

The Evolution of an Urban Design Curriculum in Landscape Architecture and a Community-Based Design Center

Frank Slegers

University of Massachusetts Amherst

John R. Taylor

University of Illinois at Urbana-Champaign

ABSTRACT

Urban community-based design centers have multiple potential functions. Ideally, they give voice to previously underrepresented groups in public discussions of urban design and environmental change. When combined with a university design curriculum, they can be training grounds for a new generation of urban designers sensitive to the needs, wants, and desires of local stakeholders. This study describes the co-evolution of an urban design curriculum at the University of Massachusetts Amherst and a design center in the nearby city of Springfield, Massachusetts. Four key areas related to community service learning were evaluated through a mixed methods approach including historical analysis, qualitative and quantitative stakeholder surveys, and university course evaluations: (1) community participation in the design studio, (2) interdisciplinary teaching, (3) planning and physical outcomes, (4) academic research and creative work. Over a span of six years, all four areas showed qualitative or quantitative improvement. Collaboration between student designers and community stakeholders deepened and expanded, with stakeholders participating in the design process at earlier stages and having a greater role in shaping studio outcomes. Interdisciplinary learning and collaboration within the curriculum increased with distance from the university and its disciplinary institutions. Collaboration between the curriculum and the community, catalyzed by the Design Center, led to unanticipated but positive physical and planning outcomes, while stakeholders' engagement in the participatory design process contributed to the development of community resilience and agency that persisted after the end of collaboration.

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The city is a contested landscape in which environmental change is never neutral. Instead, political forces manipulate and control urban processes, resulting in uneven patterns of

disinvestment and development that promote the political and economic interests of elites at the expense of marginalized populations (Swyngedouw & Heynen, 2003). Participatory design processes giving voice to politically disadvantaged groups have been proposed as a form of procedural social justice, helping to ensure that the benefits of urban change are equitably distributed and that urban development reflects the values and needs of the communities

it affects. More radically, Hester (2006) has called for participatory design processes that foster “ecological democracy.” Ecological democracy, or direct and indirect engagement of the community in decision making, informed by an understanding of natural processes and connections between the social and the natural, can “create a new urban ecology” that promotes social and ecological health and a sense of rootedness. The resulting city form, in turn, creates conditions conducive to the practice of ecological democracy, in a self-reinforcing cycle (Hester, 2006, p. 4).

Community-based design centers are one potential catalyst for ecological democracy, bringing together designers and community clients in an environment of collaboration. When coupled with university design programs, these centers can serve multiple functions. They provide an infrastructure allowing faculty and students to conduct research and develop projects that intersect with the practice of urban design and planning, with the goal of improving the physical—and consequently the social—environment (Forsyth, 2006). Centers provide service learning opportunities, a common practice in design studios (Forsyth, 2006), and the real community challenges posed by service learning enhance students’ learning experience (Forsyth, Lu, & McGirr, 2000). Engaging in participatory design processes has indeed become a crucial element in community outreach research and service activities in design schools (O’Meara & Jaeger, 2007; Thompson & Davis, 2013).

By inculcating the principles of participatory community design in design apprentices, centers and associated service learning experiences may serve to strengthen participatory design as a professional, disciplinary practice. If geographically separated from the university, with its distinct disciplinary cultures and biases, design centers housing different disciplines may further promote the development of understanding and professional networks across planning and design disciplines.

This paper describes the co-evolution of an urban design curriculum at the University of Massachusetts Amherst (UMass Amherst) and a community-based design center—sponsored in part by the university—in the nearby city of

Springfield, Massachusetts. It further examines the synergistic relationship between center and curriculum, specifically the impact of the center on the content and quality of instruction and the impact of the curriculum on the community in terms of community engagement and physical design outcomes. By illuminating the university-community dynamics catalyzed by the overlapping development of curriculum and center, we hope our analysis can serve as a guide to other institutions as they enter into collaborative relationships with community partners in founding community-based design centers.

BACKGROUND

The authors of this study are a current and a former instructor in the urban design curriculum at UMass Amherst. Their university department, the Department of Landscape Architecture and Regional Planning (LARP), houses accredited undergraduate and graduate programs in landscape architecture and a graduate program in regional planning and is located in the College of Social and Behavioral Sciences. Architecture + Design, an undergraduate and an accredited graduate program in architecture and a partner with LARP in multidisciplinary design studios, is located in the College of Fine Arts and is part of the Department of Art, Art History, and Architecture. Design studios are funded through the City of Springfield’s Office of Planning and Economic Department and the University Administration.

In 2010 the University of Massachusetts Amherst opened the UMass Amherst Design Center in Springfield, Massachusetts, as a collaborative effort between the City of Springfield, UMass Extension, LARP, Architecture + Design, and the university’s Department of Natural Resources and Conservation. The Design Center represents a significant contribution to the university’s commitment to revitalizing the city and is part of the university’s larger “Springfield Initiative,” a plan to help revitalize the city. Its mission is to create a physical presence and a UMass “footprint” in the city.

Currently the UMass Amherst Design Center is a hybrid between what Forsyth

(Forsyth, 2006) describes as the “University-based firm” model providing paid practice work in planning and design that parallels private sector consulting firms, and the “Extension-oriented center” model employing a professional agent to transfer new research from the university into practice and professional help.

METHODS

The study employed mixed methods to explore fully the development of the urban design curriculum and the Design Center and to measure the impact of one on the other. Methods included:

- Historical analysis based on notes, emails, documents from community meetings and the authors’ memories of teaching studios within the design curriculum and participating in the development of the Design Center.
- Quantitative and qualitative analysis of course syllabi and studio reports to document changes in 1) the focus of design studios, 2) their spatial distribution, and 3) the disciplines engaged in the urban design curriculum from spring 2008 to spring 2013.
- Quantitative surveys of students, faculty, city officials, and community stakeholders about their perceptions of the design studios and their impacts on the community. In 2011, one year after the center’s founding, we fielded surveys of undergraduate and graduate landscape architecture students, faculty of both LARP and the Architecture + Design program, community stakeholders, and city officials. The faculty and student surveys solicited respondents’ perceptions of the impact of the design Center on 1) the quality of instruction, 2) the level of collaboration between academic disciplines, 3) the planning and physical outcomes of design studios, and 4) research and other creative work. The surveys of city officials and community residents focused on 1) the degree of new knowledge communicated and ideas

exhibited, 2) level of interaction with students and faculty, and 3) feasibility and relevance of executed studies.

- Official student evaluations for LARP studios, completed at the end of each studio.

RESULTS AND DISCUSSION

Documents for 27 studios taught between spring 2008 and spring 2013 were collected and analyzed. Questionnaires were distributed to 50 students, 20 faculty in three disciplines, five government officials, and 20 residents; a total of 19 students (38%), 15 faculty (75%) and nine residents (45%) completed the surveys.

Below, we group study results by four key dimensions of center-curriculum dynamics: 1) Community participation in the studio process; 2) Interdisciplinary teaching across academic programs; 3) Planning and physical outcomes; and 4) Research and creative work outcomes.

Community Participation in the Studio Process

The timing, quality, and quantity of input from local stakeholders within the studio process varied over time and reflected an increasing engagement between faculty and students in the design curriculum and local stakeholders. Greater community participation in the studio process resulted in studio products that increasingly represented stakeholders’ needs, values, and concerns. We identified three evolutionary phases in the development of the design curriculum, with the founding of the Design Center in 2010 catalyzing even greater community participation in the curriculum (Figure 1).

First Phase. In the first year of the urban design curriculum, with three studios taught from spring 2008 to spring 2009, public engagement in the studio process was minimal. The focus and scope of studios were defined not by stakeholders but by instructors in consultation with the City of Springfield’s Planning Department. Stakeholder input was

limited to providing critical feedback during final public presentations of studio products, which were largely the result of hermetic analyses of urban systems, planning reports from the city and from previous studios, statistical data from sources such as the U.S. Bureau of the Census, and multiple site visits.

Second Phase. The studio process was modified in the fall of 2009 because students in the spring 2009 studio had articulated an interest in having more interaction with community stakeholders. Studio instructors began to schedule public meetings in Springfield, at which students, after conducting a preliminary analysis of the project area, presented their findings to stakeholders. Visioning workshops with stakeholders and formal surveys of neighborhood residents, two additional studio activities introduced during this phase, added another layer of public engagement and enhanced students’ understanding of the area and its residents. In the workshops, residents took a more active role than just commenting on the results of the analysis. They drew conceptual diagrams over area plans and identified and located areas with assets and challenges to articulate their priorities to the students. Students were advised to listen and to initiate a dialogue with the residents rather than defending their own ideas, perceptions, or preconceptions about what stakeholders needed, and the students ultimately altered and expanded program elements in response to participant input. This early engagement of the public was paired with students’ spontaneous, imaginative visualizations of design ideas for actual places to further communicate and explore planning and design opportunities. These visualizations were executed as sketches and collages over photographs of places students had identified as key points of design intervention during site visits; these places included highway underpasses, abandoned buildings, public amenities such as parks, key transportation intersections, and abandoned rail tracks. Residents’ interaction with the students facilitated “out-of-the-box” thinking and fostered innovation, while the reciprocal early-stage interaction with the public allowed for the refinement of studio goals and objectives and

provided a basis for evaluating the final products of the studio.

Third Phase. In the third phase three studios from two different academic programs were conducted simultaneously, yet separately, and worked in the same project area. The studios had different disciplinary foci and thus were not truly interdisciplinary. They held a joint visioning workshop and presented their final designs together but otherwise worked independently. Consequently, the public was introduced to a richer palette of design and planning strategies for an individual project area; the process capitalized on the limited capacity of interested and engaged stakeholders. Instead of having a large number of sparsely attended public meetings, these combined meetings could serve larger audiences and more forcefully press the politicians and planning officials in attendance for change. Though they did not have a multidisciplinary collaborative studio experience, students were at least exposed to the ideas of their peers from different disciplines working on the same project.

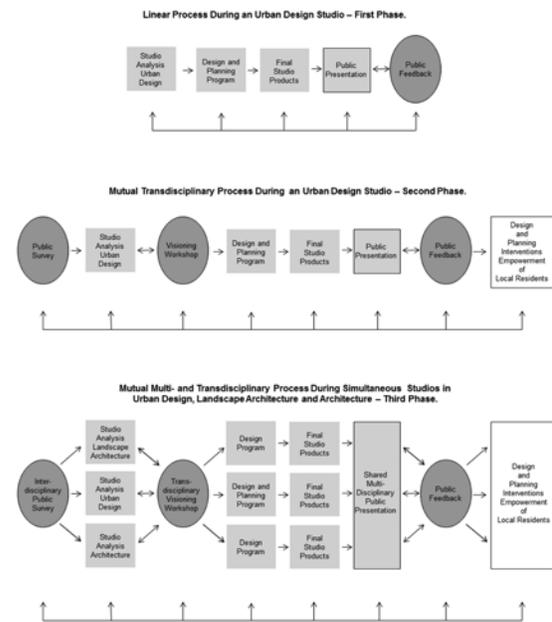


Figure 1: Teaching Pedagogy and Community Interaction in the Urban Design Studio in Three Phases.

A measure of success over the initial six years of the urban design curriculum has been the increasing number and greater diversity of

engaged stakeholders. Community participation has become integral to the majority of the studios taught. Common venues for such participation have included public surveys, personal interviews with stakeholders, visioning workshops, and pre- and post-design public presentations. An extracurricular Urban Art Laboratory organized as an independent studio within LARP also reached out to a community of artists in the downtown area of the city. Planning and design students have become a familiar presence in the city, and the exhibition of studio work at the Design Center in Springfield has raised the public visibility of the design curriculum at UMass Amherst and has facilitated dialogue between city residents and the design curriculum.

Interdisciplinary Teaching Across Academic Programs

Analysis of course syllabi, studio reports, and other studio products revealed significant changes in interactions between the disciplines—urban design, landscape architecture, architecture, regional planning, and transformative art—taught within urban design studios sponsored by the two planning/design departments/programs, LARP and Architecture + Design. Significant changes in the number of design studios taught per semester in each discipline, the studio format (one-off versus sequential versus simultaneous studios in a given focus area), and their geographical locations within the city of Springfield were also found.

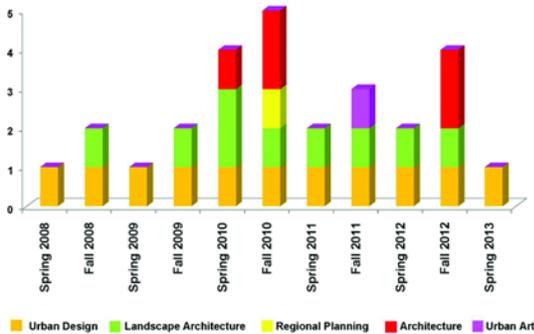


Figure 2: Number and Disciplines of Studios from Spring 2008 to Spring 2013.

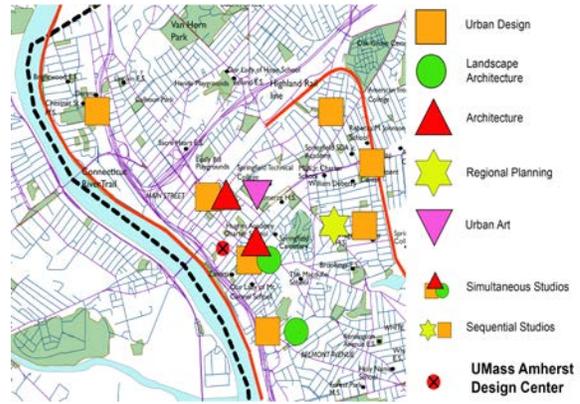


Figure 3: Spatial Distribution of Design Studios in Relationship to the City Center and Contributing Disciplines and Their Interaction and Sequencing from 2008 to 2011.

Of the 27 design studios taught from spring 2008 to spring 2013, a majority focused on urban design and landscape architecture and a minority on planning. The studios were located largely in disadvantaged neighborhoods of the city with poverty levels ranging from 36% to 57% compared to a city average of 19% (U.S. Census Bureau, 2000) (Figure 2 and Figure 3). Only one studio in regional planning (2010) and one extracurricular urban art studio (2011) were taught during this period. Since the founding of the design center in the spring of 2010, the frequency of architecture studios, which are housed in the Architecture + Design program in the Department of Art, Art History, and Architecture, has increased. Cases of simultaneously taught and sequentially occurring studios showcase the interaction of disciplines, especially in anticipation of the opening of the design center in the spring of 2010. The result is a growing profile of teaching across disciplines concentrating in strategic geographic areas in the city, with the potential to create reinforcing synergies. The integrative or multidisciplinary curriculum has resulted in an increasing number of studios per year; absolute numbers remain at a higher level with little fluctuation. Also notable is a moderately increasing number of masters’ theses or projects and independent studies embracing all three curricula and focusing on planning and/or design within the City of Springfield.

Planning and Physical Outcomes

Planning and physical outcomes serve as an objective measure of studio success beyond the impact of community service learning on students' learning and faculty's teaching experiences. A number of realized projects and planning proposals were initiated or catalyzed through curricular activities. The Design Center—in collaboration with the city's municipal planning department, which serves as a client-collaborator—played a key role in bringing these projects to fruition.

Reopening of an Abandoned Downtown Park. Pynchon Plaza is a one-acre pocket park in downtown Springfield that had been closed down for almost 30 years. In the spring of 2010, three simultaneous studios in urban design, architecture, and landscape architecture focused on the park and its surrounding area. Beginning with a public visioning workshop that addressed assets, opportunities, and challenges, the final design proposals ranged from systemic urban interventions in and connections to the neighborhood to potential site-related architectural or landscape architectural visions. The final presentation attracted a large audience and the local media. The physical result of the participatory process was not the implementation of any presented design ideas but the reopening of the park in the summer of 2010 due to media and public attention generated by the studios.

Tornado Recovery Support. A regional planning studio and an urban design studio sequentially focused on revitalization strategies for Springfield's Old Hill and Six Corners neighborhoods in fall 2010 and spring 2011. Over a nine-month period the studios engaged the public in a participatory planning and design process. Final results included planning strategies and area-specific design interventions for the two neighborhoods, which were coincidentally struck by a tornado on June 1, 2011, less than a month after the completion of the spring studio. Engaging underrepresented population in the kinds of participatory processes needed for disaster recovery planning can be daunting because of apathy, a lack of familiarity with government institutions, and prior negative interactions with such institutions

(King, Feltey, & Susel, 1998; Oshun, Ardoin, & Ryan, 2011). Studio work, however, had already introduced local residents to the participatory planning process, creating community resilience and empowering local residents to become experts in discussions with professional planners after this natural disaster. The studios' delivered plans and assessments supported "Rebuild Springfield"—a grassroots committee that worked out strategies for a master plan to rehabilitate two devastated neighborhoods. Currently two site-specific studio proposals for problematic traffic intersections are under construction.

The results are directly connected to the taught curriculum. Two crucial key elements for these successful planning and physical outcomes can be identified; the first one is an integrative process of community engagement that builds community capacity and resilience; the second one is the development of simultaneous or sequential, multidisciplinary studio activities

Research and Creative Work Outcomes

In the academic system, success in research and/or creative work as peer-recognized work is key to academic promotion, even though teaching and service are officially equally important. Thus tenure-track faculty have a real interest in excelling in research or creative work. Significant creative works and faculty-led research that have emerged from the design curriculum include POPULATION 7 and the Chapin Terrace Stormwater Infiltration Research Project.

POPULATION 7. This urban art laboratory was initiated through an extracurricular 14-week studio in the Landscape Architecture Program. Its goal was to raise public consciousness of the existing, but rare, public artworks in downtown Springfield. Students developed and executed temporary site-specific installations that were choreographed as an explorative walk. During two weeks the new artwork attracted a diverse group of visitors and received positive coverage from the public media. New connections to the young urban art scene in the city were also created. One art piece from the studio "Community Spirit" created a permanent landmark in an abandoned warehouse district

and received an award from the Boston Society of Landscape Architects (BSLA) after completion (Figure 4).

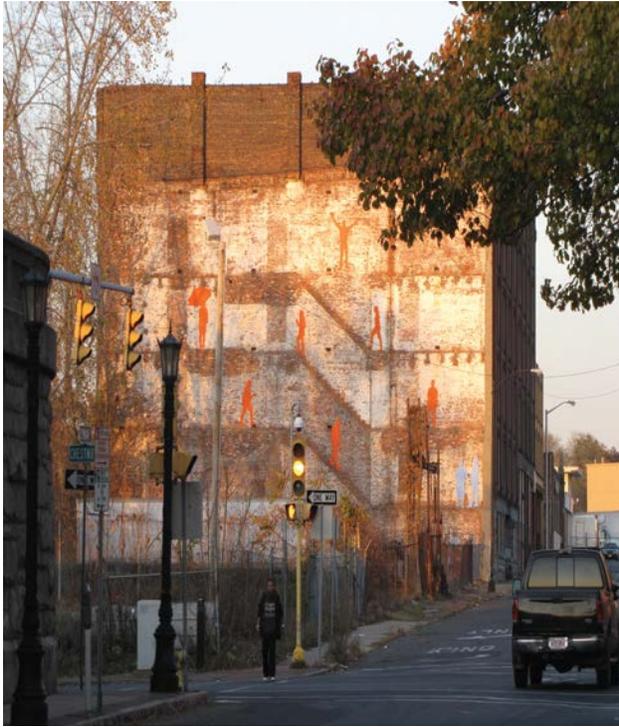


Figure 4: Awarded Design Work “Community Spirit” as a result of an extracurricular Art Studio (photo. F.Slegers, 2011).

Chapin Terrace Stormwater Infiltration Research Project. This BSLA awarded project was commissioned by the regional water and sewer infrastructure commission (SSWC) and executed by a faculty member and a student research team over a nine-month time span. The project explored infiltration of street runoff as a sustainable design intervention for minimizing stormwater quantity and reducing contaminants. Intended as a pilot project for streets in Springfield and elsewhere in the region, the project will, with some modifications, be implemented after public and administrative approval (Figure 5).



Figure 5: Chapin Terrace Stormwater Infiltration Research Project: Awarded Independent Research on Green Infrastructure and Aesthetic Experience of Stormwater (Authors: Ball, Frazee, McGeough, Slegers, and Stone, 2012).

Both of these projects have strong visual or aesthetic components that were recognized through design awards. They were products of work outside the regular studio curriculum on the part of faculty and students and longer-term engagement with sites and their challenges and opportunities. They also had no active community participation component during their conceptual phases or interdisciplinary collaboration, though both have helped to raise the visibility of the design curriculum within the community. Other examples of research/creative work catalyzed by the urban design curriculum are more modest: three peer-reviewed presentations at national conferences and two non-peer-reviewed presentations on interdisciplinary conferences around the theme of architecture or research in disengaged communities. The activities of one faculty member also resulted in active participation in a nationwide network centered on community-service learning. With the exception of this article, there is yet no record of published peer-

reviewed academic journal articles that have emerged from the curriculum.

Perception of Accomplishments Through the Design Center

On a five-point scale from “not at all” to “extremely improved,” a large majority of respondents to the student survey reported that the teaching culture, engagement with the public, the synergies and interdisciplinarity between the university’s design and planning programs, and the academic products had improved substantially after the founding of the Design Center; some students even observed dramatic improvement, while none observed no improvement. More specifically many students were enthusiastic about the opportunity to collaborate with residents, work in the heart of the city, and have a physical impact on the urban fabric. They also valued the greater exposure of their work to a larger audience through exhibitions at the Design Center. Students did express concern about the distance of the center from campus (30 miles), the lack of efficient public transportation from campus to the center and project areas, and the need for frequent, time-consuming trips to the city for studio purposes. Official student evaluations of the urban design studios increased during the six-year period from an average of 3.1 to approximately 4.5 on a five-point scale. The majority of the faculty and citizens surveyed echoed students’ positive perceptions. Residents seemed to be even more enthusiastic about the public engagement process than the students. They appreciated the new knowledge and skills that faculty and students brought to bear on planning and design projects and valued studio exhibitions and presentations at the center and in the city. At the same time, residents expressed some skepticism about the feasibility of implementing ideas as built projects because of the ephemeral nature of the semester-oriented studio praxis. Faculty had lower expectations than students about peer-recognized academic outcomes.

CONCLUSION

Our research indicates that the two major changes in the urban design curriculum over its six-year time span have been 1) the increasingly active role of community stakeholders as participants in the studio design process, and 2) greater integration of multiple disciplines in the studio process, as faculty and students have worked on common design problems at a distance from the university, under conditions in which disciplinary boundaries are blurred. Suggested by students and initiated by faculty, these changes have been lauded by students, community residents, government officials, and faculty. They have helped to ensure that students’ designs more clearly reflect community interests. They have also had positive collateral effects on the curriculum, resulting in a growing number of Springfield-related studios and extracurricular projects, increased research opportunities for students and faculty, and greatly improved course evaluations for department faculty. The increasing popularity of the design curriculum in LARP has led to the expansion—at the request of students—of the half semester studios in urban design to a full semesters and the addition of a theoretical, introductory course on urban design to the curriculum in the fall of 2013. This new course has been popular with graduate and undergraduate students in the landscape architecture, architecture, regional planning, and environmental design programs, laying the groundwork for future interdisciplinary collaboration in advanced urban design studios.

The increasingly frequent strategy of executing simultaneous or sequential studios focusing on the same project area and, in some cases, involving multiple disciplines has been beneficial for community participation, interdisciplinary teaching, and planning and physical outcomes. This approach handles community participation efficiently, integrates different faculty and curricula, fulfills the standards of the profession and the expectations of the students, and has been a pragmatic answer to the limitations of the typical seven-week studio praxis in the LARP curriculum. Simultaneous or sequential studios that are community-driven have further helped to expand

participation by underrepresented communities and have strengthened the impact of design studios, with studio projects resulting in tangible physical outcomes in the city and catalyzing municipal and community planning efforts.

The curriculum and the Design Center have had a more modest impact on academic outcomes, with an emphasis on visual, creative work. None of these accomplishments are part of the core curriculum, nor are they result of true interdisciplinary work but are typically based on short-term commitments by faculty and students. Within the six-year time frame that is the focus of this report, these positive results occurred predominantly in the last two years, since the founding of the center. Positively speaking it could be interpreted that the successful curricular foundational work in the early studios led to a positive, long-term trajectory of increasing peer-recognized activities and in superior teaching evaluations.

Future Curricular Goals

The following goals can be articulated for the urban design curriculum in the UMass Landscape Architecture and Regional Planning Programs:

Increasing the degree of interdisciplinary work within or outside the studio environment could further bridge the boundaries of the planning and design professions and increase the educational value of the studios. Achieving this goal would require careful planning and the further education of students, the public, and the cooperating municipal planners about the nature and process of interdisciplinary studios. Tangible studio outcomes may be fewer but process outcomes enhanced. Interdisciplinary—or even transdisciplinary—studios may further yield new knowledge, and enhance academic outcomes, e.g., the publication of research or the generation and recognition of extracurricular creative work through awards, for faculty.

FURTHER RESEARCH

Expanded research could look at structural solutions to enhancing teaching quality through community-based design elsewhere. Areas that

could be investigated in this context include novel funding models for engaged scholarship. Fields of research that are still neglected in our discipline could also provide successful participatory models for the design and planning curricula of design and interdisciplinary teaching.

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AUTHOR NOTE

Frank Slegers, Department of Landscape Architecture and Regional Planning,

University of Massachusetts Amherst; John R. Taylor, Department of Crop Sciences, University of Illinois at Urbana-Champaign.

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Correspondence concerning this article should be addressed to Frank Slegers, Department of Landscape Architecture and Regional Planning, 109 Hills North, University of Massachusetts, 111 Thatcher Road, Ofc 1, Amherst, MA 01003-9357.

Email:slegers@larp.umass.edu