
IGNITING COMMUNITY THROUGH ENGAGED TEACHING

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ABSTRACT

Much of what we consider to be traditional teaching practices has been formed within the limits of a classroom setting, buried within a disciplinary focus. Yet our students face great societal, economic, and environmental challenges. We must ask what are we educating our students for? Do traditional models prepare our undergraduate and graduate students for a dynamic and changing world? Service-learning gets students involved in thinking in the context of real-world issues about how to address pressing community needs in partnership with community organizations. In this paper, community-engaged teaching and service-learning will be illuminated by highlighting four diverse pedagogical approaches. This paper will provide new considerations for how to integrate or advance service-learning through courses: (1) learn by designing and making; (2) learn by cross-disciplinary engagement; (3) learn by engaging in other fields and cultures; and (4) learn by serving in the pipeline.

Keywords: Community Engagement, Design-Build, Service-Learning

1. SOCIETAL, EDUCATIONAL, AND DISCIPLINARY CONTEXT

In the early 1990s, as we were emerging as practicing, licensed architects and starting graduate school, Ernest L. Boyer, through the Carnegie Foundation for the Advancement of Teaching, issued two reports recommending significant changes in higher education: *Scholarship Reconsidered: Priorities of the Professoriate*, a call to rethink higher education in general; and a separate one for architectural education in particular, *Building Community: A New Future for Architecture Education and Practice*. A key message in both was that “the work of the scholar also means stepping back from one’s investigation, looking for connections, building bridges between theory and practice, and communicating one’s knowledge effectively to students” (Boyer 2014, 16). Boyer emphasized making meaningful connections between theory and practice to the students’ benefit, but also the value of providing service, whereby “schools . . . help increase the storehouse of new knowledge to build spaces that enrich communities, prepare architects to communicate more effectively the value of their knowledge and their craft to society, and practice their profession at all times with the highest ethical standards” (Boyer and Mitgang 1996, 28). In the intervening years, we have had ample opportunity to practice some of what Boyer recommended through community-engaged scholarship and service-learning projects, working with

partners in a variety of community settings and for different ends. This paper examines lessons learned during that time and places them in the context of a rapidly changing society and a changing architecture discipline. We will discuss four factors that influence the ways we teach architecture, attempting to address Boyer's call to change the way we train a new generation of architects: (1) radical societal challenges in recent history; (2) virtual learning; (3) shifting ways of practicing architecture; and (4) pedagogical shifts in how we define an architectural education, and share some of the projects that we have completed in our way of working.

1.1 SOCIETAL CHALLENGES

Climate change, economic insecurity and inequality, economic globalization and local disinvestment, increasing world population, fossil fuel and natural resource depletion, and spiraling educational costs make our world today a very different social, political, and economic environment to be educating students in. Just as we were delivering this paper at the "Schools of Thought" conference, the coronavirus pandemic was breaking loose; and now as we are finalizing this paper, the reemergence of widespread protests against police brutality and systemic racism are at the forefront. What does it mean to educate architecture students in this context?

1.2 VIRTUAL LEARNING

Higher education can be delivered in many forms outside of the traditional campus environment. Content delivery via the internet has expanded learning opportunities for many people who might not otherwise be able to access education. From single courses to entire degree programs, virtual learning can deliver learning materials in an enriched manner through audio and video, synchronously and asynchronously, at a time responsive to students' circumstances. Though many in the academy had not tried to expand their arsenal to include virtual learning, most were forced to at some level—and continue to—during the coronavirus campus shutdown. These learning experiences, coupled with rich experiential learning opportunities, offer expanded ways of teaching and learning for students' benefit.

1.3 DISCIPLINARY SHIFTS

The practice of architecture has changed significantly since we entered this profession. Digital computation for design and building information modeling, the emergence of new business models and building delivery systems, digital fabrication and manufacturing, and evolving economic pressures have complicated our work, both as architects and as educators. When we were in school in the early 1980s, it was probably sufficient for us to be trained as a typical architect, who would be presumed to be working on buildings in a "design/bid/build" model of building delivery. Today that's probably not sufficient. In 2010, following the collapse of the financial system, Martti Kalliala and Hans Park described the "shrinking polar ice cap of traditional practice," and visualized a new landscape of occupations that architects would be involved in, outside of traditional, building-based architectural practice. "The fragmentation of the building process into the hands of

specialist consultants, and the shift from architects being in the service of public to private capital, has made a lot of the work and responsibilities that traditionally belonged to them simply disappear or move to other professional domains. This is why newly graduated architects have difficulties finding jobs that match their education, creative ability or ambition—not to mention the thousands of students facing an increasingly uncertain future” (Kalliala and Park 2010; Figure 1).



Figure 1: Image from Kalliala and Park, “New Architect’s Atlas”
(<http://helsinki.designlab.org/blog/new-architects-atlas.html> CC BY-SA 3.0 license)

1.4 PEDAGOGICAL SHIFTS

Again, when we were in school, our studio education consisted of hand drawing images on paper and building cardboard models. We never touched a real material in the context of our education, and we never engaged with anyone outside the academy. The studio briefs were highly fictional and theoretical and, we believe, not atypical for most architecture schools at that time. Today, we find a very different architectural education landscape. Most schools have some kind of hands-on component in their curriculum, along with community engagement, internships, study abroad, and a variety of studio activities to provide for an enhanced educational experience (Erdman et al. 2002).

2 COMMUNITY-ENGAGED SCHOLARSHIP

2.1A NEW UNIVERSITY MODEL

At the university there is constant pressure to increase the number of students while doing this with fewer resources—often the quick fix seems that virtual learning is the answer. Is there a tipping point where higher education without engagement is hollow? Engaged place-based learning, designing and building in collaborative ways, and building relationships in general are some of the greatest values of a place-based institution and fulfill the civic-minded education we need most to guide young architects and designers forward to address society’s most pressing needs.

2.2 DISPLACE THE CENTER TO MEET PEOPLE WHERE THEY ARE

To fulfill this goal, we must be prepared to meet people where they are—the community member, the underserved, those who would value the voice that design thinking offers. They aren't going to travel to your campus to find you in your office or campus-centered space. Instead, we have to be prepared to meet community members in the public realm at, for example, community events, in church basements, or by creating opportunities to engage in public parks to meet people where they are—often we are required to find translators to effectively communicate. The University of Kansas (KU) is located in Lawrence, Kansas, and forty minutes by car from downtown Kansas City, Kansas (KCK) in Wyandotte County. To meet our engagement goals, Professors Shannon Criss and Nils Gore and Matt Kleinmann (PhD student) formed Dotte Agency, a multidisciplinary collaborative that engages neighborhoods to shape the built environment to improve public health.

2.3 DOTTE AGENCY: CREATING SPATIAL AGENCY IN WYANDOTTE COUNTY

We have defined the area with which we work through public health data that define Wyandotte County as home to one of the most racially diverse populations in the country. However, according to the Robert Wood Johnson Foundation's "County Health Rankings," Wyandotte County also ranks last among counties in both health behaviors and for social economic factors of health ("County Health Rankings 2012"). The backstory on that goes deep, to the 1930s Federal Home Owners' Loan Corporation home refinancing patterns where neighborhoods were "redlined" for home investment and ranked from "A" ("desirable") to "D" ("hazardous"; Figure 2). Dotte Agency has focused its efforts on the underserved, disinvested (mostly minority and low-income population) neighborhoods where home loans were difficult or impossible to obtain and still impact community lives today—we see the impacts on public health through data and visible signs of a distressed built environment.

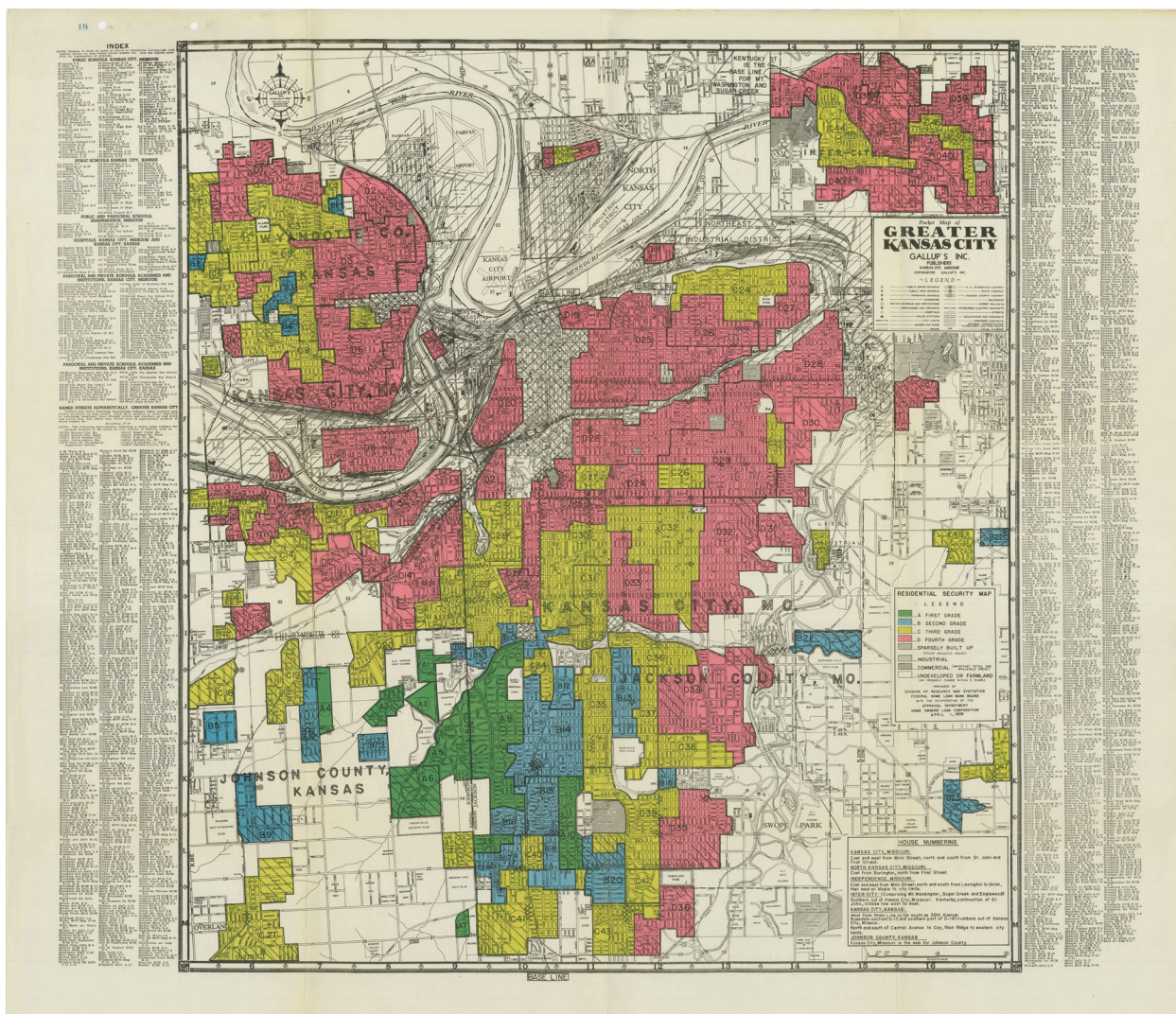


Figure 2: Kansas City redlining map
(Mapping Inequality Project, University of Richmond CC BY-NC-SA 4.0)

2.4 IDENTIFYING NEW WAYS OF WORKING

We have not operated as a standard practice in academia or the profession—but instead have opted for a way of working in the community that is through the knowledge and experience of others. We have learned to rely on our health equity experts—residents, neighborhood leadership, foundation investors, and professional and public health experts. By aligning with others' frameworks, we are better able to be useful and part of a larger conversation. We have aligned the work of Dotte Agency around supporting environments and policies that promote equitable opportunities for healthy eating, active living, and healthy public life. If we as a discipline choose to genuinely listen, we can learn a lot and be better designers. The Health Forward Foundation in Kansas City has created a *Healthy Communities Theory of Change* document that provides guiding principles, strategies, and guides to achieve short- and long-term outcomes when working with communities. Three core strategies: (1) equitable engagement, (2) mobilization for action, and (3) multisector collaboration have guided our Dotte Agency work. We have found that by “engaging community members in the conversation and [finding] solutions for developing healthier

communities, environments and policies,” we are keeping their interests and needs at the center of the conversation (Health Forward Foundation 2019). We have also received external support in an effort to mobilize community, individuals, and groups to catalyze and accelerate others’ interests. And, finally, we have engaged with nontraditional partners across multiple fields and sectors to assist in creating a stronger, unified voice, which has effectively changed and expanded our abilities to be better-informed and able designers.

To effectively do this work, we work hard to build trusting relationships within the community. By being there, a community partner offered us the use of an empty storefront over the course of three years, where we could have an expanded classroom (community members as fellow students and faculty) and offer it as a place for community partners to use, create public events, and raise awareness of how design can facilitate and activate community voice. In turning design into an active agent to make ideas visible and serve to create prototypes that play out others’ ideas, we believe we provide spatial agency where we are helping community residents and leadership see their spaces in new ways and helping us see their challenges and possibilities through their eyes. We are citizen experts who bring skills, knowledge, and capacity to a given problem, and the community serves as the expert citizens who direct the work through deep knowledge embedded in place and history. When we involve students in this approach, it offers them new ways of understanding their role and has the potential to change the trajectory of the profession as they take these practices forward—ultimately becoming new citizen-architects.

2.5 THINKING WRONG

In a typical design setting, the role of designers is to communicate their decisions regarding the shape and function of any given proposal. Designers tend to be limited, however, by their preconceived notions of what tools and strategies they need to employ for any given design challenges. To overcome these basic assumptions, the graphic designer and educator John Bielenberg asks his students “to get a new definition of the problem, not simply a new range of possible solutions” (Zolli 2005, 106). When designers use their training to re-contextualize systems of public health, they can propose alternative definitions of the problem for which new and potentially more effective solutions may become more readily apparent. By giving design proposals tangible form, the model can elicit feedback at an earlier stage of development, thus allowing for a greater potential solution as the designers respond to the criticism. When utilized in communities, this process has the potential to invite nonprofessional residents to give richer feedback, not based on empirical evidence, but rather on their tacit knowledge as members of their community’s culture and context.

3.0 FOUR NEW CONSIDERATIONS OF HOW TO INTEGRATE AND ADVANCE SERVICE-LEARNING THROUGH COURSES

To effectively do this work, we have developed four modes of advancing service-learning through coursework. This approach to teaching and scholarship is difficult. The trust building requires a lot of (essential) work, but so does setting up specific opportunities to incorporate students—who are inexperienced with listening and sensitively working—into the work through collecting information and building design responses collaboratively, within limited means and within tight (semester-by-semester) time frames. On top of that, as faculty, it is not enough to teach; we must also seek external funding, develop the community network to successfully pull off community-based projects, and then find ways to gain external review to

legitimize this work in an academic way that institutionally favors individual achievement (achieving promotion and tenure for this work is evolving in universities)—none of which is easy. However, we have identified four basic ways to work: (1) learn by designing and making; (2) learn by cross-disciplinary engagement; (3) learn by engaging in other fields and cultures; (4) learn by serving in the pipeline.



Figure 3: Mayor Mark Holland cutting the ribbon on exercise station prototypes designed and constructed in a third-year design studio course (Dotte Agency)

3.1 LEARN BY DESIGNING AND MAKING

Design thinking begins with empathy with a deep human (and nonhuman) focus so that insight can be gained, revealing new and unexplored ways of seeing and understanding. To design requires reframing the perceived problem or challenge at hand and *listening* to others' perspectives. This approach allows a more holistic look at the path toward the "solution." Collaboration and multidisciplinary teamwork can leverage the skills, personalities, and ways of thinking of *many* to solve multifaceted problems. Engaging in early exploration of selected ideas and rapidly prototyping solutions encourages learning by doing. This allows multiple voices and perspectives to gain additional insight into the viability of solutions before too much time or money has been spent. This feedback process tests the prototypes and identifies those further to remove any potential issues. Through iteration, empathetic frames of mind assist in redefining the challenge as new knowledge and insight are gained along the way. While it starts off chaotic, it can steamroll toward points of clarity until a desirable, feasible, and viable solution emerges.¹

Inherent in the design school format is the relatively limited time students have to digest the problem, explore initial concepts, and then begin fabrication toward a final design solution. Rather than take on larger-scale projects, Dotte Agency instead encourages students to think in terms of "small bets," whereby they can reasonably meet the objectives they and the community set for themselves at the beginning of the design process. This approach allows the students to propose alternative solutions to otherwise invisible problems. For example, the Centers for Disease Control and Prevention was prohibiting the use of funds for Dotte Agency to build a park bench, as it was considered sedentary behavior, despite community engagement indicating that infrequent walkers needed

adequate sitting to take breaks in the park. The students then reimagined their design as a hybrid bike rack and fitness station, allowing it to move toward reality (Figure 3).

3.2 LEARN BY CROSS-DISCIPLINARY ENGAGEMENT

In 2011, the Healthy Communities Wyandotte (HCW) coalition was launched by adopting a theory of collective action. HCW began convening multidisciplinary stakeholders into action teams focused on key health issues. Through the 1422 Grant from the Centers for Disease Control and Prevention, and in partnerships with the Community Health Council of Wyandotte County, Dotte Agency supports the placement and promotion of greater access to health in the built environment in an effort to reduce the risk of type-2 diabetes for Wyandotte County residents. By working with interdisciplinary partners, Dotte Agency utilizes design as a tool to improve access to fresh food in food deserts and increase safe and walkable places to be physically active.

Over the last six years, Dotte Agency has begun to bring resources to these issues by connecting students from the KU School of Architecture and Design (ArcD) with students and faculty from the KU School of Medicine, Department of Preventive Medicine and Public Health, as well as students and faculty in the KU School of Business and KU Department of Applied Behavioral Sciences. The courses we've developed are typically available to students on an ad hoc basis, relating the changing needs of our community partners for specific resources to take on original projects.

In 2017, Dotte Agency received external funding from the Association of Schools and Programs of Public Health (ASPPH) to support a cross-disciplinary collaboration between ArcD and public health departments by developing two professional courses taught simultaneously. The courses were designed to facilitate a shared understanding of the interplay of design and health as it relates to neighborhood food access, walkability, and active living. Through an approach that centered on both didactic and experiential learning, students learned about one another's respective disciplines as they relate to the built environment and health and completed an applied project that included neighborhood assessments and interaction with community members. The culminating experience was a community exhibition in which students presented to the represented communities a summary of their findings and attainable design solutions for improving food access and walkability. This course project has opened up all sorts of conversations with academics, other public health agencies, and community leaders that have expanded our capacity to teach students in a variety of ways (Figure 4).

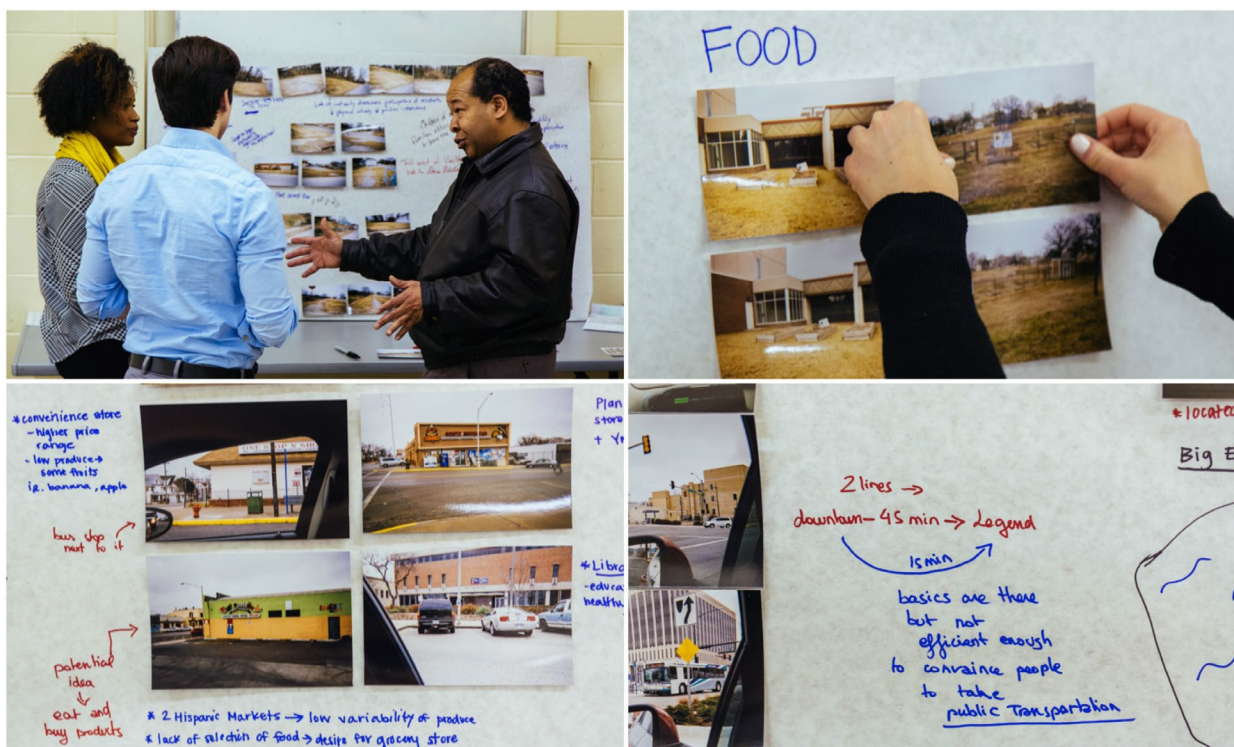


Figure 4: Photovoice project exploring food access issues in a cross-disciplinary course of KU architecture students and KU public health students (Dotte Agency)

3.3 LEARN BY ENGAGING IN OTHER FIELDS AND CULTURES

In 2019, partnering organizations Cultivate Kansas City (KC) and Catholic Charities of Northeast Kansas approached Dotte Agency seeking assistance with design advice on how to best develop a newly acquired fifty-acre parcel for urban agriculture programs in Kansas City, Kansas. “Cultivate KC is a locally grown nonprofit working to grow food, farms and community in support of a sustainable and healthy local food system for all.”² They work to create a democratic, just food system that is resilient, adaptable, and able to provide equitable access to healthy food. Their partnership with Catholic Charities of Northeast Kansas has made it possible for Cultivate KC to expand their mission to train refugees with agricultural experience to become independent farmers.

With very limited funding but social capital available from our partners, current refugee farmers, local practicing architects and landscape architects, extension agents, and others invested in the local food policy network, Dotte Agency was able to create a course that (1) educated students about the economic and social development of urban agriculture and exposed them to case study examples of food-distribution practices and best practices on how to support local food-insecure community members—learning that the best practices are inclusive ones that engage a variety of “expert” partners; (2) created a two-day immersive workshop that included urban agriculture tours, discussions with community partners, and three groups teaming with multidisciplinary partners for a “design charrette”; and (3) taught students how to collect their research, workshop design results, and conclusive discussions into a shared document. This document was then made available through our community partners and others to promote insight gained through this

experience and serve as a product to advocate and gain support for the real development of this project.

Through this experience, students gained the capabilities to learn how to use their abilities to research different models of urban agriculture and enable them to be better listeners and apply their knowledge directly to a design experience. In preparation for the design charrette, we developed a toolkit that included a scaled physical model, program template parts, and other elements (like a board game) to make all participants designers, ready to bring their expertise to the conversation. The students were able to support the effort by listening, restating, and taking notes, ultimately bringing the ideas together in a presentation to all that participated. By engaging with others, they were able to test and apply learned design skills in another way—enabling design agency for others (Figure 5).



Figure 5: Sharing a bike-based farm utility vehicle prototype with potential users in the New Roots for Refugees program in Kansas City. The bike was developed in a seminar with KU architecture students and KU industrial design students. (Dotte Agency)

3.4 LEARN BY SERVING IN THE PIPELINE

With the city as our classroom, our students are exposed to a broad cross-section of people: young and old, racially diverse, differently abled. We learn from one another and gain insights into the experience of people often unlike ourselves. With recurring experiences in

place, we can start to imagine a pipeline of people and activities that grows over time. Some of the young people in our communities may be exposed to the act and discipline of design for the first time. Through mentoring, the university students may be able to help younger students see the possibilities and promises of design to affect their daily lives, as well as the historical, political, and social factors that have made communities the way they are. In the most optimistic case, a student who starts young as a community member participating in a project might end up going to architecture school, then participating as a college student in mentoring younger citizens, then after graduating becoming a mentoring professional to both college students and younger community members. By consciously constructing the pipeline, and encouraging repeat participation in it, a culture of understanding and re-creation can be forged in the service of true systemic change.

4. CONCLUSIONS AND FUTURE WORK

In the years that we have been doing community-engaged work, we have learned the following:

1. There is a fluid, sustainable link between teaching and scholarship, as envisioned by Boyer when he said, “Theory surely leads to practice. But practice also leads to theory. And teaching, at its best, shapes both research and practice. Viewed from this perspective, a more comprehensive, more dynamic understanding of scholarship can be considered, one in which the rigid categories of teaching, research, and service are broadened and more flexibly defined. . . . The work of the scholar also means stepping back from one’s investigation, looking for connections, building bridges between theory and practice, and communicating one’s knowledge effectively to students” (Boyer 2014, 16).
2. The most meaningful and successful work, by most any standard, is integrated and informed by community engagement and citizen insight (citizen-experts).
3. Beyond the ostensible disciplinary lessons learned, perhaps more valuable are the soft skills that students need to acquire to address local/global challenges. In discussions with students long after the semester is complete, it’s clear that there are even more fundamental lessons learned about the nature of citizenship and the larger responsibilities we have as citizens in our communities. Tangible lessons in leadership, collaboration, ability to communicate, empathy/understanding/awareness are lessons not easily learned in the absence of clinical field experience.
4. The work capitalizes on the strengths of a place-based university, with bodies experientially engaged in the world. But we are also able to use virtual learning to connect with one another, our community partners, and partners elsewhere in the world for an expanded reach to connect and incorporate diverse insights.

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 Community Housing of Wyandotte County

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 Health Forward Foundation
 Historic Northeast Midtown Association
 Latino Health for All Coalition
 Menorah Heritage Foundation
 New Bethel Church Community Development Corporation
 20/20/20 Movement
 Unified Government of Wyandotte County Parks and Recreation Department
 Unified Government of Wyandotte County Health Department
 Wyandotte Health Foundation
 YouthBuild Kansas City, Kansas

KU School of Architecture and Design
 KU School of Medicine Preventive Medicine and Public Health
 KU Department of Applied Behavioral Sciences Work Group
 KU School of Architecture and Design (over 300) Students

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¹ [Interaction Design Foundation](#).

² <https://www.cultivatekc.org/our-work/about-us/>.