaction with the constructed environment can also foster attachment to place and involvement with society – this has been an emphasis in the United Kingdom (Hart 1987; Adams 1991). These outcomes also have the potential to make environmental education more relevant to urban youth (eg Smith and McGinnis 1995).

Place-identity and self-identity are strongly related (Proshansky and Fabian 1987; Rivlin and Wolfe 1985). A child's ability to identify their neighbourhood as positive or negative will influence a child's own sense of self-worth (Katz 1998). Involving children as decision makers in their neighbourhood can invest them in positive ways both in their community and in themselves as instruments of change (Breitbart 1998; Hart 1987; Lawson and McNally 1995; Lynch 1977).

Therefore it is important that children become involved in the design and planning of their communities, and this involvement can be significant among older children and teenagers.

As children become active participants in the process of change, they will develop 'the ability to imagine a range of future alternatives and understand their consequences' (Baldassari et al 1987, p 243). Breitbart (1998, pp 320 ff) lists a number of additional benefits that youth acquire as a result of involvement in environmental change and community design projects. These include acquisition of skills, personal development and growth, expanded political knowledge, control of social space, and survival mechanisms for coping with or changing one's environment (see also Lawson and McNally 1995).

There is a variety of techniques that can be used to involve children in environmental change. Chawla (1998) has identified four successful approaches: (1) drawings used as a basis for discussion; (2) tours led by children to identify important components of their environment; (3) children taking photos of their environment and labelling them (also Buss 1995); and (4) creating exhibits, with the process allowing children to identify what is important.⁴ Other approaches include: interviewing and observing children, and interviewing parents (Lynch 1977); observations, journals, and interviews (Wals 1994); small group interviews (Whiren 1995); photojournals and focus dyads or interviews with a researcher and two children (Buss 1995); and drawings and models (Dandonoli et al 1990) (see also Adams 1991; Sarkissian, Cook, and Walsh 1997).

The process of being involved may actually be more important to the participants than the final product, whether planted or built (Breitbart and Worden 1994; Stine 1997). By providing children and youth with opportunities to explore and change their world, the process aids children's physical and mental development (David and Weinstein 1987). Rather than a static completed project, children prefer places that allow them to create, build and interact, through ongoing change (Hart 1974; Moore 1974; Francis 1995). As Hart explained following two years of participant observation in a Vermont town, 'Places are built by the children more for the joy and challenge of building than for their uses as finished artifacts' (Hart 1974, p 360). Adults, however, may not approve of these ongoing and changing projects. Many adults prefer creating finished products and find 'process' oriented spaces to be messy (Moore 1974; Stine 1997).

It is clear that children's participation in the design process affects their sense of self and their communities. But in a community design studio, it is of course not only the children and youth who learn through such participatory design projects. Also of significance in this studio is the role of landscape architecture students in facilitating this process. It is within the larger framework of community service learning that we looked at the students' experiences in the design studio. Community service learning in the design studio offers an alternative to the traditional master-apprentice teaching model (Forsyth et al 2000a). Given the opportunity to learn from a number of sources and from people with a variety of backgrounds, landscape architecture students will gain deeper insights into other cultures and be better prepared to work with them as clients.

The YouthRAP Garden Project

The YouthRAP Garden project was located in the city of Holyoke, a relatively poor, formerly industrial city in western Massachusetts. The members of a neighbourhood after-school activities organisation, Youth Residents Activities Programme (YouthRAP), were inspired by a local community garden to build their own garden. The site that they determined to make into a flower garden was a parking island, approximately 20 by 60 feet, bounded by parking spaces, a driveway, and a small plaza with benches. The garden site and the community centre where YouthRAP holds its meetings are located in the alley space between two apartment blocks in the neighbourhood of South Holyoke (see Figure 1).

The four-storey redbrick apartment blocks were built in the late 1800s to house mill workers from the industries along the nearby canals. The canals still exist but most of the industries have gone. The large majority (99%) of South Holyoke residents live in rented accommodation. Approximately 41% of housing in South Holyoke is owned by the non-profit community development corporation, Nueva Esperanza Inc, including the apartments surrounding the YouthRAP Garden site. By 1990 the neighbourhood of South Holyoke was over 80% Latino (predominantly Puerto Rican), with an average age of 18. Sixty-four percent of South Holyoke residents lived below the poverty level.

The children who worked on the garden project did so with the help of several community organisations. The project was initiated by YouthRAP, after members visited a community garden managed by Nuestra Raices, a sub-organisation under the umbrella of Nueva Esperanza. Nuestra Raices agreed to supply labour, materials, and advice to build the garden.

Nueva Esperanza, which owned the land that the YouthRAP Garden was to be located on, also supported the project. They were concerned, however, that the garden might not produce a positive experience for the children who did not understand issues related to plant selection, such as bloom time, height, and



Figure 1: Site location

requirements of sunshine, shade, and soil. Nueva Esperanza wanted some professional input, but the process of designing the garden had to include the resident children and youth who were to own and maintain the garden. This led Nueva Esperanza to contact the Urban Places Project at the University of Massachusetts.

The Urban Places Project (UPP) is housed in the Department of Landscape Architecture and Regional Planning and was founded in 1995 to provide design and physical planning services to low-income communities in Massachusetts' cities. Although there are a number of low-income rural communities in western Massachusetts, UPP provides its services primarily to the region's urban areas where the University has traditionally had less of a presence. Using faculty and students in both the planning and the landscape architecture programmes, UPP runs a small proportion of its projects through design studios – classes in which the students work on design projects as they would in a professional office. The UPP faculty was interested in the YouthRAP Garden because it would provide landscape architecture students with an opportunity to work with Latino children and youth in a low-income and transient urban neighbourhood. The garden also provided the added benefit of being implementable, since it was to be built by volunteers that spring.

Since the adult supervisors from the community groups did not want the participating children to be overwhelmed by the university students, they requested that the number of students involved in the project be limited. It was agreed that six landscape architecture students would assist in the garden design.

The YouthRAP Garden was one of the projects offered to a planting design class in the spring semester of 1998. From the class of 28 students, six volunteered, including two women and four men; five of them were undergraduates, one was a graduate student.

The UMass students adopted a method of community participation. The design process was to be facilitated by the college students, but the design ideas would come from the YouthRAP members through workshops and meetings. To begin the process, the UMass students met with the YouthRAP members in their community centre one afternoon in week seven of the semester, in late March. The students decided that for this first meeting they would use a variety of methods to find out from the children what they wanted in their garden. The students brought with them a Polaroid camera, flower seeds and potting soil, garden magazines and plant catalogues for images, newsprint paper, crayons, scissors, and glue.

The children who participated that day ranged in age from six to 12, and included some of the youngest members of YouthRAP. They began by each taking one Polaroid photograph of the alley space around the community centre and answering the question: What did they like best in this place? This question was to help the students interpret the photographs. The children then created collages and drawings of the garden they would like to see planted in the alley space. This was followed by an interview designed to aid the students' interpretations of the collages. The children were each asked to explain the elements of their collages that they thought were important in a garden (see Figures 2 and 3). The seeds and potting soil were left with the YouthRAP coordinator for an ongoing project. The children would germinate seeds in time for planting in the garden. As a first step in the design process this meeting helped the university students understand

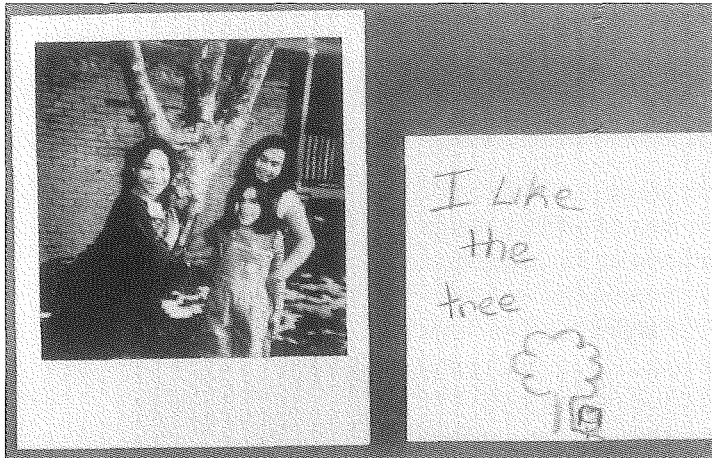


Figure 2: Polaroid with child's comments



Figure 3: Children making collages

the site, the children's likes and dislikes about the site, and their ideas about what should go into a garden. The Polaroids revealed the children's attachment to the grass and trees present in the alley, while the collages indicated the importance of lots and lots of colourful flowers in their garden.

The next step in the design process was to help the YouthRAP members visualise and design the garden spaces. One week after the first workshop, the YouthRAP members were invited to UMass to visit some garden areas and to build table-sized models of their garden. The youth who were permitted by their families to go on this field trip were generally older, ranging in age from 14 to 18 – a different group from those who worked on the photographs and collages. After visiting both an outdoor garden and a lush greenhouse on campus, these youth were divided into three groups and worked with the students and three faculty members to build models of their ideal garden using a variety of materials. The base of the model was made from three by four feet sheets of cardboard with the plan of the site and the footprint of the buildings drawn on the boards. The youth created their ideal gardens on these cardboard bases using a variety of materials from cardboard and tissue paper to pretzels (see Figure 4). During the model-making process young people were also asked to articulate what they felt was important for their future garden. This was done informally by students and faculty members sitting at the tables and helping out with the model making. A number of design ideas emerged from this workshop including a curved path, flower beds, a Puerto Rican flag, terraces, bushes, shade trees, birdbaths, fountains, play equipment, stone walls, and fences.

Based on the information collected through the Polaroids, interviews, collages and models, the six UMass students worked in pairs to create three different design proposals in model form to take back to the YouthRAP members. One team designed an elaborate vine-covered pergola with adjacent lawn, a bird bath, raised planting beds, and a Puerto Rican flag to be planted in flowering annuals. Another team had a bird bath and a lighted curved stone path with flower beds and a shrub border on one side and on the other side terraced beds and lawn. The third team designed overhead structures to serve both as entrances to the garden and as play structures, while the garden itself contained a curved path,

shade tree with seating underneath, a birdbath, and flower beds bordered by flowering shrubs.

These model gardens were placed in a much bigger three-dimensional model of the alley. This model was four feet by six feet in size and, although it was the same scale as the first models, it included the three-dimensional facades of the adjacent apartment building and the community centre. The following week, in mid-April, the students presented the three garden proposals to be voted on by the neighbourhood children and youth. This was followed by a discussion of what they liked, and didn't like, about all three design proposals. This discussion helped the college students understand the children's votes, and gave feedback about positive and negative aspects of each of the designs including those that did not win. The adult supervisors of YouthRAP, along with the adults involved from Nuestra Raices and Nueva Esperanza, also gave their feedback on the design proposals to the students (see Figure 5). Although the children loved certain elements, such as the pergola covered with vines, adults were concerned with issues such as cost, necessary materials and labour, and safety.

The landscape architecture students returned to their studio, and working collaboratively in one group, combined the responses into a final design for the YouthRAP Garden, completing the drawings in late April (see Figure 6). This final design included elements identified as important in the voting session. The elements that emerged as important were similar to those found in other research and design projects involving children's gardens. Francis' (1995) analysis of adults' memories of childhood gardens found that a large tree, edible vegetation, and water were key elements in these gardens. Heffernan (1994) describes interviews with children, conducted as part of an American Horticultural Society children's garden competition, that listed a waterfall, pond, trees, edible plants, bright flowers, and flowers to pick as being important elements. The YouthRAP Garden contained many of these same elements with the notable exception of water – which, although requested by the children, was impractical given the location, budget constraints, and the small size of the garden. The children decided not to include edible plants, as they were afraid that any vegetables that grew would be



Figure 4: Youth making models

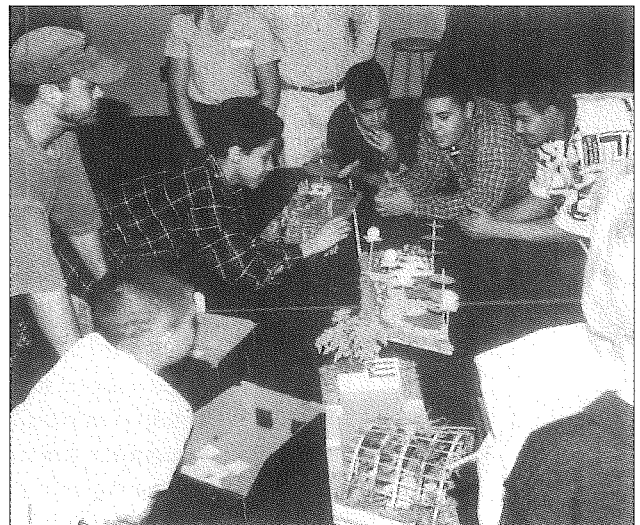


Figure 5: Discussion about college students' final models

stolen. The final design proposal included a curved path, brightly coloured flowering perennials and annuals in raised beds, a fence, and a flowering tree.

Because the garden was to be constructed by local volunteers using donated materials, some elements of the students' designs, such as raised planting beds with seating, were too complicated to build exactly as designed. Using the students' design with some modifications, adults associated with YouthRAP and Nuestra Raices collected the plant materials and equipment necessary and built the forms for the garden. On an afternoon in June, the children of YouthRAP, along with adults from the neighbourhood organisations and faculty from UMass, completed the garden by installing the plants (see Figure 7). The garden survived its first season, and was watered and weeded by YouthRAP members throughout the summer.

Evaluation: what works or doesn't work?

There are a number of successes and failures in this process from a variety of perspectives. To determine the success of the project, we must look at it from the viewpoints of both the neighbourhood children who initiated the project and the university students for whom this was an educational experience. In addition the adults who organised, supervised, and maintained the project; the university faculty; and the garden itself were also key players but are not dealt with in as much depth.

Children and youth

The involvement level of the children was high from the beginning. The project was initiated by the YouthRAP members themselves, based on their interest in community gardens. Concerned that if they grew vegetables, people would steal them, they settled on the idea of a flower garden.

One of the difficulties with this neighbourhood, however, is the transient nature of the renter population. From the beginning of the project until the completion of construction, the YouthRAP coordinator estimated that ten of the original children had moved out of the surrounding apartment buildings and were no longer part of the garden project.

Participation also varied with the activities and the age levels of the members. Younger children were interested in Polaroids and collages, but the older children either stayed away that first day or hung around the edges and wouldn't participate. However, because of their families' reservations about a field trip 15 miles from home, the younger children were not part of the visit to UMass and the model-making part of the process. Some activities are clearly more appealing to some age groups than others, and YouthRAP members cover a wide range of age groups, which made it difficult to include everyone in all of the participation process.

Is it important that the same children and youth be involved from the beginning to the end? Since the process is often more important to children than the product (eg Breitbart and Worden 1994), it would appear that the most important factor is involvement at some point by as many of the neighbourhood children as possible. The children, especially the youngest ones, probably do not remember their choices of plants for their collages. Instead, the fact that they were involved in some capacity in some part of the process, that is, that their opinion contributed to the shaping of the garden, is probably enough. We suspect that if youth were involved in the planting process, but had not been

present to make collages or models, that the involvement in the planting phase alone would be sufficient to invest them in the future of the garden.

However, in a follow-up evaluation session at the end of the summer, 25 young people, aged nine to 17, rated the garden as their least favourite summer activity. These 25 members had only participated in weeding the garden over the course of the summer, and they saw it as somebody else's garden that they were weeding. Lawson and McNally (1995) also mention this problem, arguing that overcoming the tedium of work is one of the big challenges in projects for teenagers. This also shows one of the problems of evaluating projects in an environment of high population turnover, since the youth that weeded the garden had not been involved in designing it. This led the adult leaders to propose that for the second year planting of annuals will continue throughout the summer so that a large number of young people have a chance to plant something and see it grow. However, the adult group leaders were happy with the level of maintenance of the garden and the low level of vandalism, something that they claimed had not been expected by parents.

Students

The students were asked four questions before they began the project and six after its completion: their responses were very positive. As faculty and supervisors, we entered into the project with some concerns about the ability of design students to listen and respond to client needs (Forsyth et al 2000a, b). Designers and design

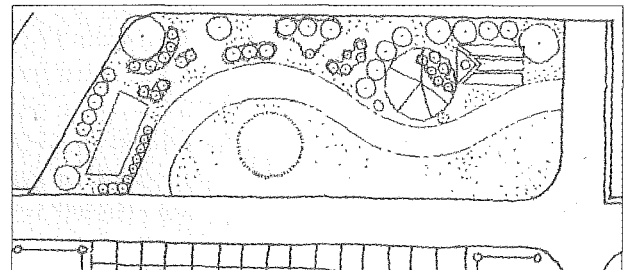


Figure 6: Final design: drawing and photos

Figure 7: Construction day

students think visually, while the residents and users of the area think about it spatially in ways that involve their physical senses, value systems, and personal experiences (Stea and Blaut 1973a).

In addition, the backgrounds of the college students were quite different from those of the clients. The participants in the project were white middle-class students from suburbs and small towns – only one of the students had ever lived in a city. The average age of the female college students was 35 and the average age of the male students was 23. Their previous experiences working with children and youth included babysitting, a school beautification programme, being a peer leader in high school, a day camp nature specialist, and no experience at all. None had experience working with children in a low-income urban area.

The survey conducted at the beginning of the project indicated that the students had largely positive expectations about working with children. These expectations included benefits for the neighbourhood children, mutual benefits for both sides, and personal and emotional rewards for the college students. Some were concerned about the challenge of the work, which they felt would require 'patience' and 'understanding'. The few negative comments made concerned the demands of children's short attention spans and noise.

When asked what they anticipated would be the most fun about working on the project, the overwhelming response was 'the kids': working with them, seeing them interact, meeting them, exploring with them, 'watching them create and develop ideas of their own'. A few students commented on what they expected to learn from the project, from the children, and from this new experience. One wrote about the benefits the project would have for the neighbourhood youth by opening up 'their eyes to a better environment'. This paternalistic approach was evident in some of the students' early discussions; for instance, they initially proposed to give the children a long lecture on photosynthesis, a proposal that was rejected by the studio faculty.

The students were also asked what they thought about working in the City of Holyoke, which has a reputation for crime and poverty. Their responses were equally divided between positive and negative. The positive responses centred around the benefits of the project: to provide the neighbourhood with 'change', 'opportunity', 'hope', and to 'introduce community involvement'. These were particularly interesting responses in that this project was actually community-generated; the students were not providing the community with hope and change and reclamation as the community had started that process themselves. On the negative side, students' expectations included concerns about safety, too much asphalt and too many people, congestion, and noise. Some were concerned about the potential obstacles and economic challenges facing the project.

A few of the comments, while neither positive nor negative, were about the city being unfamiliar, and the project requiring skills of listening and observing. One student in particular expressed self-doubts regarding his lack of knowledge of the people who he was about to work with. 'What will they think of me? What gives me the right to think that I can help in any way?'

The students were also asked what they anticipated would be the biggest problems with the project. Most were concerned about issues related to the organisation of the project and communication with the neighbourhood children. These ranged from 'breaking the ice' and 'getting the kids to agree on a design concept,' to 'having a capacity to relate to the kids and communicate with them in a

way that will benefit the kids and the project'. Some of the students had in mind educational objectives that they felt they might not be able to achieve. These objectives included the ability 'to describe what a landscape architect is' and teaching the children that 'a garden is more than just a bunch of plants'. One student, who has his own landscape construction business, was concerned about the economic limitations that would be placed on the availability and choice of plants and construction materials.

After completing the project, the students were asked to respond to a follow-up questionnaire in order to gauge the success of the studio. In general, students were very positive about the experience. However, their comments about working with youth included remarks that were more ambivalent, less about the benefits and rewards and more narrowly focused on the children's 'energy', 'excitement', 'enthusiasm' and 'fun'. The less positive comments were related to the difficulties of working in loud, chaotic, and nerve-racking situations. Only a couple of students maintained their blanket enthusiasm for the rewards and satisfaction of working with children and youth.

In the follow-up survey, the students were, in contrast, much more positive about working in the City of Holyoke. It was the project's 'valuable' and 'useful' impact on the city that was most commented on, with no mention of the fears of working in the city which had been present before the project began. One student even felt that one of the most enjoyable aspects of the city was working in an urban setting. This development of positive awareness of urban areas is important for many future landscape architecture professionals, particularly those from suburban parts of deeply divided metropolitan areas.

The students' evaluations of the problems in question reflected some difficulty in the preparation and organisation of the project. However, most negative responses were about two areas: the role of adults in the process and the lack of materials and resources to implement the project. One student was disappointed with the 'lack of further citizen involvement, other than children'.

The lack of resources came as a surprise to the students. In most of their school projects, they were not required to think about constraints put on implementation by a lack of money, labour, or materials. Many of the proposed designs were much more elaborate than either YouthRAP or Nuestra Raices could ever afford, and this reality was frustrating and disappointing to a few. This caused some difficulty for the adult supervisors as one design had an elaborate pergola which was impossible to construct given budget and labour constraints, but the design captivated the children and teenagers, from whom it received the largest number of votes. The students who produced this fairly extravagant design were then disappointed when, in their perception, adults 'took over' and 'erased much of what the kids wanted'. However, another student commented that lack of materials 'should be taken as more of a challenge' rather than something upsetting. There was obviously confusion about these constraints and in future work faculty plan to start with very clear lists of materials from sponsor groups.

Some students felt rewarded by working within these constraints. One student expressed it as the reward of 'designing something that I believe satisfied all their criteria despite the confusion of working for multiple clients on a limited budget'. The benefits of working with a real community were very appealing to the students, particularly doing 'something useful for people'. The students were

rewarded by providing a useful service to the community, educating children and working with real clients.

However, students clearly most enjoyed working with the children. This included meeting them, getting to know them, learning 'how to interact at a deeper level than previous projects with clients', and working with them: 'helping and watching them work on projects was rewarding', 'seeing the enjoyment the kids got out of our visits and their visit to UMass', 'coming up with ways to include children in the process'. The children were the focus of many of the college students' positive comments about the project.

The studio

The follow-up survey asked for the students' recommendations for future projects. Included in those responses were recommendations for meeting separately with the adult supervisors involved with the project, finding out more information in advance about constraints, and educating the adults on the process and design thinking involved from the student's perspective.

Some concerns that were only briefly mentioned in the surveys in fact loomed rather large in the process – particularly concerns about group dynamics and the students' professional role. These problems emerged behind the scenes, in meetings conducted by the students in preparation for the various community meetings. Two problems emerged because of individual students. One student felt that they were unwelcome in the neighbourhood. This is hinted at in his post-project survey, in which he felt he was an 'outsider but not out of place' and that the community was 'welcoming to a certain extent, unwelcoming to another'. In group meetings with other students working on the project he expressed the belief that their presence was resented because they were white. At the same time, he expressed dissatisfaction with the explicit constraints put on their use of professional jargon and the minimisation of their roles as design experts, saying he was tired of tiptoeing around being a landscape architect. Other members in the group took on the role of arguing for the neighbourhood's viewpoint in this process.

Another problem emerged with one student who had a sceptical and critical nature, and who often dismissed other students' ideas. Although he worked well with the children, in meetings with other students his criticisms inhibited communication and problem solving. In group process, judgements by group members are often a barrier to effective communication, and there are bound to be some problems based on personalities and dynamics when working in any group. However, this group was self-selected. If involvement in this type of project were mandatory, it would certainly bring up issues related to the controlling of these aspects of group dynamics.

In addition, some of the students' objectives for what was to be accomplished in the community meetings were unrealistic. When preparing for their first meeting with the children, the students expected to teach them something about gardens, plants, and photosynthesis, in addition to collecting information to be used in the garden design. The unfocused energy of the children made accomplishing these objectives difficult. Although a more personal one-on-one relationship between the students and the young people would have made the interviews easier and more structured, the low ratio of college students to children was requested by the sponsoring organisation. As a result, it was not

possible to talk to the children individually or to work with them one-on-one in the design process.

Another difficulty was the times at which the meetings were scheduled with YouthRAP. Because it was an after-school programme, meetings were held from four to six in the evenings which was outside of regularly scheduled classroom time. This necessitated students providing their own transportation to the meetings and adjusting their schedules to accommodate the community. At the final meeting, which ran later than expected, some students became anxious about getting back to jobs, dinner, or homework for other classes.

Conclusion

The design studio set out to increase college students' awareness of cultures other than their own, to involve children and youth in the design of their environments, and to evaluate the studio process and outcomes for future projects of a similar nature. In order to evaluate the findings, this paper posed two questions. First, what are the main benefits of these kinds of activities? Second, what are the potential problems of working on design projects with both college students and low-income children and teenagers?

Overall, these kinds of projects have benefits for young people both by giving them a sense of involvement in their environment and by physically improving it. The lack of vandalism to the garden has been noted by both neighbourhood adults and by the adult supervisors, demonstrating some degree of ownership and respect on the part of the community. For many of the low-income teenagers, this was their first trip to the university and it made quite an impression, showing them options for their future. The university, as well as the design professions, may also benefit in terms of recruitment.

University students obviously learned much of value. Although they did not explicitly mention this, working with low-income children from minority groups has relevance for many academic fields. Marginalised by economics and race, these groups are under-represented in academic disciplines, and often the college students working in these disciplines come from middle-class and ethnically homogeneous backgrounds. Experiences with other economic, ethnic, and racial groups can broaden the outlook of white middle-class students. While for any college students from minority groups in landscape architecture or other programmes, such experiences can foster a sense of inclusiveness as well (Dewar and Isaac 1998; Groat and Ahrentzen 1996; Kennedy and Mead 1996).

In terms of problems, most were internal to each group – college students and YouthRAP members – and did not involve problems with interaction between the two groups. Many children moved out of the apartment buildings, leading to a large turnover in the YouthRAP group. The large age range, and parental concerns about visiting the university, meant different children were involved in different parts of the participatory process. University students were concerned about financial constraints on their designs, and about the role of adults in the design process. Of course students made comments about children's noise and short attention spans, but overall felt greatly rewarded by the work.

However, a few problems did arise from the interaction between the two groups. One was the discomfort that the adult supervisors felt at not being able to implement the students' extravagant designs. Because they felt it would disappoint the students to see that the garden had not been built exactly as it had

been designed, they were reluctant to contact UMass faculty and students to assist in its planting.

From the studio experiences and the student surveys have emerged ways in which the project could have been improved in order to enhance the value of the experience for both students and the community. In terms of the *community* it is recommended that future projects:

- 1 Include adults in the design process along with the college students and children. This involvement must allow the college students to hear the budgetary and safety concerns of the adult leaders, and it must provide an opportunity for the students to explain their design decisions to the adults. This dialogue needs to take place before the design process begins, and throughout the process.
- 2 Improve the quality of the children's involvement in the design process by including more college students in this phase, allowing more one-on-one interaction and information gathering, and by preparing different design activities aimed at the different age levels of the children and youth involved.
- 3 Plan for the children's ongoing involvement in the garden after construction and throughout the year. Future plans for the garden include spring, summer and fall plantings; cutting beds that allow children to pick flowers; flowers that can be dried for crafts activities; and herbs and spices that children can learn to use in food preparation.

In order to improve the *learning experience of the college students* involved in children's community design projects, recommendations for the future include:

- 1 Clear agreements with students regarding meeting schedules outside of class time, with the provision of excused studio class time as a trade off for their evening commitment to the project.
- 2 Better preparation of students for working with children, such as the identification of appropriate design activities for different age groups and of how long one can expect to hold their attention on any given activity.
- 3 Better preparation of students regarding the role of the community design professional, including discussion of what products and services they will be expected to deliver to the community, and what rewards they can expect to accompany this work.
- 4 Explicit information on constraints that will affect the design proposals, including money, labour and materials, and safety concerns.
- 5 Better preparation of students regarding the group process, such as how groups work and what to expect when working in a group.

The experience of this studio was clearly positive for the landscape architecture students and, for most of them, beneficial in terms of developing a working relationship with cultural groups other than their own. The responses given in the surveys regarding the benefits of working in unfamiliar communities, in this case low-income, Latino urban neighbourhoods, indicate that this type of community studio project goes a long way toward developing an appreciation for other groups. For landscape architects who become committed to this work, they may need to acquire political and economic development skills as well, but openness to diverse populations is the first step toward this type of commitment. Contact with minority groups will not guarantee better understanding on the part of landscape architecture students in all instances, any more than involving children in the design process will

guarantee that they will become better citizens. The argument of this paper is, however, that if we guarantee a certain amount of success through the process of bringing these groups together in the collaborative learning environment of the design studio, both groups can ultimately benefit.

NOTES

- ¹ Authors' names are listed in alphabetical order. Work was shared equally between authors.
- ² Useful general works on service learning include Bringle and Hatcher (1996), Yarmolinsky and Martello (1996) and, from an urban perspective, Cisneros (1995).
- ³ The work by Blaut et al (1970) is particularly interesting in terms of our own work as it tested first graders in Massachusetts and Puerto Rico.
- ⁴ As is described below, the first three of these techniques were used in the YouthRAP Garden.

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