Community–University Collaborations for Environmental Justice: Toward a Transformative Co-Learning Model

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Abstract

Community–university collaborations for environmental justice have pushed the boundaries of the modern research university, yet remain rooted in a research frame. This article lays out a transformative co-learning model, which aspires to cultivate long-term, place-based, reciprocal partnerships where university and community co-produce knowledge and action toward a more just, sustainable, and democratic society. Starting with joint inquiry and planning, community and university integrate teaching, research, and service activities over a cycle of three to five years and, if sustained, co-evolve in place over the decades. Co-learning partnerships can anchor transformational learning, support community-based research, address critical community issues, and diversify the university. Tufts Department of Urban and Environmental Policy and Planning has recently developed a three-year co-learning partnership model with long-time partner Dudley Street Neighborhood Initiative. Yet, challenges still remain in resourcing community partners, valuing local anchoring, aligning university rewards with co-learning, and ensuring that community benefits are prioritized.

Introduction

Community–university collaborations for environmental justice often demand an interdisciplinary approach, bringing together social science, environmental

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health, and other disciplines. But how these partnerships are conceived and practiced varies greatly—from community-based participatory research (CBPR) to service learning. Often, collaborations are fragmented into teaching, research, and service, the three parts of the university's mission. These approaches also face multiple challenges posed by the constraints of the modern research university, including "town-gown" disparities, university elitism and inaccessibility, exploitative research partnerships, short semester-to-semester time frames, lack of valuing and resourcing community expertise and knowledge, and inequitable sharing of costs and benefits of collaborations.

This article introduces a transformative co-learning model, which aspires to cultivate long-term, place-based, reciprocal partnerships where university and community co-produce knowledge and action toward a more just, sustainable, and democratic society. This model draws upon traditions of community-based and action research, service learning, civically engaged universities, anchor institution approaches, and the struggles of communities of color to increase access to and diversify universities. Co-learning re-envisions the role of the university in its immediate locale, as a place to recruit and educate students, create knowledge of local value (with global implications), and support local community and economic development. Co-learning partnerships can be platforms for community-engaged learning, community-based research, advancement of community strategies, and recruitment of a more diverse student body from partner communities. In short, co-learning transforms both university and community, as they work together to improve the world around them.

This model is emerging from the author's own practice and recent initiatives to deepen community strategies at the Department of Urban and Environmental Policy and Planning (UEP) at Tufts University. The approach is informed by the author's prior experience at a community-based environmental justice organization in Boston, Alternatives for Community & Environment, where he was on staff for more than thirteen years (including almost ten as Executive Director) and collaborated with numerous universities.

This article begins with a review of some of the more established frameworks for community–university partnership. It then lays out the co-learning model and describes how this approach is emerging at Tufts UEP with one long-time community partner, the Dudley Street Neighborhood Initiative (DSNI). The article concludes with reflections on co-learning and recommendations for its further development.

University as ivory tower

The ivory tower is a common metaphor for describing how universities are disconnected and aloof from the "real world." From the ivory tower, academics produce knowledge, which then flows down to society and fuels technological innovation and economic development. This conception of the university's

relationship to society rests upon a positivist view of knowledge, in which impartial researchers observe and conduct experiments to discover "scientific laws." This prevalent view is not simply a result of internal institutional preferences and decisions, but also arises from external political and economic forces that have shaped the modern research university. Internally, universities, with public and private support, professionalized into departments more focused on their disciplines than society in general.[1] With World War II, universities became more embedded in the federal military agenda and emerged as engines of scientific research.[2] Over the last several decades, as the economy globalized and became more reliant on technology and knowledge production, universities found themselves increasingly in competition with the private sector for research funding. The conservative political turn during this same period not only resulted in cutbacks to social welfare but also decreased funding to public universities, forcing them to become more entrepreneurial, and increasingly seeking private funding sources.[3]

The business model of research universities now relies heavily on large federal and corporate research grants and on commercializing the results of research into new products and seeding start-up companies. The result is that the agenda of universities is being steered toward those who can pay for research, which often serves the interests of big businesses and preserves the status quo.[4] To succeed in the research funding marketplace, universities work to enhance their global elite status. They reward forms of scholarship that support these pursuits. They privilege "expert" and "scientific" ways of knowing while devaluing local, experiential, and other forms of knowledge. Universities prioritize educating students to become researchers and hiring researchers as faculty, over practitioners. This dynamic also steers funding and institutional support toward disciplines such as the biosciences and away from social sciences that may be more relevant to communities. This elitist vision creates even more distance and inaccessibility between universities and the communities in which they are situated, many of which have been devastated by public disinvestment and global economic forces.

For those who aspire to harness the capacity of universities in the service of social justice and democracy, there are various traditions from which to draw. The contemporary calls for renewing the civic mission of universities are an attempt to stem the retreat of research universities from serving public to private interests.[1,5] Almost a century earlier, the Settlement House movement provided university faculty and students the opportunity to live in poor neighborhoods and help deliver services and conduct participatory research.[6] In the same period, DuBois[7] called for education to contribute to the liberation struggles of African Americans, while John Dewey[8] saw education as a vehicle for developing social consciousness and democratic practice. In the 1960s and 1970s, social justice movements demanded more access for communities of color as well as establishment of African American and Ethnic Studies,

disciplines that were embedded in community-based research methodologies and an ethic of community service and partnership.[9]

University as research collaborator for environmental justice

In spite of the trend toward the ivory tower and buttressing the status quo, universities figured prominently in the birth and progress of the environmental justice movement from the mid-1980s. They have helped frame the problem, provided technical assistance to affected communities, assisted in building grass-roots capacity, and advocated for policy change. However, many of these efforts have stayed within the frame of providing expert technical assistance and conducting conventional positivist research. In this way, the challenges facing community–university collaborations for environmental justice are similar to those faced by other movements such as occupational health.

Early environmental justice research documented and validated the presence and extent of environmental disparities, defining the problem for policy makers.[10,11] In 1990, a group of academics who had convened at University of Michigan (the "Michigan Coalition") wrote a letter to and met with U.S. Environmental Protection Agency Administrator William Reilly. Their advocacy led to the establishment of the Office of Environmental Equity.[12] There are also numerous instances of faculty and students providing technical assistance to grassroots environmental justice groups. A number of universities have developed centers to provide research and support for environmental justice, including the Environmental Justice Resource Center at Clark Atlanta University, the Deep South Center for Environmental Justice at Dillard University, and environmental justice law clinics at Golden Gate University and Tulane University.

These efforts have been significant and impactful but have had to sustain themselves within the constraints of the research university, which means raising funds from public and private sources and generating knowledge as measured by peer-review publications. Perhaps, the largest source of research funding for environmental justice has been the National Institute of Environmental Health Sciences (NIEHS). From 1994 to 2012, NIEHS funded 155 environmental justice-related projects across rural and urban areas throughout the United States. These projects generated more than 2000 peer-reviewed journal articles.[13] Not surprisingly, the majority involved research in the natural sciences rather than the social sciences, with 73% of projects examining inhalation, ingestion, and absorption as routes of environmental exposure.[13]

As a grassroots-led movement, environmental justice has been concerned about equitable and accountable collaborations between universities and community. In terms of research, this concern has led to various approaches to community-engaged research. More than 90% of NIEHS-funded environmental

justice projects involved community-engagement components.[13] Arguably, environmental justice collaborations have not only utilized community-engaged approaches but have helped spur the development of these methods, including CBPR. CBPR sets a high standard for equitable partnership and mutually beneficial research collaborations. Principles of CBPR include generating knowledge for action, valuing community knowledge and expertise, building capacity of community partners, genuine partnership with co-learning, and involving community in all phases of research from defining questions to dissemination of results.[14] Just a few examples of environmental justice community-engaged research include: the "bucket brigades" in Louisiana and California collecting air samples near industrial facilities to document environmental violations;[15] air monitoring studies on the impact of diesel pollution in Harlem (New York)[16] and Roxbury (Boston),[17,18] assessing exposure and health impacts on Boston area residents who live next to major highways and developing planning interventions to reduce these exposures,[19] and a study of exposures to chemicals in Richmond (California) and their links to breast cancer.[20]

CBPR's advances have been notable, particularly for their ability to garner federal research support and publish peer-reviewed research. But CBPR is still framed as research, even though it aspires to do much more. CBPR's success is due, in part, to its ability to meet the standards of the research university. Based on the author's experience as a community partner involved in CBPR and other community-engaged research projects, our university collaborators had to worry about whether the project would generate research that could be published in prestigious peer-reviewed journals. These concerns affected research methods (such as whether and how to involve youth) and the immediate applicability of findings to community initiatives. At times, it felt as if the university partners benefited more from the partnerships in terms of research funding and helping faculty to publish and gain tenure. These concerns were echoed by community practitioners at a 2007 conference "Achieving the Promise of Authentic Community-Higher Education Partnerships: Community Partners Speak Out!"[21] Nevertheless, more sustained and accountable community–university collaborations continue to be forged, such as Community–University Research and Action for Environmental Justice in California's San Joaquin Valley.[22]

University as place-based anchor institution

Fortunately, there are other approaches to university–community partnerships that can overcome some of the constraints of a research framing and that apply to environmental justice and beyond. Some universities are defining themselves as "anchor institutions," which play a critical role in the civic life, community development, and economy of their region. According to the Democracy Collaborative, anchors are "... institutions that once established tend not to move location. Emerging trends related to globalization. . . . . . suggest the growing

importance of anchor institutions to local economies."[23] Many anchor institutions—which also include hospitals, museums, and other entities—have thrived while their surrounding neighborhoods have suffered economic disinvestment and decline. These disparities have led some institutions to realize that their fates are intertwined with the communities that they are a part of and drove them to focus on their roles in the local economy, land-use and development, and civic leadership, as well as their traditional education and research roles. For example, the University of Pennsylvania's efforts in West Philadelphia over the last 25 years have spanned the university and involved faculty and students in service learning, community service, and research, all geared toward improving the community and enhancing democracy more generally.[24] In Cleveland, anchor institutions came together in the Greater University Circle Initiative to revitalize their surrounding neighborhoods. Together they have coordinated urban planning efforts, seeded new worker-owned cooperative businesses, and helped to address the housing, health, and educational needs of the area.[25]

The planning and community development literature has highlighted the roles of universities as anchor institutions.[26–28] The U.S. Department of Housing and Urban Development (HUD) has supported anchor institution strategies through its Community Outreach Partnerships Centers program from 1994 to 2005, investing more than $45 million in more than hundred universities to form partnerships to cocreate urban development, social, and educational initiatives. Critical assessments of these partnerships have raised concerns mirroring the critiques of research-based collaborations, including their lack of longevity, unequal power dynamics,[2,29] promotion of traditional roles of expertise,[30] and insufficient internal assessment.[31]

Contemporary challenges to university–community partnerships

Whether it is through community-based research or anchor institution strategies, university–community collaborations face common challenges:

Student-centered focus and rigidity of academic calendar

In the service learning model, student learning is prioritized over community needs.[32] Engagement is structured around the academic calendar, which is often not well aligned with the needs of community organizations and limits the prospects for longer term projects.

Lack of focus on community impact and capacity

Much of the research evidence for the success of engagement programs has focused on student learning outcomes. There is little emphasis on assessing

the benefits (and costs) to community. Also, there is lack of attention to and resources for the community capacities necessary to engage with university partners. Too often, small non-profit community organizations with little dedicated funding are stretching their staffing and other resources to guide and mentor students and work with faculty.

Lack of institutional rewards for faculty

Tenure and promotion policies reward traditional scholarship and publication in academic journals rather than engaged research or public service. Scholars who prioritize engaged work often do so at the expense of their own career.

Research university funding model

Decreased public funding for universities combined with a research university model has caused universities to prioritize the pursuit of large research grants and seek enrollment from wealthier students. Decreased federal funding for social welfare has resulted in cuts in university outreach programs, along with increased tuition and use of contingent faculty.

Global orientation over place-based

As universities struggle to distinguish themselves in an environment of stiff competition for research funding, many have put greater emphasis on global impacts over local. International research grants are more lucrative and granted more elite status than local community development projects.

Elitism and selectivity

Global ranking systems reward universities for selectiveness, making them increasingly elitist institutions that are inaccessible to low-income youth and youth of color who often live in their surrounding neighborhoods. Excellence is then seen as in tension with accessibility.

Transformative partnership: Toward a co-learning model

Tufts UEP has been developing a transformative co-learning model of partnership that tries to address these challenges (see Figure 1). The co-learning model cultivates long-term, place-based, reciprocal partnerships where university and community co-produce knowledge and action toward a more just, sustainable, and democratic society. Co-learning weaves together various strands of university civic and democratic practice into three- to five-year

partnerships with community-based organizations. In each cycle, community and university cocreate knowledge and action and build relationships that set the stage for deeper partnership. Sustained over a ten- to twenty-year period, co-learning can lead to institutional transformations and a coevolution of both university and community partners in place. The salient features of the model are laid out below, followed by examples of its implementation at Tufts UEP.

Co-learning starts with the intent to contribute toward a more just, sustainable, and democratic society. It challenges the existing power relations that drive the social, economic, and environmental injustices it seeks to ameliorate. Thus, co-learning seeks to partner with entities beyond the established powers in government, business, and community. It looks for partners led by and composed of those segments of the community that are marginalized and oppressed and allies who share a social change orientation. Co-learning can start most quickly with partners that are already in some relationship with the university and who have the capacity to be equal drivers of the partnership.

The co-learning cycle begins with joint inquiry and planning by the university and community partner. This step is critical to the model, to ensure that community is an equal partner in driving the engagement. Joint inquiry can include discussions as well as more formal workshops and courses to investigate and identify mutual priorities. This inquiry, itself, can take several years, during which relationships of trust and accountability are built. This step in the cycle addresses the challenge of partnerships being overly driven by university needs and an exclusive focus on student learning. The result of joint inquiry is a multi-year plan and a formal agreement (or Memorandum of Understanding) setting out joint activities, decision-making processes, expectations, and commitment of resources.

The multi-year plan lays out a cycle of praxis—where partners engage in "reflection and action directed at the structures to be transformed."[33] These activities are not seen as ends in themselves but as a means to contribute to change in the world. Too often, community-based research and service learning are too brief and disconnected from each other to result in much community impact. While the plan lays out intent and direction, co-learning follows an evolving line of inquiry that is responsive to dynamic political and economic conditions.

While each multi-year cycle does not necessarily lead immediately to another, these cycles can lay the basis for "sustained engagement"[30] over ten to twenty years (or more). Cultivating partnerships over this generational time scale is not unreasonable, given that many faculty careers are even longer, and many community-based organizations have similar longevity. Finally, this longer time frame is necessary to pursue significant community and structural change as well as institutional transformations in the university.

Co-Research/Co-Education partnership with the Dudley Street Neighborhood Initiative

UEP is implementing the co-learning model through its Co-Education/Co-Research (CORE) partnership. CORE is built on a long history of community partnerships at UEP dating to the founding of the department in 1973. As a professional graduate program dedicated to "educating practical visionaries," UEP defines university–community partnership as a two-way mutually beneficial relationship that provides the opportunity to connect theory and practice to create knowledge that is usable and democratic and makes a difference in the world. Students work with community partners and gain experiential knowledge through a required Field Projects course and an internship, and many conduct class projects and/or master's theses with partners. In the 1970s, UEP developed programs to train leaders in the emerging environmental movement and in the 1980s and 1990s ran a Management and Community Development Institute for practitioners in housing and community development. In the 2000s, UEP established the Neighborhood Fellows scholarship to support up to five experienced urban leaders of color to complete its mid-career Master of Public Policy program. Additionally, UEP has a history of hiring experienced community practitioners not only as adjuncts, but as core faculty (including the author).

The CORE model was formally adopted by the UEP Faculty in spring 2014 as a way to deepen UEP's community partnerships from more fragmented and semester-to-semester engagements to a multi-year, integrated approach. In January 2016, UEP entered its first CORE partnership with the DSNI. DSNI came together in the mid-1980s to revitalize a Boston community of color that had been devastated by urban renewal policies, bank redlining, and economic disinvestment.[34] While CORE has been launched only recently, UEP's engagement with DSNI began more than twenty-five years ago. In 1990, UEP Field Projects team worked with DSNI to assess the human needs of the neighborhood. This was to be the first of twelve Field Projects conducted with DSNI, ranging from vacant lot development and environmental remediation to urban agriculture and child development. Naturally, some UEP students aligned their internships and master's theses with DSNI's needs. Trish Settles did her master's thesis analyzing brownfields in the Dudley neighborhood and after graduating in 1994 continued on at DSNI as environmental organizer for more than a decade. Conversely, DSNI staffers have come to UEP as students in the mid-career master's program, including long-time senior staff member May Louie, former Executive Director John Barros, and current Executive Director Juan Leyton.

But the relationship has extended beyond students. Melvyn Colón, who lectured at UEP from 1990 to 2002, had been involved in the founding of DSNI and served as board president for two years prior to teaching at UEP. In the last six years, two UEP faculty have dedicated considerable time working with

DSNI. Professor James Jennings advised DSNI on building its community data and research capacity and served as principle investigator for DSNI's successful federal Promise Neighborhoods grant. The author piloted the Practical Visionaries Workshop as a "co-learning space" for students and community members, where DSNI served on the steering committee and sent several of its younger organizers to participate.

Although this deep partnering over a generation has led to significant outcomes, much of it was accomplished without an explicit co-learning model and led by individual faculty planning collaboration a semester at a time. CORE weaves together these already-existing elements into a multi-year engagement anchored by a process of joint inquiry.

Integration of curricular elements

CORE includes three elements of UEP's required curriculum. Field Projects is a required course for all first-year students in the spring, in which they work in teams of three to five with community, non-profit, and local government partners on real-world projects. At least one Field Project will be guided by the CORE partner each year. UEP students also must complete a minimum 150-hour internship. With support from Tisch College for Civic Life at Tufts, two UEP students are funded for ten-week full-time fellowships each summer with the CORE partner. Finally, UEP students complete a master's thesis in their second and final year. At least one or two students each year are expected to extend their learning and research with CORE partners via their master's thesis.

Joint inquiry through co-learning workshop

The joint inquiry leading to our CORE partnership with DSNI started with the Practical Visionaries Workshop. From 2011 to 2014, a steering committee including DSNI and two other partners helped design an annual co-learning workshop and guided a Field Projects team each spring. The workshop consisted of a series of eight 3-hour sessions and included roughly equal numbers of graduate students and community practitioners. Steering committee partner staff and the lead faculty met periodically to plan for the content of the workshops and field projects. The initial convening of the partners was helped along by the fact that the lead faculty already had strong relationships with each of the organizations through his community practice prior to Tufts and to each organization's past experience with UEP.

The workshop started with an inquiry into community strategies for just and sustainable cities and in the second and third years explored strategies and popular education tools for building new community economies. The 2012 Field Project team drafted a report *If Not Walmart, Then What? Envisioning a*

Different Paradigm for Local Economic Development in Roxbury and Somerville. In 2013, the team produced a set of popular education tools *Cultivate Your Food Economy*, which were then implemented by DSNI and one of the other partners with their youth groups that summer. That same summer, UEP supported an action research project with DSNI to document the extent of home gardening in the neighborhood. In 2014 and 2015, Field Project teams continued to work with DSNI and its partners to support a community food action planning process for the Dudley Real Food Hub. During this period, one or two UEP students each year did summer internships with partner organizations and one or two pursued related master's theses. The Workshop is now institutionalized at UEP as a Community Practicum course offered every other year.

Through the Workshop, UEP learned several lessons that have helped shape the CORE model. First, the university can create valuable space for community practitioners to learn and reflect. Travis Watson, a DSNI organizer who participated in 2012 said, "When you're in the work it's hard to step back and take a look in a larger context. To get questions from grad students from a different lens was really valuable. It made me think a little bit differently" (personal communication, June 7, 2012). Second, the engagement needed flexibility to adjust to the capacities of our partners and the flow of their work. In the original Workshop model, the community and graduate student participants not only learned together but also were supposed to undertake joint projects. After the first year where half of the community participants were unable to commit the time to the projects, the model was adjusted so that students took on a project via the Field Projects course. Harry Smith, a senior DSNI staff who served on the steering committee, said, "There was room for give and take and doing things on the fly. Some of the original ideas about community meetings, we had to say we couldn't do it" (personal communication, June 7, 2012). Finally, partners valued the sustained nature of the collaboration. Meridith Levy, a steering committee member with the Somerville Community Corporation, stated,

> I prefer this model to the service learning model. . . . Anything that can build on a continuous relationship and process is better. It is especially effective when students finish a (field) project with us, and continue to work with us over the summer or following semester. It feels more transformative—it's no longer about an isolated experience, but it gives legs to their work and their relationship with us and with the community. (personal communication, June 11, 2012)

Three-year plan and memorandum of understanding

This joint inquiry process, then, laid the foundation for the CORE model and its three- to five-year partnerships. We chose this time frame because it allows for

maximizing engagement and learning of UEP graduate students (who have their own cycles of two to three years) and fits into the typical planning and funding time frames for community-based non-profit partners. By the time UEP approved the model in 2014, the potential partners from this process had strong working relationships and several recent years of experience working with UEP graduate students and courses. To recruit the first CORE partner, the lead faculty held a series of meetings with all three Workshop steering committee partners and one other participating group. Of the four, only DSNI was ready and willing to plan for a multi-year engagement.

A written memorandum of understanding sets out the goals and expectations of the partners and accountability toward each other. The memorandum of understanding with DSNI states "we will continue to work together to learn about, research, develop, and implement strategies for community-controlled sustainable and just local economic development. During this period, we will continue to develop our work on food economy and community land trusts." It lays out learning objectives for UEP students and DSNI members, action goals to further DSNI's work, community land trusts and building the food economy, and partnership goals to deepen the institutional relationship between Tufts and DSNI. Finally, the memorandum of understanding details commitments of resources, staffing, and joint fundraising and a process for decision-making. As of spring 2016, the partners are still seeking funding to support DSNI's basic staffing commitment. However, the partnership continues to deepen, with intensive work under way to help DSNI launch the Greater Boston Community Land Trust Network and develop policy recommendations for the City of Boston and Massachusetts.

Reflections and conclusion

This article has laid out a co-learning approach to community–university collaborations that tries to overcome some of the constraints of the research university. Co-learning aspires to incorporate the best practices of community-engaged research, but go beyond it by integrating the teaching and service missions of the university and defining the university's role as a place-based anchor institution. Tufts UEP has a long history of community-engaged teaching, research, and service in the Boston area. And it is from this foundation that the author has been able to develop the CORE partnership. While CORE is new, the practices that make up the partnership are long-standing and include curricular components (Field Projects, internships, and master's theses), a co-learning Practicum, research projects, and collaborative research and action.

As the university goes through the process of co-learning, it will inevitably face tensions that challenge the structure of the university itself. In recognizing the values of multiple forms of knowledge and of the importance of community and practitioner knowledge, co-learning leads the university to open up access.

Who can and should be part of the university (as faculty, student, or staff) starts to widen as the boundaries between university and community are blurred. In co-learning, partnerships become a pipeline for recruitment of community members into universities as students, faculty, and staff. But this recruitment is not only for the sake of diversity; it is about the university pursuing its mission and understanding that excellence cannot exist without diversity.[9] At UEP, we are already seeing some of these transformations:

Student recruitment

Community partners are now seen as a resource in UEP's efforts to recruit students, particularly to its mid-career master's program. Already, several DSNI staff have completed their master's degrees at Tufts, and one will be starting UEP's mid-career program as a Neighborhood Fellow in Fall 2016.

Visiting Practitioners program

In 2013, UEP instituted a Visiting Practitioners program as an affiliation equivalent to Visiting Scholars. In the first year of the program, one of the Visiting Practitioners was Juan Leyton, who is now the Executive Director of DSNI. In 2015, May Louie, who had recently left DSNI after more than twenty years, joined as a Visiting Practitioner and is working on a popular education curriculum project (described below). To further increase the ability of the Visiting Practitioners to contribute to the university will require developing resources to support practitioners to take time away from their regular duties.

Teaching innovations

Working with CORE and other community partners, UEP is developing Teaching Democracy, a train-the-trainers curriculum for popular education. With grant support from the Tufts Provost's Office (the Tufts Innovates program), this project is supporting Visiting Practitioner Louie as a curriculum consultant. DSNI and several other community partners are part of the curriculum design team.

UEP has learned several lessons that can be helpful for others trying to implement co-learning. UEP's status as a professional master's department has provided fertile ground for co-learning because it prioritizes professional practice, not just research. This priority has led the department to recruit both faculty and students with deep community connections and practitioner experience. Practitioner faculty have not been tenure-stream and thus, not subject to research and publishing pressures. Others may find similar professional
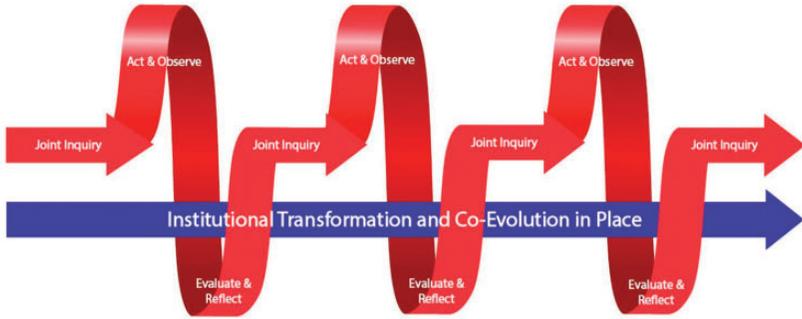
Figure 1. Co-learning model.

practice-oriented departments and programs within their institutions to help anchor co-learning.

Co-learning can flexibly weave together already existing resources. Thus, the approach does not have to rely on a large funding source or highly placed institutional leader. In UEP's case, the only resource necessary to develop the multi-year model was an annual course release for the lead faculty to develop and pilot the Practical Visionaries Workshop. Then, several other internal sources at Tufts were secured for service learning and teaching innovation. Departments can grant faculty the time to develop co-learning partnerships through course releases and assignments to courses. Many universities also have various resources relating to service learning and community engagement that could provide additional resources.

Co-learning can be linked to the diversity goals of universities. UEP received two small grants from an internal diversity fund that supported university-community forums to share findings from the Practical Visionaries Workshop. With nearly half of UEP's mid-career master's students being people of color, the department can boast of a level of diversity well beyond the rest of the campus and make the case that its community partnerships are one factor of its success. Many universities have made public commitments to diversity and inclusion that could be openings to support co-learning.

Despite these opportunities, there are still key challenges to address. Below are recommendations for further development of the co-learning model:

Secure adequate resources for community partners. Universities are accustomed to spending resources on faculty and students, but not on community partners as coresearchers and coeducators. Not only should universities help to raise external funds for community partners but should be willing to allocate their own resources to support partners in the same way they pay for visiting faculty and researchers.

Shift university identity to include local anchoring. In an era where universities compete for global significance, the disconnect with their locales can be profound. Co-learning offers a way for universities to develop as local anchor institutions and deepen their roots in a place. This local anchoring can, in fact, enhance global reputation.

Align university rewards with co-learning principles. Many faculty who develop these types of partnerships do not receive tenure or promotion. And non-tenure stream faculty often have little job security and thus little incentive to develop long-term partnerships. The lack of valuation of co-learning practices results in powerful disincentives for faculty and students. While these reward systems may not be easily shifted, co-learning can advance partnerships that create more internal and external pressures for change.

Prioritize community benefits in co-learning partnerships. There is a university-centered bias in articulating and assessing university-community partnerships (including this article). To counter this bias, there needs to be more focus on defining community goals and benefits that align with the missions and institutional needs of community partners.

It is hoped that co-learning can be a useful re-orientation of the community-university relationship that can be applied to environmental justice collaborations and many other fields. Co-learning grounds a university in place as an active neighbor in improving its place. Co-learning can take root in multiple ways, but in each instance must be adapted to the particular institutional history of its partners and place. Co-learning opens the boundaries between university and community, making the university more porous and accessible. As universities and communities co-learn, they can co-produce a more just, sustainable, and democratic future for each other.

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References

1. Checkoway B. Renewing the civic mission of the American research university. *J Higher Educ* 2001; 72: 125–147.
2. Boyle ME and Silver I. Poverty, partnerships, and privilege: elite institutions and community empowerment. *City Community* 2005; 4: 233–253.
3. Fisher R, Fabricant M and Simmons L. Understanding contemporary university-community connections. *J Community Pract* 2005; 12: 13–34.
4. Greenwood DJ and Levin M. Reconstructing the relationships between universities and society through action research. In: Denzin N and Lincoln Y (eds) *Handbook of qualitative research*. Thousand Oaks: Sage, 2000, pp.85–106.
5. Boyer EL. The scholarship of engagement. *Bull Am Acad Arts Sci* 1996; 49: 18–33.
6. Bromley R. On and off campus: colleges and universities as local stakeholders. *Plan Pract Res* 2006; 21: 1–24.
7. DuBois WEB. *The talented tenth*. New York: James Pott and Company, 1903.
8. Dewey J. *Democracy and education*. New York: MacMillan, 1916.
9. Jennings J. Theorizing black studies: the continuing role of community service in the study of race and class. In: Marable M (ed.) *Dispatches from the Ebony tower: intellectuals confront the African American experience*. New York: Columbia University Press, 2000, pp.177–185.
10. United Church of Christ. Commission for Racial Justice. *Toxic wastes and race in the United States: a national report on the racial and socio-economic characteristics of communities with hazardous waste sites*. New York: Public Data Access, 1987.
11. Bullard RD. *Dumping in Dixie: race, class, and environmental quality*. Boulder, CO: Westview Press, 1990.
12. Cole LW and Foster SR. *From the ground up: environmental racism and the rise of the environmental justice movement*. New York: NYU Press, 2001.
13. NIEHS (National Institute of Environmental Health Sciences). *Advancing environmental justice*. Bethesda: National Institutes of Health, 2015.
14. Wallerstein NB and Duran B. Using community-based participatory research to address health disparities. *Health Promot Pract* 2006; 7: 312–323.
15. O'Rourke D and Macey G. Community environmental policing: assessing new strategies of public participation in environmental regulation. *J Policy Anal Manage* 2003; 22: 383–414.
16. Kinney PL, Aggarwal M, Northridge ME, et al. Airborne concentrations of PM(2.5) and diesel exhaust particles on Harlem sidewalks: a community-based pilot study. *Environ Health Perspect* 2000; 108: 213–218.
17. Loh P, Sugerman-Brozan J, Wiggins S, et al. From asthma to AirBeat: community-driven monitoring of fine particles and black carbon in Roxbury, Massachusetts. *Environ Health Perspect* 2002; 110(supplement 2): 297–301.
18. Levy J, Houseman EA, Spengler J, et al. Fine particulate matter and polycyclic aromatic hydrocarbon concentration patterns in Roxbury, Massachusetts: a community-based GIS analysis. *Environ Health Perspect* 2001; 109: 341–347.
19. Brugge D, Patton AP, Bob A, et al. Developing community-level policy and practice to reduce traffic-related air pollution exposure. *Environ Justice* 2015; 8: 95–104.

20. Brown P, Brody JG, Morello-Frosch R, et al. Measuring the success of community science: the northern California household exposure study. *Environ Health Perspect* 2012; 120: 326–331.
21. *Achieving the promise of authentic community-higher education partnerships: community partners speak out!*. Seattle, WA: Community-Campus Partnerships for Health, 2007.
22. London J, Frampton ML, DeLugan R, et al. Growing community-university research partnerships in the San Joaquin Valley. *Environ Justice* 2013; 6: 62–70.
23. Democracy Collaborative. *Overview anchor institutions*. http://community-wealth.org/strategies/panel/anchors/index.html (accessed 30 November 2015).
24. Harkavy I and Hartley M. Integrating a commitment to the public good into the institutional fabric: further lessons from the field. *J High Educ Outreach Engagem* 2012; 16: 17–46.
25. Cleveland Foundation. *Cleveland's Greater University Circle Initiative: building a 21st century city through the power of anchor institution collaboration*. Cleveland: Cleveland Foundation, 2013.
26. Perry DC, Wiewel W and Menendez C. The university's role in urban development: from enclave to anchor institution. *Land Lines* 2009; 21: 2–7.
27. Harkavy I and Hodges RA. *Democratic devolution: how American universities can strengthen their communities*. Washington, DC: Progressive Policy Institute, 2012.
28. Initiative for a Competitive Inner City. Anchor institutions and urban economic development: from community benefit to shared value. *Inner City Insights* 2011; 1: 1–9.
29. LeGates RT and Robinson G. Institutionalizing university-community partnerships. *J Plan Educ Res* 1998; 17: 312–322.
30. Hoyt L. A city-campus engagement theory from, and for, practice. *Michigan J Comm Serv Learn* 2010; Fall: 75–88.
31. Rubin V. Evaluating university-community partnerships: an examination of the evolution of questions and approaches. *Cityscape* 2000; 5: 219–230.
32. Hoyt L. A core commitment to service-learning: bridging planning theory and practice. In: Hardin MC (ed.) *From the studio to the streets: service-learning in architecture and planning education*. Washington, DC: The American Association for Higher Education, 2005, pp.17–31.
33. Freire P. *Pedagogy of the oppressed*. New York: Continuum, 1970.
34. Medoff P and Sklar H. *Streets of hope: the fall and rise of an urban neighborhood*. Cambridge, MA: South End Press, 1994.

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