

EDITED BY LISA M. ABENDROTH AND BRYAN BELL

PUBLIC INTEREST DESIGN EDUCATION GUIDEBOOK

CURRICULA, STRATEGIES, AND SEED ACADEMIC CASE STUDIES



Public Interest Design Education Guidebook

Public Interest Design Education Guidebook: Curricula, Strategies, and SEED Academic Case Studies presents the pedagogical framework and collective curriculum necessary to teach public interest designers. The second book in Routledge's Public Interest Design Guidebook series, the editors and contributors feature a range of learning competencies supported by distinct teaching strategies where educational and community-originated goals unite. Written in a guidebook format that includes projects from across design disciplines, this book describes the learning deemed most critical to pursuing an inclusive, informed design practice that meets the diverse needs of both students and community partners.

Featured chapter themes include Fundamental Skills, Intercultural Competencies, Engaging the Field Experience, Inclusive Iteration, and Evaluating Student Learning. The book consists of practice-based and applied learning constructs that bridge community-based research with engaged learning and design practice. SEED (Social Economic Environmental Design) academic case studies introduce teaching strategies that reinforce project-specific learning objectives where solving social, economic, and environmental issues unites the efforts of communities, student designers, and educators. This comprehensive publication also contains indices devoted to learning objectives cross-referenced from within the book as well as considerations for educational program development in public interest design.

Whether you are a student of design, an educator, or a designer, the breadth of projects and teaching strategies provided here will empower you to excel in your pursuit of public interest design.

Lisa M. Abendroth is a professor in the Communication Design program at Metropolitan State University of Denver in Colorado, USA. She is a SEED Network founding member and a recipient of the SEED Award for Leadership in Public Interest Design. Her work focuses on the social, economic, and environmental impacts of design created within the contexts of underserved people, places, and problems. Abendroth is a coeditor of the *Public Interest Design Practice Guidebook: SEED Methodology, Case Studies, and Critical Issues* (2016).

Bryan Bell founded Design Corps in 1991 with the mission to provide the benefits of design for the 98 percent without architects. Bell has published three books on public interest design. His work has been supported by the American Institute of Architects Latrobe Prize and through a Harvard Loeb Fellowship. His designs have been exhibited at the Venice Biennale and the Cooper Hewitt, Smithsonian Design Museum. Bell holds degrees from Princeton University, USA, and Yale University, USA. He teaches at North Carolina State University, USA.

Public Interest Design Education Guidebook

Curricula, Strategies, and SEED
Academic Case Studies

Edited by Lisa M. Abendroth and Bryan Bell

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Lastly, we are thankful for the inspiration provided by our students who drive the requirement for enhanced understanding and application of public interest design pedagogies today and into the future.

Recognizing this work as the deep collaboration that these acknowledgments represent, and seeing this collective work as part of a broader discourse on the interconnected relationship between practice and pedagogy, we envision a future where public interest design practitioners are more and more supported through thoughtfully constructed and engaged learning pedagogies.

Notes

- 1 Nadia M. Anderson, Greta Buehrle, Shannon Criss, Lee Davis, Ursula Hartig, Nina Pawlicki, Michael Rios, Jota Samper, Benjamin R. Spencer, Eduardo Staszowski, and Mike Weikert.
- 2 Beth Chute, Emily Axtman, Andrew Sturm, Aaron Bowman, Evan Harrel, Elisa Iturbe, Drew Kepley, Jeremy Knoll, Melissa Tello, Melissa Threatt, and James Wheeler.

Foreword

Can Public Interest Design Be Taught?

Rahul Mehrotra

Today, the physical structures of human settlements around the globe are evolving—becoming more malleable, more fluid, and more open to change than the technologies and social institutions that generate them. Urban environments face ever-increasing flows of human movement, more frequent natural disasters, and iterative economic crises that modify the global investment of capital and affect the physical form of cities and their extended hinterlands. Furthermore, a general sense of inequity is emerging as one of the largest challenges for imagining the built environment. At a time in which change and the unexpected are the new normal, approaches to design—whether of the built environment or as a broader intervention in people’s lives—need to be more flexible. In this context, attributes like reversibility and openness are critical elements for articulating a more sustainable form of our habitats. How can we imagine transitions in this unpredictable, emerging landscape of demographic and economic shifts? How do practitioners concerned with the built environment partner with people to make these transitions happen? How does design become more vested in the public’s interest for the present as well as the future?

Starting in the 1960s, many alternative practices of engaging with the built environment emerged globally as a counterpoint to the perceived eraser of tradition, as well as nonparticipatory models that the “modern” project perpetuated. These alternative models first manifested themselves in the form of the architect as craftsperson—working directly with the builders and often with the community, essentially eliminating drawings as a medium to communicate design intentions. In other words, drawings and documents as the only means of instruction in the building process were deemed inadequate. Vigorous use of local materials and vernacular

construction techniques characterized the buildings that these practitioners created. The method of direct communication created a truly participatory process, with the bulk of the decisions left to the artisans and builders to make.

The early treatise by Christopher Alexander and others in the seminal book *A Pattern Language: Towns, Building, Construction* (New York: OUP USA, 1977) and, later, the more systemic approach in *Supports: An Alternative to Mass Housing* by John N. Habraken and Jonathan Teicher (Gateshead, UK: Urban International Press, 1999) are two examples of the theorization of this model. The representative work of Laurie Baker in Kerala, India, and Rural Studio in the United States grew out of this genre of practice. In this approach, flexibility in design intentions and open-endedness, where the construction process determines the final product, facilitate the easy incorporation of symbols, icons, and—most importantly—local building practices as a way to link architecture to the larger social and cultural traditions and economy of the region. In these practices was inherent the seed of public interest design as we have come to see it today.

The idea of placing the public interest at the center of design engagement was reenergized with new vigor in the 1990s, with the onslaught of globalization and the marginalization and displacement that ensued. This model of practice now encompasses architect activists and practitioners who have consciously chosen to be more reflective, to consider the consequences of their actions and ways they can effectively counter the global flows that marginalize both traditions and people. These practitioners enter into a potentially more fulfilling relationship with the site, its history, the community of users whose needs they address, and the members of the workforce who are their collaborators. Mainstream practitioners view this model of practice with great suspicion—perhaps as it challenges the more orthodox patterns of professional practice? These experiments are, in fact, carried on at the margins of conventional practice. By choosing to operate at the boundaries of the dominant structure of capital, these alternative practitioners, who work explicitly in the public's interest, have made overt their moral choices in the face of globalization.

This model of practice is innovative in the matter of patronage; projects are sometimes supported by the state or the corporate sector in a compassionate mood (trusts, foundations, and so on), but more usually by nongovernmental organizations, charities, and similar patrons. In the same spirit, practitioners reject certain sources of patronage, such as developers and real estate speculators, and treat with suspicion technologies of mass production, such as reinforced cement concrete, steel, and an obsessive use of glass. In this way, the model demonstrates new directions and interpretations of sustainable design in the global context.

Exploration of alternative technologies and building methods is a recurring theme in this model. All decisions are based on community participation, resuscitating architecture from formal production processes by focusing on the lived experiences of users. This form of practice also acts as an important counterpoint to the protocol-driven corporate pattern of architecture and planning. The practice emphasizes an intimacy of scale, a direct involvement with building, and an activist preoccupation

with political and civic issues that impinge on architecture. Practitioners make an argument for architectural diversity and acknowledge the differences that are critical to the evolution of relevant architecture. Moreover, recognition of human creativity acquires special meaning in the age of atomizing privatism. This access to a wider base of skills and concerns is especially important in the face of globalization, which has reduced the character of the built form to a thin veneer of glamour. Most critically, practitioners have the public's interest in the outcomes of any design intervention at the center of their agenda; the goal is to have the public participate and, more importantly, benefit.

While public interest design often operates at a limited scale, this model of practice is firmly embedded in the socioeconomic milieu of the region. The model facilitates the engagement of social networks in the process of building and is characterized by cost-effective solutions—often derived from the conversion of social assets into financial ones in the way labor is engaged or material procured. Not overwhelmed by issues of architectural and aesthetic concerns, these buildings are often conceived with a looseness that allows for flexibility in terms of materials and the building process. Although this mode of practice has seen popular support among institutions, nongovernmental organizations, and intellectuals and has produced a significant amount of building, it often lacks cohesion in physical articulation and is sometimes reduced to caricatures of regional icons and images. While public interest design seemingly extends traditions and attempts to express an economy of means, its literal visual translation often subverts rather than extends vernacular traditions and can lack the aesthetic robustness that makes the vernacular idiom timeless.

Ironically, this position of privileging the visual should not be seen as contrary but rather as being a simultaneously valid aspiration. However, pedagogy seems to address one over the other. Thus, what does this recognition of alternative practices of design in the public interest mean for pedagogy? While there are currently more questions than answers, some of these questions open up a conversation for the future. How does education address this issue—does it accept and work with reinforcing this pluralism or try to recast the profession in a singular model? Can education simultaneously embrace these counterpoints to create schizophrenic architects, or is conformity a better alternative?

The real question in this discussion of orienting pedagogy for the public interest designer is whether reconciling these varied aspirations is possible at all. Practices that focus on public interest questions often evolve. Conventional practitioners stumble on these issues out of circumstance or while pursuing their own passions and commitments. Alternative practitioners interested in public interest design typically come from the institutions or practices that serve as incubators to nurture these alternative approaches and are often in circumstances where peer learning and support result in new directions. So can public interest design practice be taught?

Public Interest Design Education Guidebook: Curricula, Strategies, and SEED Academic Case Studies, edited by Lisa M. Abendroth and Bryan Bell, fills a crucial gap in grappling with this critical question. The two themes dominating the book

are interdisciplinary public interest design education and the Social Economic Environmental Design (SEED) process, which suggest new ways that the authentic learning from projects around the globe can inform pedagogy and vice versa. While the projects presented in the book are diverse, tackling specific challenges of participating partners and communities, the persistent thread is education: the education of student designers, the frameworks of public interest design pedagogy, and the communities affected by this work. All are crucial ingredients in the formation of the alternative practitioner for whom the public interest is at the heart of the practice.

The challenge of reorienting pedagogy to educate those students who might become alternative practitioners is the primary theme of the book. All of the contributors—educators, students, and project partners—share this mission. In addition to posing questions about the issues that need to be addressed in achieving this pedagogical mission, the book’s admirable ambition is articulating the SEED process, which asks, “What is the specific vision of success?” and “How is that vision to be measured?” The authors propose that *learning objectives* function as the much-needed lens through which to analyze student-centered *learning outcomes* to provide a universal reference within the language of pedagogy. The term for measurement in this context is *assessment*. These commonly accepted academic terms link design education to critical questions that the book seeks to answer in public interest design pedagogy and within the broader process of SEED.

This critical feedback loop and the structure in a pedagogical framework that the authors have established make this book an important resource for educating the public interest designer more globally. The book facilitates a network of practices by constructing a structure that allows and actually encourages all sorts of feedback loops, which support thinking and practice around public interest design. Addressing an academic audience of educators, students, scholars, and administrators, the *Public Interest Design Education Guidebook* explores how public interest design practice demands specialized instruction that embraces many core values. These values range from a deep investment in working locally through participatory practices with diverse and underrepresented stakeholders to the pursuit of an issue-based approach to problem solving that promotes longevity and sustainability.

The book also covers implementation of evaluation that is embedded in community-centered design work from a project’s start—that is, how to build community partnerships, how to assess student learning in conjunction with project development, how to incorporate service-learning and internships, and more. The book creates a tool kit for the practitioner and educator, as well as for the patron, to understand their own relationships. Its most powerful suggestion is that there is a blurring between the practice of advocacy in the interest of the public and the tools of advocacy. Today, these two things have to be intrinsically linked and coevolved by the advocate and the community.

Any shift in values and modes of practice that we bring to the profession has to be founded on a solid base of education—on values that inform how we

practice. Society invests in our training as architects with the express intention that we help imagine spatial possibilities in which human beings can lead better lives. In fact, public service and interest are intrinsically central to our purpose as design practitioners. Perhaps our training has to reclaim this mission once again to retrieve it from an amnesia that has engulfed us in the final decades of the twentieth century. The *Public Interest Design Education Guidebook* is a guide to nurturing this sensibility in a generation of designers to come.



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Introduction

Public Interest Design Pedagogy

Lisa M. Abendroth and Bryan Bell

The goal of this publication is to advance the rigors of a comprehensive public interest design education and collective curriculum. The editors, along with a team of project peer-reviewers, have undertaken the vital task of identifying the best methods and pedagogical techniques embedded within public interest design education today. Subsequently these documented learning competencies together with teaching strategies help shape a vital landscape where academic and community-based goals unite. The inherent challenge was to ensure the information presented here is communicated in the clearest terms and in a manner that promotes relational understanding across audiences. The editors and contributors strive in earnest to move the profession forward by presenting a dialectic of pedagogies, a detailed account of the educational processes, systems, and interactions that empower engaged learning within communities and with community stakeholders. While a mutuality of efforts has galvanized public interest design as a viable profession, it is the attentive pedagogy of educators that will sustain it, offering new standards and practices that define this ever-evolving field.¹

In this publication, the term *public interest design*² functions as a unifier of diverse approaches and descriptions of inclusive community-based practices from across the fields of design.³ In recent years and the more distant past there has been steady momentum shaping a context for what public interest design might mean to the education and the practice of a designer. In his foreword to *Expanding Architecture: Design as Activism* (Bell and Wakeford 2008) Thomas Fisher (2008) ponders how education might respond to the necessary evolution of architectural practice in new and differing contexts (10). Donald Schön (1985) has also examined the evolution of architectural design education in the wake of “community architecture.” He points to

the question of whether a “traditional architectural education” best serves students stepping into previously undefined roles (Schön 1985, 3–4). Originally published in 1971, in *Design for the Real World: Human Ecology and Social Change*, Victor Papanek (1985) radically asserts, “The main trouble with design schools seems to be that they teach too much design and not enough about the ecological, social, economic, and political environment in which design takes place” (291).

The call to action has been palpable for quite some time. Today, the evidence of many individual and unified efforts to build transferrable knowledge of this field through pedagogy *and* practice is apparent.⁴ Yet, while there are a number of qualified public interest design educators, each offers a unique range of knowledge and experience. This variety has been productive in building pedagogical discourse but has yet to yield the fully developed, transparent, and interconnected cross-disciplinary scale needed within academia. The adverse result is that very often neither administrators, educators, nor students know what a *complete* education in public interest design includes.⁵

The demand for design professionals capable of guiding this practice is growing. Students, educators, and administrators must be prepared to tackle the challenges and benefits of a pedagogy of engagement. An opportunity is presented in the creation of new theoretical frameworks that imagine future iterations for applied learning. A new era of education demands continued and dedicated research that maps, for example, educational approaches to the convergence of metacognitive and technical skill development. While educators are thoughtfully developing engaged teaching and research activities, much work remains. There is a need to understand the impact of these activities, both project results and student learning outcomes, on students themselves, the community partners, and institutions. The relatively recent evolution of diverse degrees, programs, and formats of study in this field fuel the necessity for this conversation.

The evidence of public interest design pedagogies are presented here in three primary sections of this publication. This structure was created to provide a baseline for examination of curricular perspectives, thematically driven project-based work along with case studies that demonstrate the rigor and evolving standard of pedagogy embedded within public interest design education.

Part 1: *Public Interest Design Curricula* presents eight chapters from faculty in distinct educational settings—public and private, research-based and teaching-based, undergraduate and graduate levels—from across design disciplines and throughout the United States. The authors reflect on the comprehensive nature of their integrated course work by presenting pedagogical goals and learning outcomes. These create a bridge between Part 1 chapters, demonstrating core curricular and learning takeaways helpful in comparing programs and approaches. Featured projects offer evidence that links educational frameworks with community-based efforts. Project goals, learning objectives, project outputs, and documentation of student learning through assessment of project results are discussed. Together these authors reveal an important transformation shaping schools that moves beyond typical design studio scenarios to

deeply contextualized problem solving working mutually *with* communities (NERCHE 2016)⁶ toward collectively identified goals and often in embedded situations.

Part 2: *Educating the Public Interest Designer* presents twenty chapters expressed through five themes that underscore the timely relevance of engaged pedagogy. Each thematic section begins with an introduction from an invited author who orients the theme within the landscape of public interest design pedagogy and connects the individual efforts of contributors in that section to a broader discourse. Fifteen double-blind, peer-reviewed chapters identified through an international call for projects constitutes the volume of this section. These chapters articulate a range of critical community-based methods and teaching strategies through applied project-based and practice-based learning that will help design educators envision new possibilities in their own pedagogies.

Chapter themes in Part 2 include the following topics:⁷

- As noted by authors Lee Davis and Mike Weikert in their introduction to the theme *Fundamental Skills*, two interwoven yet fundamental concepts emerge: “(1) elevating social literacy to expand students’ capacity for understanding the complex, systemic nature of social problems and change; and (2) employing immersive, collaborative, and participatory practice-based learning experiences to expose students to real-world problems” (see pages 107–110). Thematic topics further address ethics, leadership, immersion, social responsibility, mutuality, building trust, and practicing empathy.
- Ursula Hartig and Nina Pawlicki share perspective on the theme *Intercultural Competencies* stating, “a profound understanding of the specific local context and a deep investment in the place are required” (see pages 131–134) for intercultural understanding to emerge. Projects in this section demonstrate the importance of metacognitive skill development along with the imperative for translating social and cultural meaning and for considering cultural immersion through the interpretation of political, economic, environmental, and social frameworks.
- In *Engaging the Field Experience* Benjamin R. Spencer introduces readers to the Scholarships of Application and Engagement (SAE) as “a platform for educators to take public interest design out of the classroom and into the field” (see pages 155–157). Design research in local, national, or international contexts requires a clear understanding of culturally appropriate engagement. Featured authors in this section delve into the processes and contexts that have shaped project outputs through community collaborations.
- Eduardo Staszowski positions *Inclusive Iteration* as “an experimental, iterative process, where project phases and activities often repeat or overlap, allowing for the disparate needs, motivations, and ideas that exist among the different participants to proliferate and align” (see pages 179–181). Thematic projects reveal ways of generating and gathering effective feedback, which can inform an iterative and participatory design development strategy that promotes access and inclusion.

- The theme of *Evaluating Student Learning* is introduced by Nadia M. Anderson who poses the question, “Do students see themselves, as a result of the course, as dialogical people participating in mutual exchange with others, or do they see themselves as individuals separate from others?” (see pages 202–205). Authors in this section reflect on the relational quality of student–university–community partnerships in engaged programs where the role of evaluation is vital to understanding learning outcomes and project results as well as long-term and short-term impacts within applied learning contexts.

Part 3: *SEED Academic Case Studies* demonstrates nine educational projects that highlight project-specific learning objectives paired with a selection of teaching strategies that elucidate the skills required within a resulting public interest design practice. Projects developed into case studies were selected by the editors from within the previously discussed peer-reviewed call for projects. The faculty representing selected case study projects also submitted their work to the SEED Network using the SEED Evaluator to further their case study development. The resulting cases offer important evidence of the variables found within community-based applied learning that address social, economic, and environmental issues; the community-based challenge; pedagogical goals; and project results and learning outcomes. These uniquely divergent perspectives, unified by a consistent SEED case study format useful for comparison/contrast analysis, make tangible the sometimes-intangible aspects of public interest design pedagogy. To further the accessibility of this content, learning objectives in Part 3 and from throughout the book have been collated in Appendix A (Part 4, pages 318–327) and offer a comprehensive set of learning goals as a useful reference.

In the foreword to Paulo Freire’s *Pedagogy of the Oppressed* (2013), Richard Shaull offers perspective on the tacit relationship between education, transformation, oppression, and justice. He reminds us, “There is no such thing as a neutral educational process” (34). This prompt signals the implicit responsibility of educators who, in the context of this publication, seek to empower students and communities through the mutuality of thoughtfully derived public interest, community-centered work. Shaull goes on to translate the important message of Freire’s work where education “becomes the ‘practice of freedom,’ the means by which men and women deal critically and creatively with reality and discover how to participate in the transformation of their world” (34). A proposal for a comprehensive, collective curriculum of public interest design endangers itself in its codification and instead must acknowledge the requirement for intentional, meaningful engagement in the social contexts that define communities and *their* needs. The emphasis on pedagogy itself as a transformative experience liberated beyond that of a singular set of strategies (Macedo 2013, 24–25) is necessary. The editors of this volume are hopeful that the projects, ideas, and approaches presented here together embody a philosophy of education that transcends a reliance on the technological qualities of design education today. Through a rigorous immersive pedagogy and ethical professional practice, public interest designers can be poised to decisively address the systemic needs of today’s global society.

Notes

- 1 The editors are indebted to the fine work of the many scholars and affiliated organizations who have pioneered progress on the aligned topics of community engagement, democratic engagement, civic learning, and engaged learning. Please see the Reading List in the *Part 4: Appendix* (pages 315–317) for recommended reading.
- 2 In the *Public Interest Design Practice Guidebook* (Abendroth and Bell 2016), public interest design is defined as “[a] design practice composed of three tenets—democratic decision making through meaningful community engagement, an issue-based approach, and the requirement for design evaluation” (308).
- 3 See *Wisdom from the Field: Public Interest Architecture in Practice* (Feldman et al., 2011) for a description of public interest design in “Appendix 5: Survey Instrument” (112, para 2). See also “Appendix 8: Survey Findings Report” for an expanded definition of public interest design adapted from *Building Community: A New Future for Architecture Education and Practice: A Special Report* (Boyer and Mitgang 1996, 9) which emphasizes “putting creative abilities to use to improve quality of life in communities” (129, para 2). These publications have been pivotal in shaping the discourse around public interest design education today.
- 4 See the panel discussion summary from the Structures for Inclusion 2016 conference session, “Public Interest Design Education Open Forum” moderated by Lisa M. Abendroth and hosted at North Carolina State University College of Design on March 19, 2016. <https://designcorps.org/sfi16-panel-4/>.
- 5 The editors acknowledge the inherent significance and challenges in conducting work with communities as part of the higher education experience. This publication’s editors have made a priority of celebrating the desirable attributes of this pedagogy, many of which follow here. First, the requirement for mutuality of benefits between community partners and participating institutions should serve as a baseline for coproduced projects developed through the lens of “community engagement” (NERCHE 2016). Further, an emphasis on the integrated nature of “democratic purposes and processes” can demonstrate an alignment with publically meaningful and purpose-driven “democratic engagement” that strives to “alleviat[e] public problems through democratic means” (Saltmarsh, Hartley, and Clayton 2009, 6). Fostering long-term relationships that are built upon trust through collective skill- and knowledge-sharing can promote and strengthen community-identified goals. Honing skills in culturally appropriate communication (both visual and verbal) and design facilitation that respects people and place should benefit both students and community partners alike. Last, the power of exercising humility and building empathy cannot be over stated as necessary twenty-first-century design skills.

- 6 See the Carnegie Foundation's definition and stated purpose of community engagement: http://nerche.org/index.php?option=com_content&view=article&id=341&Itemid=92#CEdef.
- 7 Some of the themes included in this publication were inspired during an invited luncheon of over fifteen participants hosted by Design Corps and conducted during the Structures for Inclusion 2015 conference in Detroit on April 12. The meeting provided a forum to explore topics of significance to educators pursuing and/or practicing public interest design and helped establish a space for critical inquiry of these in this publication.

References

- Abendroth, Lisa M., and Bryan Bell, eds. 2016. "Glossary." In *Public Interest Design Practice Guidebook: SEED Methodology, Case Studies, and Critical Issues*, 306–9. New York: Routledge.
- Boyer, Earnest, and Lee Mitgang. 1996. *Building Community: A New Future for Architecture Education and Practice: A Special Report*. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching.
- Feldman, Roberta, Sergio Palleroni, David Perkes, and Bryan Bell. 2011. *Wisdom from the Field: Public Interest Architecture in Practice*. FAIA Latrobe Prize Research Report. Washington, DC: College of Fellows of the American Institute of Architects. Accessed August 23, 2014. https://issuu.com/designcorps/docs/latrobe_prize_research_-_public_int
- Fisher, Thomas. 2008. "Foreword: Public-Interest Architecture: A Needed and Inevitable Change." In *Expanding Architecture: Design as Activism*, edited by Bryan Bell and Katie Wakeford, 8–13. New York: Metropolis Books.
- Macedo, Donaldo. 2013. "Introduction." In *Pedagogy of the Oppressed*, by Paulo Freire, 11–27. New York: Bloomsbury Academic.
- New England Resource Center for Higher Education (NERCHE). 2016. "Carnegie Community Engagement Classification." Accessed October 12, 2016. http://nerche.org/index.php?option=com_content&view=article&id=341&Itemid=92#CEdef.
- Papanek, Victor. 1985. *Design for the Real World: Human Ecology and Social Change*. Chicago: Academy Chicago Publishers.
- Saltmarsh, John, Matthew Hartley, and Patti Clayton. 2009. *Democratic Engagement White Paper*. New England Resource Center for Higher Education. Accessed February 10, 2017. http://repository.upenn.edu/gse_pubs/274.
- Schön, Donald A. 1985. *The Design Studio: An Exploration of Its Traditions and Potentials*. London: RIBA Publications for RIBA Building Industry Trust.
- Shaull, Richard. 2013. "Foreword." In *Pedagogy of the Oppressed*, by Paulo Freire, 29–34. New York: Bloomsbury Academic.

References

Introduction: Public Interest Design Pedagogy

Abendroth, Lisa M., and Bryan Bell, eds. 2016. "Glossary." In *Public Interest Design Practice Guidebook: SEED Methodology, Case Studies, and Critical Issues*, 306-9. New York: Routledge.

Boyer, Earnest, and Lee Mitgang. 1996. *Building Community: A New Future for Architecture Education and Practice: A Special Report*. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching.

Feldman, Roberta, Sergio Palleroni, David Perkes, and Bryan Bell. 2011. *Wisdom from the Field: Public Interest Architecture in Practice*. FAIA Latrobe Prize Research Report. Washington, DC: College of Fellows of the American Institute of Architects. Accessed August 23, 2014. https://issuu.com/designcorps/docs/latrobe_prize_research_-_public_int

Fisher, Thomas. 2008. "Foreword: Public-Interest Architecture: A Needed and Inevitable Change." In *Expanding Architecture: Design as Activism*, edited by Bryan Bell and Katie Wakeford, 8-13. New York: Metropolis Books.

Macedo, Donald. 2013. "Introduction." In *Pedagogy of the Oppressed*, by Paulo Freire, 11-27. New York: Bloomsbury Academic.

New England Resource Center for Higher Education (NERCHE). 2016. "Carnegie Community Engagement Classification." Accessed October 12, 2016. <http://>

Papanek, Victor. 1985. *Design for the Real World: Human Ecology and Social Change*. Chicago: Academy Chicago Publishers.

Saltmarsh, John, Matthew Hartley, and Patti Clayton. 2009. *Democratic Engagement White Paper*. New England Resource Center for Higher Education. Accessed February 10, 2017. http://repository.upenn.edu/gse_pubs/274.

Schön, Donald A. 1985. *The Design Studio: An Exploration of Its Traditions and Potentials*. London: RIBA Publications for RIBA Building Industry Trust.

Shaul, Richard. 2013. "Foreword." In *Pedagogy of the Oppressed*, by Paulo Freire, 29-34. New York: Bloomsbury Academic.

1 1. Whole-Systems Public Interest Design Education: Department of Landscape Architecture, University of Washington

Carpenter, William J. 1997. *Learning by Building, Design, and Construction in Architectural Education*. New York: Van Nostrand Reinhold.

Feld, Shara, Benjamin R. Spencer, and Susan Bolton. 2016. "Improved Fog Collection Using Turf Reinforcement Mats." *Journal of Sustainable Water in the Built Environment* 2 (3): 1-8. doi:10.1061/JSWBAY.0000811.

Hou, Jeffrey. 2011. "Differences Matter: Learning to Design in Partnership with Others." In *Service-Learning in Design and Planning: Educating at the Boundaries*, edited by Tom Angotti, Cheryl Doble, and Paula Horrigan, 55-69. Berkeley, CA: New Village Press.

Hou, Jeffrey. 2014. "Life Before/During/Between/After Service-Learning Studios." In *Community Matters: Service-Learning and Engaged Design and Planning*, edited by Mallika Bose, Paula Horrigan, Cheryl Doble, and Sigmund C. Shipp. London: Earthscan.

Pallasmaa, Juhani. 2012. *The Eyes of the Skin: Architecture and the Senses*. West Sussex, UK: John Wiley and Sons, Ltd.

Sennett, Richard. 2008. *The Craftsman*. New Haven, CT: Yale University Press.

Spencer, Ben, and Susan Bolton. 2016. "Emergent Convergent: Technology and the Informal Urban Communities Initiative." In *Innovations in Landscape Architecture*, edited by Jonathon R. Anderson and Daniel H. Ortega, 205-22. London: Routledge.

Spencer, Ben, Susan Bolton, and Jorge Alarcon. 2014. "The Informal Urban Communities Initiative: Community-Driven Design in the Slums of Lima, Peru." *International Journal of Service Learning in Engineering*, 9 (1): 92-107.

Wagenfeld, A., and Daniel Winterbottom. 2015. *Therapeutic Gardens: Design for Healing Spaces*. Portland, OR: Timber Press.

Winterbottom, Daniel. 2002. "Building as Learning." *Landscape Journal*, 21 (1): 201-13. Winterbottom, Daniel. 2011. "Effecting Change Through Humanitarian Design." In *Service-Learning in Design and Planning: Educating at the*

Boundaries, edited by Tom Angotti, Cheryl Doble, and Paula Horrigan, 189-204. Berkeley, CA: New Village Press.

Winterbottom, Daniel. 2014. "Developing a Safe, Nurturing, and Therapeutic Environment for Families of the Garbage Pickers in Guatemala and for Disabled Children in Bosnia and Herzegovina." In *Greening in the Red Zone: Disaster, Resilience and Community Greening*, edited by Keith G. Tidball and Marianne E. Krasny, 410-37. New York: Springer.

2 2. Educating the Next Generation of Social Innovators: Designmatters at ArtCenter

Abendroth, Lisa M., and Bryan Bell, eds. 2016. *Public Interest Design Practice Guidebook: SEED Methodology, Case Studies, and Critical Issues*. New York: Routledge.

Amatullo, Mariana, Liliana Becerra, and Steven Montgomery. 2011. "Designmatters Case Studies: Design Education Methodologies as a Tool for Social Innovation." VentureWell Open Conference, Washington, DC, March 24-26.

Amatullo, Mariana, and Mark Breitenberg. 2006. "Designmatters at ArtCenter College of Design: Design Advocacy and Global Engagement." Cumulus Working Papers, Nantes, France, July 16.

Amatullo, Mariana, and Penny Herscovitch. 2012. "Perspectives About Design Education for Social Innovation: The Safe Agua Case Study." Cumulus Working Papers, Santiago, Chile, November 25.
www.designmattersatArtCenter.org/

Mulgan, Geoff, Simon Tucker, Rushanara Ali, and Ben Sanders. 2007. *Social Innovation: What It Is, Why It Matters, and How It Can Be Accelerated*. Oxford, UK: Skoll Centre for Social Entrepreneurship.
<http://youngfoundation.org/wp-content/>

Prahalad, C. K., and Stuart L. Hart. 2002. "The Fortune at the Bottom of the Pyramid." *Strategy + Business* 26 (First Quarter). www.strategy-business.com/article/11518?gko=9a4ba.

Schön, Donald A. 1983. *The Reflective Practitioner: How Professionals Think in Action*. New York: Basic Books.

4 4. A Comprehensive Public Interest Design Curriculum: College of Design, North Carolina State University

Boyer, Ernest L., and Lee D. Mitgang. 1996. *Building Community: A New Future for Architecture Education and Practice*. Stanford, CA: Carnegie Foundation for the Advancement of Teaching.

Dewane, David. 2015. "Navigating the Frontiers of Public Interest Design." *Design Intelligence*, December 23. www.di.net/articles/navigating-the-frontiers-of-public-interest-design/.

Feldman, Roberta, Sergio Palleroni, David Perkes, and Bryan Bell. 2011. *Wisdom from the Field: Public Interest Architecture in Practice*. FAIA Latrobe Prize Research Report, Washington, DC: College of Fellows of the American Institute of Architects.

LAF (Landscape Architecture Foundation). 2016. "The New Landscape Declaration."

NC State Design. 2016. "Architecture." NC State University College of Design. Accessed December 21, 2016. <https://design.ncsu.edu/academics/architecture/>.

5 5. Connecting Classrooms and Publics: The University of California, Davis, Center for Design in the Public Interest

Abendroth, Lisa M., and Bryan Bell, eds. 2016. *Public Interest Design Practice Guidebook: SEED Methodology, Case Studies, and Critical Issues*. New York: Routledge.

Bell, Bryan. 2016. "The State of Public Interest Design." In Abendroth and Bell, *PIDPG*, 11-18.

California Department of Motor Vehicles. 2016. "Get a DUI-Lose Your License!" *California Driver Handbook*. Accessed January 7, 2017. www.dmv.ca.gov/web/eng_pdf/dl600.pdf.

Fisher, Thomas. 2016. "Professional Responsibility and Ethics." In Abendroth and Bell, *PIDPG*, 35-44.

Graham, Jesse, Jonathan Haidt, Sena Koleva, Matt Motyl, Ravi Iyer, Sean P. Wojcik, and Peter H. Ditto. 2013. "Moral Foundations Theory: The Pragmatic Validity of Moral Pluralism." *Advances in Experimental Social Psychology* 47: 55-130, January 1.

Haidt, Jonathan, and Craig Joseph. 2007. "The Moral Mind: How Five Sets of Innate Intuitions Guide the Development of Many Culture-Specific Virtues, and Perhaps Even Modules." In *The Innate Mind*, edited by Peter Carruthers, Stephen Laurence, and Stephen Stich, vol. 3, 367-91. New York: Oxford.

Japan National Tourism Organization. 2016. "Radiation in Daily-Life." *Japan Travel Updates After the 3.11 Earthquake*. Accessed July 7, 2016. www.jnto.go.jp/eq/eng/04_recovery.htm.

Office of the University Registrar. 2016. *UC Davis General Catalog: 2016-2017, 2017- 2018*, vol. 48.

Regents of the University of California. 2016. "Mission Statement: Philosophy of Purpose." Accessed October 21, 2016. <http://catalog.ucdavis.edu/mission.html>.

Tufte, Edward R. 2008. *Envisioning Information*. Reprint. Cheshire, CT: Graphics Press.

Verba, Susan. 2016. "Design 159 Syllabus."

Verba, Susan, and Sarah Perrault. 2015. "Design for

Understanding: Creating OpenWorld and Open-Ended Design Experiences for Undergraduates.” IIID Vision Plus 2015 Symposium Papers, Abstracts, and Speaker Biographies, 83-89. Birmingham, UK, September 3-4.
www.iiid.net/downloads/IIID-VisionPlus2015-Proceedings.pdf.

Verba, Susan, and Sarah Tinker Perrault. 2016. “Unbounded: Integrating Real-World Problems into an Undergraduate Information Design Course.” *Information Design Journal* 22 (3): 266-80.

Visocky O’Grady, Jennifer, and Kenneth Visocky O’Grady. 2008. *The Information Design Handbook*. Cincinnati, OH: How Books.

6 6. Design (Education) to Create Meaningful Change: The Design for Social Impact Master's Program at the University of the Arts

Bell, Daniel. 1976. *The Coming of Post-Industrial Society: A Venture in Social Forecasting*. New York: Basic Books.

Buchanan, Richard. 1992. "Wicked Problems in Design Thinking." *Design Issues* 8 (2): 5-21.

Burnette, Charles. 2015. *An Interdisciplinary Graduate Program for Design Education and Research*. Philadelphia, PA. Accessed February 10, 2017. www.academia.

Elkington, John. 1990. *Cannibals with Forks: The Triple Bottom Line of 21st Century Business*. Oxford, UK: Capstone Publishing.

Goleman, Daniel. 2005. *Emotional Intelligence: Why It Can Matter More Than IQ*. New York: Bantam Dell Publishing Group.

Golsby-Smith, Tony. 1996. "Fourth Order Design: A Practical Perspective." *Design Issues*, 12 (1): 5-25. IDEO. 2011. *Human-Centered Design Toolkit: An Open-Source Toolkit to Inspire New Solutions in the Developing World*. Bloomington, IN: AuthorHouse. Sanders, Elizabeth B.-N., and Pieter Jan Stappers. 2013. *Convivial Toolbox: Generative Research for the Front End of Design*. Amsterdam: BIS Publishers. UArts (The University of the Arts). 2016. "Core Values and Mission." Accessed December 20, 2016. www.uarts.edu/about/core-values-mission.

7 7. Collaborating for Change in New Orleans: Small Center for Collaborative Design

Johnson, Cedric G. 2011. "The Urban Precariat, Neoliberalization, and the Soft Power of Humanitarian Design." *Journal of Developing Societies* 27 (3-4): 462.

Perkes, David. 2009. "A Useful Practice." *Journal of Architectural Education*. 62 (4): 64-71.

Pitera, Dan. 2014. "Leading from the Side: Leadership, Civic Engagement and the Built Environment." In *Syncopating the Urban Landscape; More People, More Programs More Geographies*. Detroit Collaborative Design Center, 187-92.

Till, Jeremy. 2005. "The Negotiation of Hope." In *Architecture and Participation*, edited by Peter Blundell-Jones, Doina Petrescu, and Jeremy Till, 25-44. London: Routledge.

8 8. From the Ground Up: Envisioning an MFA in Public Interest Design at Metropolitan State University of Denver

CCMW (Campus Compact of the Mountain West). 2014. "Engaged Campus Award." Accessed January 3, 2017. www.ccmountainwest.org/awards/engaged-campus-award.

MSU Denver. 2010. "Metro State Academic and Student Affairs Subcommittee Meeting Agenda-Revised." May 12. Accessed March 20, 2017. <https://msudenver.edu/admissions/apply/adultstudents/>.

MSU Denver (Metropolitan State University of Denver). 2015. 2015-2020 Strategic Plan Refresh June, 2015. Accessed January 3, 2017. www.msudenver.edu/

MSU Denver. 2017a. "Admissions: Adult Students." Accessed January 3. <https://msudenver.edu/admissions/apply/adultstudents/>.

MSU Denver. 2017b. "Metropolitan State University of Denver Strategic Plan 2020." Accessed January 3. www.msudenver.edu/about/strategicplan2020/.

New England Resource Center for Higher Education (NERCHE). 2016. "Carnegie Community Engagement Classification." Accessed October 12. <http://nerche.org/>

SEED (Social Economic Environmental Design Network). 2017a. "Mission." Accessed February 21, 2017. <https://seednetwork.org/about/mission/>.

SEED (Social Economic Environmental Design Network). 2017b. "SEED Evaluator 4.0." Accessed February 21, 2017. <https://seednetwork.org/seed-evaluator-4-0/>.

Fundamental Skills

Guerino, Paul, Paige M. Harrison, and William J. Sabol. 2011. "Prisoners in 2010." NCJ 236096, December. Accessed March 19, 2013. www.bjs.gov/content/pub/pdf/p10.pdf.

Levin, Simon A. 2009. *The Princeton Guide to Ecology*. Princeton, NJ: Princeton University Press.

Morgan, Chris, and Fionn Stevenson. 2005. *Design for Deconstruction: SEDA Design Guidelines for Scotland: No. 1*. Glasgow: Scottish Ecological Design Association. www.seda.uk.net/assets/files/guides/dfd.pdf.

Pittsburgh Department of City Planning. 2012. "PGHSNAP Raw Census Data by Neighborhood." Accessed June 3, 2015. www.pittsburghpa.gov/dcp/snap/raw_data. 10.3 Exterior view of the community room, studio, and entrance hall of PROJECT RE_ taken from the industrial woodshop and prefabrication area, illustrating the integration of the reconstituted and harvested building material systems employed. Urban Design Build Studio, PROJECT RE_, Pittsburgh, Pennsylvania, 2015. When articulating the ethos of public interest design, practitioners frequently use the phrase "design with, not design for," underscoring the value of designers being invited into partnership by communities. How do design educators support their students in translating this phrase into embodied action? Educators share technical skills, often discrete activities designed to break down interpersonal barriers, and they build consensus and initiate collaboration among project participants. Educators facilitate project-based learning: mutually beneficial partnerships with community groups through which students develop research and technical skills, reflect on public interest design practice in real time, and gain confidence in real-world settings. And educators provide framing for how students might approach their work, invoking the behavior we expect of guests—respect for, and deference to, our hosts—to upend the power dynamic of practitioner-client relationships epitomized in *Dick & Rick: A Visual Primer for Social Impact Design* (Gaspar et al. 2015), where Dick privileges his design knowledge over the lived knowledge of a community. Upending these dynamics and professional narratives is crucial to disrupting assumptions and to breaking down our internal barriers to collaborative practice. In addition to these inherently valuable teaching methods, the Center for Art + Public Life at California College of the Arts (CCA) advocates for opportunities to learn more about ourselves and about what

we bring to working partnerships. At the Center, we help our students to explore by asking: • How might who we are influence our ability to partner and work within a community? 11 Preparing to Design With Megan Clark and Shalini Agrawal Preparing to Design With IMPACT Orientation Megan Clark and Shalini Agrawal

- How might we engage with, and learn about, all of the identities we hold?
- How might our identities intersect with those of our partners and with the unique historical, social, and political realities of a project?

And of ourselves, as educators, we have sought to explore the following:

- How might we develop programming that meets our students where they are?
- How might our educational approach avoid assumptions about students' identities and experiences?
- How might we prevent a similarly static or unidimensional perception of our communities and community partners?

Our Context

The Center for Art + Public Life is an independently run department of CCA in the

San Francisco Bay area. Since its founding in 1998, the Center has worked with over

two thousand alumni and has evolved from an external hub for community-based

practitioners to an internal and external hub that partners CCA students of art, design,

and writing with community organizations dedicated to social good. With this shift,

we have expanded the educational experiences offered to our students as well as

the creative resources offered to our community partners, and we have recognized

the associated need for deep, responsive community-engagement pedagogy. The Center's IMPACT Awards require that interdisciplinary teams of CCA

students develop grant proposals in direct response to a social need identified by

a community local to the project. As a program focused on student-led projects,

IMPACT presents an ideal space to pilot in-depth introspective programming. Teams

apply their critical and creative problem-solving skills and outline actionable next

steps with communities in the San Francisco Bay area, elsewhere in the United

States, and internationally. Once awarded IMPACT funding, teams prepare to

collaborate with community experts and local groups.

IMPACT Orientation

To facilitate students' preparation, we developed the IMPACT Orientation, focusing

on identity literacy, active listening, and navigation of power dynamics. At the

stage when the orientation is offered, teams have begun building a relationship with

their community partners but have not yet begun design or implementation. We

aim to ground the students in their own identities and to empower them to address

challenges with honesty and sensitivity, while building trust and open communication

with one another and with their community partners.

11.1

Spectrum of Spectrums tool, adapted from Saltwater Training's tools. Shreya D. Shah, Saltwater Training

(www.saltwatertraining.org).

IMPACT Orientation begins with the establishment of community agreements that set the tone for a safer growth environment. We then move into an exploration of self using the Spectrum of Spectrums, a tool developed by Shreya Shah of Saltwater Training, which we will focus on for the purposes of this chapter. The Spectrum was first introduced to CCA as part of school-wide conversations organized by a coalition of staff, faculty, and students, including Center staff. The discussion focuses on the diagram (see Figure 11.1). Components of personal identity are set side by side, each with a vertical spectrum of relative power and oppression. The empty bubbles at the right acknowledge the inherent privilege in who defines the list of identity components, which keeps the list interactive and open for discussion. Once we have discussed and edited the Spectrum, students engage in multiple rounds of pair sharing and group debriefs around their individual experiences with both power and oppression. In a setting that—while not neutral—has yet to be complicated by project deadlines and the natural tensions of local context, the Spectrum dialogues offer students a framework for recognizing power dynamics and provide the language for discussing them. The conversations, and the Spectrum itself, thereby open the door for students to collaborate as empathetic, multifaceted humans rather than as unidimensional designers. It is the setting of a new and different expectation, one of radical empathy, as emphasized by Sue Mobley and Stephen Goldsmith's (2016) Design Futures session, "Centering the Human in Human-Centered Design." The IMPACT Orientation builds upon this self-exploration by examining power dynamics through a student-community case study, defining and exploring the

practice of allyship, identifying implicit and explicit communication, practicing active

listening, and, finally, developing a framework for setting and evaluating project

goals. Together, these exercises and discussions provide a response to our initial

question, "How might we develop programming that meets our students where

they are?" At the conclusion of orientation, students draft team charters, in which

they set forth the project description, mission, vision, goals, responsibilities, timeline,

communication plan, and team values.

Learning Objectives and Outcomes

To determine whether the Center has met its learning outcomes for IMPACT

orientation, we refer back to the team charters. We compare the teams' initial

intentions and mindsets as articulated in their charters with their written reflections

during and after fieldwork. These comparisons consistently reflect achievement in

the following learning objectives:

- apply inclusive language and regular reflection on power dynamics and privilege
- employ active listening rather than a team's fixed vision to evolve relationships and projects
- practice new communication tools among teammates and with community partners
- experiment with responsiveness and flexibility

The mission of Team Visible Youth, a group of undergraduate design students,

proved a particularly powerful compass. Over several months, the team established

a mutually exciting partnership with Larkin Street Youth Services, a nonprofit

serving homeless and at-risk youth in San Francisco. In spite of good rapport and

communication, the roadblocks they hit throughout the summer led all to agree to

postpone a built solution. At the final IMPACT presentation, the team was asked,

“Why didn’t you just build something without Larkin Street?” They responded

without hesitation that doing so would have violated their commitment—captured

in their mission statement—to develop a project collaboratively with Larkin

Street’s staff and extended community. That they came to this decision of their

own accord underscores deeply held personal convictions about public interest

design practice.

Further Examples From Academic Peers

The Center acknowledges that the core practices—identity literacy, contextual

grounding, and active listening—have been, and continue to be, tried by professional

12

Democratic Civic Engagement Pedro Pacheco Democratic Civic Engagement

The USAER XXXIV Training

Center for Special Education

Pedro Pacheco

Today more than ever civic engagement finds the appropriate conditions to move

society in the direction that protects the common good and in ways that are

respectful of human rights. Universities across the globe are slowly but consistently

identifying ways to prepare students to create knowledge and find sustainable

solutions to the challenges posed by diverse societal groups through collaborative

partnerships (Kecskes, Joyalle, Elliot, and Sherman 2017).
In this sense, democratic

civic engagement becomes a transformative and intense
process as college

students participate passionately in the co-creation of
knowledge for the purpose of

changing society (Saltmarsh, Hartley, and Clayton 2009;
Boyte and Fretz 2010). As a

consequence of the democratic civic movement, experiential
learning strategies

such as design/build are becoming more widespread within
design schools, not

only to educate design professionals but also to promote an
integrated approach to

education that is place-based, problem-oriented, and
transdisciplinary (Kolb 1984;

Sanoff 2011; Allen 2012; Raisbeck, Mitcheltree, and Pacheco
2013). Design/build was employed in the USAER XXXIV 1
Training Center for Special

Education (UTC) project as the service-learning instrument
in a senior architectural

design studio at the Tecnológico de Monterrey (Monterrey
Tec) 2 to understand

and apply principles of community design, including
participatory decision making

and community building. Service-learning was also used to
illustrate to first-year

architecture students the public nature of design and the
social responsibility of

architects. The UTC facility, located within the Belisario
Dominguez Primary School,

was designed and built by college students and volunteers
for special education

training. At seventy-two square meters, it includes an office, a kitchenette, a

restroom, and a flexible space used as a meeting room and as a classroom. Teachers are trained at the UTC to work with 284 children with mental or physical disabilities within the Escobedo school district using the inclusive model employed in the regular school system. UTC demonstrates the collaborative effort of college students and community members to learn by building. As a result of this project, students were able to achieve the following learning objectives:

- build trusting relationships with diverse stakeholder groups by engaging in formal and informal encounters for learning with UTC users; to do so, students collaborated with potential users in defining and evaluating post-occupancy activities
- facilitate communication and design outcomes through participatory strategies, in which users were viewed as experts
- generate understanding in academic and community-centered endeavors that helps identify meaningful opportunities for action
- interpret the public purpose and realize the impact design can have on underserved groups

Building Relationships of Trust

The UTC project was planned, designed, and built from July 2012 to December 2014 on its host site at the Belisario Dominguez Primary School. From the first day, as the UTC's director explained the facility's needs and expectations to the Monterrey Tec students, it was clear that the project could count on the enthusiastic collaboration of the UTC members, who wanted a dignified place to work but did not have the economic resources to accomplish their goal. In the process of building a trusting partnership, the students and UTC members developed a strong sense of ownership and responsibility that sustained the project over time and led to other projects at the primary school, including a shaded outdoor space, a dining area, and a kitchen. As of July 2016, parents from the school were preparing to build the shaded space. Donaldson and Kozoll (1999) suggest that in the initial stages of collaborative efforts, stakeholders develop social and psychological contracts to guide their work but that formal agreements consolidate these relationships. Collaboration for UTC began as a personal relationship between its director and the design studio professor and was eventually formalized by an institutional agreement. What began as a perceived need developed into the built project that satisfied the space requirements of UTC, fulfilled Monterrey Tec's mission of preparing students to become citizens committed to the sustainable development of their communities and allowed the students to comply with mandatory community work

adopted by Tecnológico de Monterrey (Benavides-Ornelas, Pacheco, and Hernandez 2017). The collaboration succeeded in no small part as a result of this informal-formal process that permitted the stakeholders to develop both a shared vision and clear roles and responsibilities (see Figure 12.1). 12.1 Model of interagency collaboration (Pacheco 2003).

Facilitating Design and Communication

Designing for underserved groups is a challenge in a context where resources are

scarce and the need for appropriate and dignified spaces is great. Fortunately, for

UTC and for many similar projects around the globe, design schools are increasingly

adopting experiential learning as an important pedagogical paradigm (Allen 2012).

Although hands-on education is not new, it is becoming an alternative for practice

among students and young architects seeking meaningful learning experiences. A key component of the UTC case was the mandatory community work,

used from diagnosis to construction. Like other schools within the Monterrey Tec

system, the School of Architecture, Art and Design (EAAD) integrates the citizenship

component across its curriculum to supervise the 480 hours of community work that

students are required to complete as a prerequisite for graduation. Traditionally, the

EAAD has integrated the community work requirement into the design studio, thus

creating a service-learning strategy to help community groups find solutions to spatial

and architectural problems, while at the same time allowing architecture students,

along with students from other disciplines, to develop the corresponding disciplinary

competencies. In this sense, the work done in the design studio is meaningful for

both the students and the beneficiaries because it uses the students' capacities and

the community work mandate as resources for addressing real challenges for real

people. In the case of UTC, an advanced design studio was used from 2012 to 2014

to explore the potential of connecting the curriculum requirements and community

work with the needs and expectations expressed by the community. In the first

phase, during the summer of 2012, students from the University of Melbourne,

Australia, and from Monterrey Tec explored ideas for a master plan that eventually guided the UTC project and other projects at the Belisario Dominguez Primary School in collaboration with parents and teachers. During the second phase, which lasted one year, students developed the architectural design of the building and tested construction techniques using nonconventional materials such as wood pallets, recycled polyurethane, refrigerator doors, and reused glass and doors from the Monterrey Tec campus (see Figure 12.2). In this phase, prototyping was crucial to develop students' sensibility for materials and for the interior atmosphere of the building. In the third phase, during the summer and fall of 2014, the new UTC building was erected according to the technical plans developed by students. In both the second and third phases, students from the architecture school and other disciplines collaborated with parents and teachers from USAER in the exploration of materials, training, and eventual construction of the UTC. Prior to construction, every participant was trained in the use of tools and manipulation of materials. Collaboration was the keystone of the UTC experience, from diagnosis of the situation through design, construction, and celebration. UTC students, their parents, and their teachers were involved at every step of the process, from problem definition through construction. Most students participated for only

one academic period (four months). Those willing to continue did so on a voluntary basis for up to three semesters in a row through the Impulso Urbano program; 3 many did because they had developed a sense of ownership on the project, as expressed by one student: “[We] wanted to see the construction of an idea.” Interaction among stakeholders was accomplished in different scenarios to enable all participants to understand one another’s work environments and to

12.2

Students experimenting with materials in the laboratory.

Impulso Urbano program,

Testing Prototype, Monterrey,

Nuevo León, Mexico, 2012.

allow the Monterrey Tec students to absorb the knowledge and experience of the

stakeholders, both teachers and students. The Monterrey Tec students, for example,

expanded their site investigation to include neighborhood streets and households

of elementary school children. Conversely, UTC teachers and students visited

Monterrey Tec to understand how architecture students work and to be trained

in construction methods. Other opportunities for interaction included searching

for construction materials in the city and eating and working together on-site. In

all instances, Monterrey Tec students were encouraged to reflect with different

stakeholders about the lessons learned and the challenges faced by the group.

The result of reflecting in action was always useful in

finding better solutions to
problems identified at the construction site or to
visualized potential additions to
the project.

Generating Understanding in Academic

and Community-Centered Endeavors

Because of the involvement of indirect users, such as other
students in the school

district, their teachers, and community volunteers, the UTC
experience went beyond

its original goal of providing a sufficient, dignified
space for training special education

teachers. Once the UTC was inaugurated, its director and
other stakeholders saw

the opportunity to formulate a program for strengthening
relationships between

students with disabilities and their parents through
informal citizenship and human

rights courses, a workshop to fabricate a bench and a small
wooden easel that was

later used for a painting class, and other programs.
Teachers from nearby schools have used the UTC facility for
ceremonies

and other after-hours social activities. In addition,
Monterrey Tec's EAAD is slowly

becoming an Engaged Department (Keszckes et al. 2017) by
supporting faculty

involved in community projects. Since 2015 the Department
of Architecture uses

the training center as a case study to raise awareness
among first-year students

about the public purpose of the discipline and the role
that collaboration plays in

addressing social problems in general. Raising awareness is the first of a four-phase

model that Monterrey Tec is implementing to make the mandatory community

work an awakening and transformative experience. The other three phases include

comprehension, action, and transformation and are embedded within the curricula

through the five-year program of all majors. Perhaps the greatest lesson for all participants, including design students, is

learning that our world has become so complex that solving problems now requires

the knowledge and capacities of many people, including different disciplines and

other stakeholders, working toward the common good. UTC has become an important reference for all participants, but mainly for

Monterrey Tec students, who learned basic principles of democratic civic engagement

by designing and building a public facility for special education students and their teachers, one of many underserved groups in society (see Figure 12.3). In the process, the community has been empowered with training in methods that allow them to take greater control of their urban and domestic environments. Connecting people, place, and its problems has provided the ingredients for nonconventional educational methods that allow all participants to become aware of the realities in our society, while gaining the disciplinary capacities and methodologies to address the wicked problems that need attention (see Figure 12.4). Finally, the USAER XXXIV Training Center has become a success story in part due to the commitment of all stakeholders involved, but mainly due to the assumed responsibilities of beneficiaries and the support from an engaging Department of Architecture that recognize the pedagogical strategy used in the project. At the same time, the UTC represents a challenge for both the academic community and the institution as they explore ways of consolidating the pedagogical strategy.

12.3

Children with special needs performing a play in collaboration with students from the school district.

Impulso Urbano program,

USAER XXXIV Training

Center for Special Education,

Escobedo, Nuevo León,

Mexico, 2014.

12.4

The UTC building. USAER

XXXIV Training Center for

Special Education, Escobedo,

Nuevo León, Mexico, 2014.

Notes

1 Unidad de Servicio de Apoyo a la Educación Regular (USAER) is a government agency that coordinates and trains special education teachers to help children with special needs (disabled and high performing children) within the traditional classrooms. There are 237 USAER units in the state of Nuevo León to support 39,000 students with special needs (physical, developmental, behavioral/emotional and sensory impaired).

2 Monterrey Tec is a private university with twenty-six campuses in different states of Mexico. The university has a population of 89,641 students of which 26,114 are high school students, 55,565 are bachelor level, and 7,962 are graduate students.

3 Impulso Urbano is a nonprofit organization that partners with families and communities to improve their housing and

community conditions through self-help practices and voluntary work. The program is coordinated through the Department of Architecture within the School of Architecture, Art and Design at Monterrey Tec and works collaboratively with family and community members, social service students, and faculty to design/build housing and community projects. Impulso Urbano is a platform to explore alternative ways to use and reuse resources in the search for a better-built environment in which trash becomes treasure for most projects.

Allen, Stan. 2012. "The Future That Is Now: Architecture Education in North America Over Two Decades of Rapid Social and Technological Change." *Places Journal*, March. Accessed July 21, 2016. <https://placesjournal.org/article/the-future-that-is-now/>.

Benavides-Ornelas, Ernesto, M. F. Pacheco, and Brianda Hernandez Cavalcanti. 2017. "Brigadas Comunitarias in Queretaro Mexico." ed: Hoyt, Lorlene. In *Regional Perspectives on Learning by Doing: Stories from Engaged Universities around the World*, Project MUSE. East Lansing: Michigan State University Press, 2017: 21-36.

Boyte, Harry C., and Erick Fretz. 2010. "Civic Professionalism." *Journal of Higher Education Outreach and Engagement*, 14 (2): 67-90.

Donaldson, Joe F., and Charles E. Kozoll. 1999. *Collaborative Program Planning: Principles, Practices, and Strategies*. Malabar, FL: Krieger Publishing Company.

Kecskes, Kevin, Jennifer Joyalle, Erin Elliot, and Jacob D.B. Sherman. 2017. "Sustainability of Our Planet and All Species as the Organizing Principle for SLCE." *Michigan Journal of Community Service Learning*, Spring 2017: 159-164. Kolb, David. 1984. *Experiential Learning: Experience as the Source of Learning and Development*. Englewood Cliffs, NJ: Prentice-Hall. Pacheco, Pedro. 2003. "Partnering Globally: Connecting People, Places, and Ideas for Sustainable Development." Seventh International Conference on Technology, Policy, and Innovation, Monterrey, Mexico, June 10-13. Raisbeck, Peter, Heather Mitcheltree, and Pedro Pacheco. 2013. "(RE) Thinking Architectural Design Pedagogy." Paper presented at the Reclaim + Remake Symposium, Washington, DC, April 11-13. Saltmarsh, John, Matthew Hartley, and Patti Clayton. 2009. *Democratic Engagement White Paper*. Boston, MA: New England Resource Center for Higher Education. Sanoff, Henry. 2011. "Multiple Views of Participatory Design." *Focus* 8 (1):

Article 7.

Intercultural Competencies

Brown, Stuart. 2009. *Play: How It Shapes the Brain, Opens the Imagination, and Invigorates the Soul*. London: Penguin Group.

Dweck, Carol. 2006. *Mindset: The New Psychology of Success*. New York: Ballantine Books.

Presencing Institute. 2016. "Case Clinic." Accessed August 14, 2016. <https://uschool.presencing.com/tool/case-clinic>.

Scharmer, Otto. 2009. *Theory U: Learning from the Future as It Emerges*. Oakland, CA: Berrett-Koehler.

Zander, Benjamin. 2006. "Gurus with Benjamin Zander." Teachers TV video, 14:01, recorded July 10. Accessed August 14, 2016. <http://archive.teachfind.com/ttv/www.teachers.tv/videos/benjamin-zander.html>. 16 Addressing Air Pollution Impacts on Senior Citizens in Beijing, China Deland Chan Addressing Air Pollution Impacts The International Urbanization Seminar Deland Chan China has experienced rapid urbanization and economic growth since 1978, resulting in reduced air quality and growing concerns about air pollution. In Beijing, fine particulate matter concentrations at times exceed World Health Organization safety guidelines (He et al. 2001). Students in the International Urbanization Seminar (IUS) 1 at Stanford University examined air pollution and its impacts on senior citizens in Beijing as a critical question of urban sustainability. Working in a multinational, interdisciplinary team, American and Chinese students collaborated with Clean Air Asia, an international nongovernmental organization (NGO) that promotes better air quality in cities across Asia through technical assistance, to develop public campaign materials targeting Beijing's older adult populations. Over four months, the team researched scientific literature on air pollution impacts, identified barriers and opportunities, translated technical knowledge into public campaign materials, and tested these materials with senior citizens. Through this course, students learned to work across cultures and disciplines to apply human-centered design and advance sustainability approaches rooted in cultural humility and respectful collaboration with local communities. *Toward an Inclusive Urban Future* Two-thirds of humanity will be living in cities by 2050, elevating the need for a sustainable and equitable urban future for all (United Nations 2014). Recognizing

that cities are complex and extend beyond the ability of a single discipline to

tackle their challenges, the author co-founded the Stanford Human Cities Initiative

(HCI) to nurture a pipeline of leaders who understand cities to be responsive to

diverse human communities. 2 Through education and research, the HCI uses design

thinking to envision an inclusive human-centered urban future. Several courses are offered under the HCI that are open to undergraduate

and graduate students from across disciplines at Stanford. Courses such as the IUS

are offered for academic credit and count toward degree requirements. The author

developed and teaches the course along with a trans-Pacific faculty team from the

Program on Urban Studies at Stanford University and the Department of Construction

Management and Information Art and Design at Tsinghua University in Beijing, China. 3 Initiated in 2014, the IUS focuses on design thinking and fieldwork strategies

for students from all disciplines to apply creative problem-solving approaches to urban

sustainability. It is structured around three urban labs that guide students through

human-centered design, empathy interviews, user observation, and prototype

testing. This chapter refers to the Clean Air Campaign undertaken by IUS students as

one of three projects in fall 2015.

Seminar Structure

The IUS consists of three phases: a two-week fieldwork

studio in Beijing, a ten-week

course involving remote collaboration, and a capstone experience at the Human

Cities Expo held at Stanford University at the conclusion of the course. The course sequence begins with Stanford students traveling to Beijing for a

two-week studio. They participate in daily seminars with Tsinghua University students,

visit local NGOs and sustainability organizations, and engage in immersive activities

that allow them to understand the scale and history of Beijing (see Figure 16.1).

The studio emphasizes fieldwork where students are divided into multinational,

interdisciplinary teams to meet with community partners and engage in site visits. After the studio, Stanford students return to the United States and continue

with a ten-week course during the fall quarter. Students meet twice a week in class

to discuss comparative United States-China sustainability issues and participate in a

weekly joint teleconference session with their Tsinghua counterparts. During these

sessions, students engage with faculty and invited guest experts from both sides of

the Pacific and break out into small group discussions. Students are required to work

outside the class on project development, guided by assignments focused on urban

observation and prototyping in the city. The course culminates with Tsinghua faculty and students traveling to Stanford

to participate in the annual Human Cities Expo (see Figure 16.2). The expo serves as

a daylong celebration of interdisciplinary perspectives and strategies for advancing

human-centered cities. The expo features interactive exhibits, class presentations,

and keynote talks from sustainability scholars and practitioners.

16.1

China Director of Clean

Air Asia presents the

organization's work and

meets the students in the

International Urbanization

Seminar in Beijing, China,

2015. Photo: Deland Chan.

16.2

Students in the International

Urbanization Seminar

create interactive exhibits

and engage with audience

members at the Human

Cities Expo as a capstone

experience. International

Urbanization Seminar,

Stanford, California, 2015.

Photo: Adriana Baird. Learning Objectives and Outcomes:
Clean Air Campaign The Clean Air Campaign team consisted of six Tsinghua students and five Stanford students from the fields of environmental systems engineering, construction management, and service design. They partnered with Clean

Air Asia to develop a scientifically based educational campaign to reach senior citizens, who are

disproportionately affected by air pollution impacts in Beijing. By engaging in this

work, students achieved the following learning objectives:

- comprehend scientific knowledge
- analyze a real-life problem
- synthesize field research into effective ways of addressing air pollution impacts on seniors

Students began the project by researching the health impacts of air pollution on senior

populations and effective methods of protection that an individual could take, such

as purchasing indoor air purifiers, wearing a respirator mask, or reducing exposure.

Students reviewed existing scientific research, interviewed subject experts, and

summarized current practices in a technical report. After the initial literature review, students embarked on exploratory fieldwork to

understand the motivations of the senior population. This led to unexpected findings;

for example, students discovered that seniors did not initially express concern for

their own health but were very concerned about the health of their grandchildren.

In turn, the team realized that they could attract the attention of senior citizens by

targeting educational materials that describe health impacts on their grandchildren

and suggest protections that would benefit the entire family. Following this discovery, the team analyzed and distilled this knowledge

into prototypes of public campaign materials to educate senior citizens about the

hazards of air pollution and available methods of self-protective measures. Tsinghua

students then tested these flyers at a Beijing senior center (see Figure 16.3) to see

if the message targeting the senior citizens' of responsibility as caretakers of their

Lessons Learned

The next generation of global leaders must collaborate across cultures and disciplines

to address complex urbanization challenges (Steiner and Posch 2006). The Stanford

HCI nurtures this pipeline by offering project-based courses such as the IUS and

opportunities to partner with stakeholders on real-world problems. The Clean Air Campaign supports the educational benefits of students

applying human-centered design to analyze the needs of local stakeholders and

devise culturally sensitive approaches. While students sought to work with humility

and respect local expertise, the course also emphasized project deliverables that

targeted individual actions, rather than broader advocacy for the public or private

sectors to regulate air pollution. Future iterations of the course would need to address

the delicate balance of working in a foreign country in regard to politically sensitive

topics and maintaining collaborative relationships, while ultimately ensuring that the

project is sustainable and impactful.

Notes

1 The International Urbanization Seminar is an interdisciplinary course offered at Stanford University through the Program on Urban Studies as Urban Studies 145 and cross-listed in other departments as Civil and Environmental Engineering 126, Earth Systems 138, and International Policy Studies 274.

2 Based in the Program on Urban Studies at Stanford University, the Human Cities Initiative takes a whole-systems approach to the research and practice of sustainable cities. The initiative identifies urbanization challenges at different stages of development and supports human-centered technological, policy, and design strategies that address those challenges. It develops and practices ethical approaches, using frameworks that are inclusive (for many) and participatory (by many) and striving to benefit diverse human communities. For more information, see www.humancities.org.

3 The trans-Pacific faculty team included Kevin Hsu (Program on Urban Studies, Stanford University), Nan Li (Construction Management, Tsinghua University), and Zhiyong Fu (Information Art and Design, Tsinghua University).

Engaging the Field Experience

18

iZindaba Zokudla

(Conversations About Food) Angus Donald Campbell and Naude´MalaniZindaba Zokudla (Conversations About Food)

Innovation in the Soweto

Food System

Angus Donald Campbell and Naude´Malan

iZindaba Zokudla (Conversations About Food): Innovation in the Soweto Food System 1

is an interdisciplinary research project initiated by the departments of Development

Studies and Industrial Design at the University of Johannesburg (UJ), South Africa.

The project aims to create a more sustainable food system in Johannesburg

through urban agriculture. In 2013, iZindaba Zokudla conducted a series of public

multi-stakeholder engagement (Dubbeling, de Zeeuw, and van Veenhuizen 2010)

sessions to develop a strategic plan for urban agriculture in Soweto. 2 Appropriate

technology was identified as a key requirement for sustainable food-systems change. In response, an interdisciplinary service-learning (Jacoby 2015) course was

developed in 2014 to support students and urban farmers in designing appropriate

technology for marginalized and resource-poor urban farms. The course, Urban

Agriculture and Food Systems Change, was offered to Bachelor of Technology

Industrial Design students as a component of their Design

Theory 4 and Product

Design 4 modules and to Bachelor of Arts Honours
Development Studies students

in their Participation and Institutional Development
module. Urban farmers located

at three educational centers in Soweto were identified to
take part in the design

process. For each site, an interdisciplinary team was
assembled that consisted

of one industrial design student, between four and seven
development studies

students, and between three and five local farmers. The
service-learning course was offered to the students with
the following

learning objectives:

- identify opportunities for technological design through processes of personal immersion and engagement with community partners
- design appropriate technology for resource-poor contexts through collaborative design and social science methods
- critically evaluate the impact of relevant design processes and outcomes

Methodology The 2014 service-learning course was developed as a direct result of the iZindaba Zokudla multi-stakeholder engagement sessions (see Figure 18.1) (Dubbeling, de Zeeuw, and van Veenhuizen 2010), which began in 2013. The sessions continued in 2014 in conjunction with the service-learning course, resulting in increased articulation and interaction in the complex collective-action project. Broad participation democratized opportunities for developing and refining urban-farm technology, contextualizing and socializing it in the process. Inherent in this methodology was an acknowledgment that technology is part of a local sociotechnical system (Latour 2005), which includes social capital among actors (Malan 2015a), local resources such as land, and city policies (Malan 2015b). This acknowledgment was important to encourage appropriate technological outcomes from the service-learning course (Smillie 2000). The specific methods used within the service-learning course drew on participatory action research and human-centred design (Campbell 2013; Hussain, Sanders, and Seinert 2010). A step-by-step methodological guide was provided to the students but was sufficiently flexible to

encourage improvisation. This methodological guide consisted of three distinct phases: (1) immersion in the lifeworld of the farmers (Brand and Campbell 2014; Theron, Wetmore, and Malan 2016); (2) active engagement with the farmers; and (3) continual reflection on the process (Malan and Campbell 2014).

18.1

iZindaba Zokudla multi

stakeholder engagement

session at the UJ Soweto

campus. Naude Malan and

Angus D. Campbell, iZindaba

Zokudla, Johannesburg, South

Africa, 2013. Immersion was encouraged through a range of field visits and theoretical

lectures. Engagement was facilitated through different design media, such

as drawings, clay, cardboard models, and toys, to enable effective three-way

communication between the designers, social scientists, and farmers. Reflection

was undertaken using private online student blogs. In each team, the industrial

design students were required to focus on the design of the technology, and the

development studies students took up roles as team managers, process monitors,

and asset and stakeholder mappers.

Learning and Technological Outcomes

Participatory methods enabled students to observe and engage with farmers on

each of the sites in order to identify appropriate designs.

The process resulted in

three prototype technologies over a period of fourteen weeks of teaching time and

biweekly field trips to farming sites, farmers' markets, local farming cooperatives, or

iZindaba Zokudla multi-stakeholder engagement sessions. The prototypes served as

the industrial design students' major project outcome for the semester. The students

documented the design process in their blogs, which were integrated with their

fieldwork and design development into a final mini-dissertation. The development

studies students were required to write four assignments: a contextualization of the

current food system in Soweto, their own private reflective blog, a report on their

participatory process, and an evaluation of the outcomes of the project. The three prototype technologies that were realized surpassed all expectations,

resulting in the university's Technology Transfer Office provisionally patenting them

after the course. They included a self-watering seedling growing system (see

Figure 18.2), an off-grid food storage and cooling system (see Figures 18.3 and

18.4), and an off-grid water pump. The seedling growing system was exhibited

internationally and included in the publication *Design to Feed the World* (Di Lucchio

and Imbesi 2015, 144, 153-4). The off-grid food storage and cooling system has been

further validated by an external engineering company, Resolution Circle, to be batch

manufactured. This process still continues but is not open to participating farmers

to test its appropriateness effectively. Therefore, the water pump was consciously

made more accessible. It was documented in an open source manual, 3 which used

readily available plumbing components for do-it-yourself manufacture by urban

farmers. The manual was printed and disseminated to 150 urban farmers in two of

the iZindaba Zokudla engagement sessions and has thus far been viewed seventy

times and downloaded thirteen times (Jacobsz, Campbell, and Malan 2014). The fourteen private student blogs documented the design research process

and illustrated how design and societal considerations can be built into technology

development. On analysis, it was clear that a methodological structure with defined

disciplinary outputs succeeded in meeting the intended learning objectives of the course.

Apart from limited interpersonal conflict, students and farmers collaborated amicably.

18.2

Seedling growing system

concept discussion at

Setlakalana Molepo Adult

Education Centre, Jomari

Budricks, Angus D. Campbell,

and Naud e'Malan, Take

Root Seedling Growing

System for iZindaba Zokudla,

Johannesburg, South Africa,

2014.

18.3

Food-storage prototype

evaluation with urban farmers

from Siyazenzela. Natalia

Tofas, Angus D. Campbell,

and Naud e'Malan, Umlimi

Urban Food Storage Unit

for iZindaba Zokudla,

Johannesburg, South Africa,

2014. The service-learning aspect of the course led to increased diversity within the student and farmer teams in terms of culture and social class. This was important to encourage appropriate and relevant knowledge outcomes in the postcolonial and postapartheid South African context (Mbembe 2015). Both student groups benefited from learning from each other through collaboration, although depending on team dynamics, some of the development studies students felt that the practical design of the physical technology overshadowed their written theoretical outputs. This conflict required coordination by the lecturers to help bridge the two disciplines.

18.4

The evaporative cooled food storage system accommodates the post-harvest activities of food packing, transportation,

and display. Natalia Tofas, Angus D. Campbell, and Naude'Malan, Umlimi Urban Food Storage Unit for iZindaba Zokudla,

Johannesburg, South Africa, 2014. Real-world learning, with the associated complexity involved in the

interactions between multiple actors, requires sufficient

time. The service-learning

course somewhat underestimated these time requirements. Even with these

shortcomings, the course benefited both the urban farmers, who received more

appropriate technology, and the students, who experienced real-world embedding of

their own learning—resulting in highly appropriate knowledge outcomes for the next

generation of South African citizens. 4

Notes

1 For more information, see www.designsocietydevelopment.org/project/izin-daba-zokudla/ and www.facebook.com/izindabazokudla/.

Latour, Bruno. 2005. *Reassembling the Social: An Introduction to Actor-Network Theory*. Oxford, UK: Oxford University Press.

Malan, Naudé. 2015a. "Design and Social Innovation for Systemic Change: Creating Social Capital for a Farmers' Market." In *The Virtuous Circle: Design Culture and Experimentation*, edited by Luisa Collina, Laura Galluzzo, and Anna Meroni, 965-78. Milan, Italy: McGraw-Hill Education.

Malan, Naudé. 2015b. "Urban Farmers and Urban Agriculture in Johannesburg: Responding to the Food Resilience Strategy." *Agrekon* 54 (2): 51-75.

Malan, Naudé, and Angus Donald Campbell. 2014. "Design, Social Change, and Development: A Social Methodology." In *Design with the Other 90%: Cumulus Johannesburg Conference Proceedings*, edited by Amanda Breytenbach et al., 94-101. Johannesburg, South Africa: Cumulus Johannesburg.

Mbembe, Achille. 2015. "Decolonizing Knowledge and the Question of the Archive." *Africa Is a Country*. <https://africaisacountry.atavist.com/decolonizing-knowledge-and-the-question-of-the-archive>.

Smillie, Ian. 2000. *Mastering the Machine Revisited: Poverty, Aid, and Technology*. Rugby, UK: Practical Action

Publishing.

Theron, Francois, Stephen Wetmore, and Naudé Malan. 2016. "Exploring Action Research Methodology: Practical Options for Grassroots Development Research." In *Development, Change, and the Change Agent: Facilitation at Grassroots*, edited by Francois Theron and Nthuthuko Mchunu, 317-41. Hatfield, South Africa: Van Schaik Publishers. A large river and its eight subsidiaries run through the city of Santiago, Dominican Republic. These urban streams used to be places for recreation, fishing, and even bathing. Santiago's population has grown in the past fifty years, turning some of these waterways into areas of concentrated poverty with dangerous living conditions. The city also faces serious risk of natural disaster from hurricanes and tropical storms. Low-income communities are often most vulnerable during severe rainfall events, so a US Fulbright Program research project sought to better integrate those communities into the city's disaster-mitigation efforts. This ten-month project, completed at Pontificia Universidad Católica Madre y Maestra (PUCMM), took an interdisciplinary approach to environmental remediation, flood mitigation, and public participation in postdisaster rebuilding. On November 20, 2012, a torrential downpour hit the city of Santiago, killing three people in a barrio called Yagüita de Pastor (Ponce 2012). Among the deceased was a three-year-old girl who fell in a stream while crossing a makeshift bridge. A young community leader who attempted to save the child also died. The mayor of Santiago held a press conference, stating that he would move the affected families to a safe place and restore the stream to its original state (CDN Channel 37 2012). This never happened. So, in 2016 students from PUCMM's School of Architecture partnered with the US Fulbright program and PUCMM's Center for Urban and Regional Studies (CEUR) to develop a design proposal to bring the community one step closer to recovery. In this case, urban design became a strategy to advocate for a barrio that had been forgotten by local authorities. Once called "Santiago's campus" because of its public outreach programs, PUCMM had since shifted its focus to building private partnerships. The research 19 Building Partnerships and Awareness Brian Gaudio Building Partnerships and Awareness Healing an Urban Stream Brian Gaudio

project, in a small way, attempted to renew the idea that PUCMM and its students

can contribute meaningfully to their city. To graduate from

PUCMM, all architecture

students must complete two 180-hour internships. The six students who participated

on the research team each fulfilled one of the required internships. Student learning objectives addressed the following:

- synthesize qualitative and quantitative data in field research activities
- understand how to collaborate effectively with community partners
- position design as a tool to advocate for those with limited voices

The project was carried out in two phases, a research phase and a design phase,

with the goal of integrating the affected community into the city's environmental

resiliency efforts.

Research Phase

The initial research phase began by creating a basemap of the neighborhood.

Students partnered with the Dominican chapter of Habitat for Humanity to facilitate

a participatory mapping exercise with thirty residents, who identified businesses,

churches, educational facilities, and so on. Students synthesized this information,

field-verifying locations during site visits. After establishing the basemap, the interns

formed two teams: one investigating qualitative sociocultural issues and the other

quantitative environmental issues. The sociocultural team investigated the barrio's history and partnered with

neighborhood teens from the community nonprofit Acción

Callejera to conduct interviews

with residents. Acción Callejera, which specializes in youth development programs, has

worked in the community for over ten years and has a large facility in the barrio. The

interviews compared past and present Yagüita, focusing on four important spaces: the

park, the stream, the community center, and the school. The teens and architecture

students co-created questions, then surveyed twenty-seven residents. This information

was translated into two morphological maps: one detailing sectors and land uses in the

barrio, the other highlighting a visual history of development (see Figure 19.1). Through the sociocultural team's research, they learned that Yagüita originated

as a repository for people who had been displaced by city infrastructure projects.

Yagüita was established in 1950 when Rafael Trujillo, the country's dictator at the

time, constructed a monument in downtown Santiago. The thirty families who lived

on the site of the future monument were moved to a vacant hillside across the river.

By 1960, about 190 families lived in the barrio, and by the 1980s, the population

had reached ten thousand (CEUR et al. 1993). According to Juan Parache, Director

of Land Use for the City of Santiago, most of the new development occurred in

close proximity to the stream despite it being illegal to live within thirty meters of

the waterway. Today Yagüita has approximately twenty thousand people. Many of

19.1

Morphological maps. Brian Gaudio and research team, Healing an Urban Stream, Santiago, Dominican Republic, 2015. the newer streets are too small for a garbage truck to pass, and the city has yet to connect a sewage line. Thus, the stream is a repository for waste. The environmental team tested water quality in the stream and estimated the number of families living in flood and mudslide zones. They referenced the work done by Fundación Dominicana Para la Gestión de Riesgos (FUNDOGER), the city's disaster and risk assessment group. In terms of environmental degradation, FUNDOGER reports that 31 percent of residents living near the stream are served by a garbage truck, while 69 percent use the stream as a dump, and sewage from 49 percent of households flows directly into the water (Peña 2012). To measure how poor the water quality was, students collected samples from four points along the stream, analyzing them for pH, dissolved oxygen, turbidity, and conductivity. They also brought samples to the local water authority for analysis. Water in the stream was at "code red" levels due to the dangerously high levels of fecal coliform and low levels of dissolved oxygen. At these levels, residents should refrain from coming into contact with the water. Design Phase Responsibility for the stream's putrid condition falls equally on the shoulders of city government and residents. Infrastructure alone cannot improve the stream's health; basic environmental education for residents is as important as any physical

19.2

Site photos. Brian Gaudio, Healing an Urban Stream, Santiago, Dominican Republic, 2015.

changes to the stream. At the macro scale, the proposed design outlined 2,200

meters of riparian restoration and erosion control to mitigate flooding and enhance

water quality. A microcollection system for trash pickup was designated for areas

where roads are too small for garbage trucks. Local mototaxis would serve as

subcontractors, collecting water cooler-sized waste bins from individual homes

and transporting them to trash facilities stationed on the existing garbage route.

Pedestrian bridges located at high points along the stream would improve evacuation

routes and increase connectivity, while public “soft spaces” along the stream would

provide recreation and prevent future residential development in flood-prone areas. One of those public “soft spaces” was proposed on the site of the collapsed

bridge. Today, a bench and a large shade tree sit on the south side of the stream,

while three houses remain disconnected on the north side (see Figure 19.2).

Dominican Habitat for Humanity met with the three families who live on the north

side of the stream and discussed relocating and building new housing for them. The

proposal recommends that the land where those houses sit be transformed into a

pilot park (see Figure 19.3). The proposed park’s features were derived during a participatory design

exercise, in which residents delineated activities and programming they would like

to see in the space. The south side of the stream was recommended to become

an urban “parklet,” with built-in seating for playing dominoes, a patio for barbecues

and celebrations, and porous ground cover to reduce runoff. A pedestrian bridge

would take visitors across the stream into the approximately twelve-by-fifty-meter

19.3

Streamside park and urban parklet. Brian Gaudio, Healing an

Urban Stream, Santiago, Dominican Republic, 2015. park. The park would have three distinct spaces: a shaded sitting area, a covered community meeting space, and a small field for unstructured play, all connected by an elevated walkway. Terraced gabion walls would stabilize the soil, and relief channels and berms would offer flood protection. Trees and riparian plants, such as the royal poinciana, would provide shade and help lower the water temperature. Results These plans were presented to the affected community, Acción Callejera, FUNDOGER, Dominican Habitat for Humanity, the Rockefeller Foundation's 100 Resilient Cities initiative, and students and faculty of PUCMM's architecture school. The design proposal has not been implemented, and the affected families still live in the line of disaster. The project failed to result in structural changes, but it did build awareness. One architect from Santiago is using the project as a case study for a resiliency plan the city is creating with the US Agency for International Development. Also, one of the six architecture interns designed housing for the families who are still living along the floodplain as her senior thesis. In 2017, Acción Callejera and a team from the University of Florida proposed to work in Yagüita on an environmental education program and a microcollection system. The outcome of this proposed project is unknown. In the case of postdisaster rebuilding, understanding a place's history, development, and future aspirations can only strengthen the quality of design. When

engaging the field experience, it is important to build partnerships with organizations

that have already been working on and will continue to work on the issues that

the project seeks to address. Listening to residents, analyzing the situation in

multidisciplinary fashion, and cultivating the right partnerships can lead to a quality

design solution; however, execution of such a design solution may require more

long-term commitment and financial resources.

Cadena de Noticias Channel 37. 2012. "Sepultan Niña Murió Ahogada en Cañada Hoyo de Elías" (video). Recorded November 21, 2012. www.diariode3.com/sepultan-nina-murio-ahogada-en-canada-hoyo-de-elias/.

CEUR, PUCMM, Programa de las Naciones Unidas para el Desarrollo, and Ayuntamiento de Santiago, eds. 1993. Proyecto Manejo Ambiental Urbano "Carpeta de Proyectos, Estrategia Barrio Sano."

Peña, Luis. 2012. Plan Comunitario de Gestión de Riesgos. Santiago, Dominican Republic: FUNDOGER.

Ponce, Miguel. 2012. "Inundaciones Dejan Cuatro Muertos y Daños a Viviendas." El Caribe, November 20. www.elcaribe.com.do/2012/11/20/inundaciones-dejan-cuatro-muertos-danos-viviendas. The Ada Louise Huxtable Fellowship at the Boston Architectural College (BAC) promotes design leadership, civic engagement, and service learning across design disciplines. A competitive and selective honors program, the fellowship resides within the BAC's Gateway Initiative and is funded with support from OneWorld Boston and the Cummings Foundation. As an educational initiative, the Huxtable Fellowship has the following aims: • mobilize students who have demonstrated an interest in design and community engagement • facilitate academic and community partnerships, supported by local municipal, nonprofit, and professional organizations • sharpen the pedagogies of applied learning and refine communication and collaboration skills in the context of public interest design projects • develop student leaders • encourage the transfer of skills and experiences through vertical, peer-to-peer mentoring As an initiative rooted in public interest design and civic engagement, the fellowship reinforces the BAC's commitment to applied learning through collaborative partnerships with Boston's Community Design Resource Center (CDRC) and affiliated nonprofit and community organizations. At its core, the Huxtable Fellowship emphasizes design's utility to foster a community's capacity for meaningful change. The current cohort of diverse, advanced students in both undergraduate and graduate 20 Advancing Resiliency Benjamin Peterson Advancing Resiliency The Huxtable Fellowship in Civic Engagement and Service Learning Benjamin Peterson

degree programs in architecture developed a program of community-supported

outreach and advocacy related to sea level rise and climate change in East Boston.

Advancing Resiliency in East Boston

With a population of over forty thousand densely packed, tightly knit residents, East

Boston is uniquely situated to incur the predicted consequences of coastal flooding

associated with climate change and sea level rise. The neighborhood is a transport

and infrastructure hub, and, as such, agency-based planners have responded

to these alarming predictions with the intent to protect city assets (ULI 2015, 9).

However, the voices and stories of East Boston residents—long-term dwellers in a

classified environmental justice community—have often been excluded from top

down planning agendas of larger, louder stakeholders (Newman et al. 2013, 9). In partnership with East Boston's Neighborhood of Affordable Housing

(NOAH) and the CDRC, the Huxtable Fellows have sought to amplify these often

unheard stories, developing tactics to empower residents to take action and to

devise equitable resolutions to their community's specific vulnerabilities.

Learning by Doing: Strategies in Action

To ensure that neighborhood residents have a voice in shaping solutions to their self

identified risks, the Huxtable Fellows have addressed multiple learning objectives:

- identify challenges and verify opportunities through quantitative geospatial research and qualitative ethnographic fieldwork
- provide a foundation for communicating the consequences of sea level rise
- design materials that demystify climate change

- create social cohesion and community consensus through the dissemination of research in public forums

Through these efforts, the fellows uncovered how collaborative planning, focused

on replicable and targeted solutions, foregrounds the issue of sea level rise in two

ways: as a shared ecological concern and as the impetus for the residents of East

Boston to become more resilient collectively.

Design Research: Data as Context

To become trusted allies in community-supported planning efforts, the Huxtable Fellows

have oscillated between the roles of the empiricist, data-driven design investigator and

the empathetic design listener. East Boston presents a complex and diverse array of conditions that prohibit simplistic design resolutions. As the Huxtable Fellows pursued their efforts, they zoomed in and out of scales, from the macro level of regional ecological, economic, and demographic data to the very micro level of an individual homeowner's dreams and desires. Approaching these complexities as systems has allowed the fellows to recognize patterns, to isolate and synthesize parameters for design prioritization, and to develop tactical and effective approaches to design action curated into accessible, community-vetted, and verified design recommendations. The fellows began their research in the syntax of percentages, quantities, and geospatial data sets. Confidently, they recited the "facts" to their peers: "In East Boston, the median family income is 58 percent of the statewide median." "Fiftyfive percent of East Boston residents do not speak English as their native language." "By 2050, 35 percent of the housing stock in Jeffries Point will be susceptible to flooding." And they visualized this information as articulate-if distant-infographics, maps, and diagrams (see Figure 20.1). However, while the fellows were canvassing the neighborhoods, a resident in a topographically low street pointed to tattered cardboard covering his gradelevel basement windows and stated that at high tides today, he can pick seashells

After the Huxtable Fellows canvassed East Boston and verified initial findings through in situ meetings with homeowners, they

distilled information into diagrams illustrating shared vulnerabilities. Boston Architectural College Huxtable Fellows (Annika

Nilsson Ripps, Andres Rincon, David Morgan, Mehran Jahedi, Anna Mezheritskaya, Christine Banister), Huxtable Fellowship in

Civic Engagement and Service Learning, East Boston, Massachusetts, 2015.

out of his dirt-covered basement floor. This encounter immediately humanized

the quantitative metrics, and the fellows recognized the need to collect stories.

The students used the generated maps, diagrams, and data sets as foundational

transcripts for conversations; the quantitative research was enriched by the more

qualitative, ethnographic, and narrative data of the social fabric of East Boston. The

residents' recollections of storm events, the tangible evidence of prior damage,

and the palpable efforts of continued reconstruction supplemented the numbers

ascribed to relative scales of vulnerability in East Boston's neighborhoods.

Field Research: Building Consensus Through Engagement

Along with the scientific evidence suggesting East Boston's vulnerability to flooding,

other challenges complicate the community's readiness to respond to the complexities

of sea level rise and climate change (Kirshen, Ballestrero,

and Bosma 2014). The

Huxtable Fellows identified issues that included, but were not limited to, the following:

- economically burdened families coupled with high levels of poverty
- linguistic and social isolation
- substantive knowledge deficit related to the climate change science
- overburdened civic organizations and historical lack of organizing support for community-supported planning initiatives
- limited funding for environmental education of residents
- institutional insensitivity to language-related communication challenges

In response, field research became an essential tool both for on-the-ground

investigation and as an immediate platform for advocacy and education. Over multiple weeks, the Huxtable Fellows canvassed East Boston's most vulnerable

neighborhoods, developing a system for cataloging existing housing-stock conditions. To

clarify initial findings, the students visited with residents in their homes to understand how,

where, why, and when water had compromised their living conditions. The information

was graphically synthesized (in various languages) as a tool for homeowners and renters

to understand concerns and options for future remediation (see Figure 20.2). Research

in the field transformed into a service: residents identify the fellows as advocates and

knowledge partners and continue to contact the cohort, asking for assessments of their

homes and actionable, affordable recommendations for improvement.

Strengthening With Partnerships and

Transforming With Capital

The Huxtable Fellows' efforts demonstrate how successful public interest design

projects simultaneously galvanize a constellation of stakeholders and catalyze future

efforts. The community-supported planning process, developed in partnership with

20.2

The information was graphically synthesized (in various languages) as a tool for homeowners and renters to understand

concerns and options for future remediation. Boston Architectural College Huxtable Fellows (Annika Nilsson Ripps, Andres

Rincon, David Morgan, Mehran Jahedi, Anna Mezheritskaya, Christine Banister), Huxtable Fellowship in Civic Engagement and

Service Learning, East Boston, Massachusetts, 2015. NOAA, presents a paradigmatic methodology of education, outreach, and action for replicable efforts in other neighborhoods likely to be affected by sea-level rise. The development of an equitable, transparent academic-community partnership has bolstered NOAA's ongoing resiliency-planning efforts. In fact, the Huxtable Fellows have played an important role in demonstrating the effectiveness of NOAA's collaborative efforts, assisting the organization to secure a three-year implementation grant funded by the Kresge Foundation. The Huxtable Fellowship has been made possible through the generous grant funding of the Cummings Foundation's OneWorld Boston program. Each fellow receives a stipend for participation in the project, with the remaining funding allocated to costs associated with the project's goals, including stipends to support community-member participation in design charettes and community meetings (see Figure 20.3). The fellows have become aware of the catalytic potential of funded work to support or generate other grant funding; multiple funding

streams, including the grant recently awarded to NOAA from the Kresge Foundation, not only help guarantee the efficacy of actions but also build capacity among the variety of partners and participants involved in East Boston's resiliency-planning efforts.

Transferring Knowledge and Sharpening Applied

Learning Pedagogies

The experience has contributed to the Huxtable Fellows' professional development

as they take ownership of their educational and entrepreneurial trajectories.

The fellows' tenure has been punctuated by moments of reflective assessment

structured as outlets for metacognitive, double-loop learning to support the

continuous refinement of collaboration and communication skills. Each fellow has

assumed a mentorship role within less experienced Gateway teams. As "super"

teaching assistants, the fellows share knowledge and transfer lessons learned

through vertical, peer-to-peer mentoring. Moreover, the fellowship has cultivated a spirit of self-directed leadership in

the realm of public interest design. One fellow is developing a business focused

on resiliency retrofitting that aims to educate local contractors in a network

of homeowners-consumers who may be affected by rising tides. Another has

embarked on a course of research and advocacy exploring resiliency-planning efforts

and community engagement in cities affected by similar issues: New York City, New

Orleans, and Houston. At a curricular scale, the fellowship offers an educational experience through

applied learning in the civic realm. The fellows have recognized that design

thinking and processes situate designers as instigators, facilitators, mediators, and

advocates. Moreover, the project identifies complex problems as opportunities

for design resolutions that are fortified through engagement with stakeholders in

iterative, ongoing processes. Finally, the Huxtable Fellowship reinforces that design

leadership requires the ability to communicate and collaborate and the sensitivity to

Inclusive Iteration

22

“Making” Change Together
Paula Horrigan
“Making” Change Together

Rust to Green’s

Placemaking Praxis

Paula Horrigan

In 2015, Cornell University’s Rust to Green (R2G) Capstone Studio (LA 4020/7020)

joined forces with the Oneida Square neighborhood in Utica, New York, to co-create

the first One World Flower Festival (OWFF), to be held that spring. Since 2010, the

studio’s professor, Paula Horrigan, has been leading R2G’s university-community

partnership and teaching its companion capstone service-learning studio. The studio

is designed to support the larger R2G New York civic engagement project, also

led by Horrigan. R2G aims to catalyze community-driven placemaking in upstate

New York cities endeavoring to transition from postindustrial “rust” to “green”

resiliency (Horrigan 2015). Guided by placemaking (Schneekloth and Shibley 1995)

and democratic civic engagement (Saltmarsh, Hartley, and Clayton 2009), R2G is

deeply rooted in place and, for the past six years, in the city of Utica. The R2G Capstone Studio emphasizes integration and application of skills and

knowledge learned in the landscape architecture major while introducing graduating

seniors to R2G's placemaking praxis through undertaking local placemaking

projects with Utica partners. The Capstone Studio's 2013 efforts generated the

study, "Taking Steps Toward Creative Placemaking: Oneida Square Arts and Culture

District" (Horrigan et al. 2013). The study identified ways that creative placemaking

(Markusen and Gadwa 2010) might drive Oneida Square's integrated environmental

transformation—physically, socially, and economically. The Oneida Square neighborhood anchors downtown Utica's south end and is

home to its most diverse population, 38.7 to 51.1 percent of whom are living below

the poverty line (US Census Bureau 2016). Oneida Square contains the Mohawk

Valley Resource Center for Refugees (MVRRCR), the Utica Public Library, and the

Munson-Williams-Proctor Arts Institute. In spite of recent physical upgrades, this neighborhood is considered unsafe, socially inactive, and unappealing. Creating an art and culture festival was one of the 2013 study's creative placemaking action ideas. Two years later, R2G's university-community partners moved the idea forward, and in the process, the 2015 R2G Capstone Studio, with eleven students participating, realized the following three learning objectives: • learn and practice placemaking and democratic community design • collaborate effectively with others across differences on addressing a local issue, need, problem, or aspiration • co-create and complete a placemaking project with community partners
Project Goals The OWFF unfolded as a participatory placemaking process to remake Oneida Square into a safe, inclusive, and welcoming public place. With the festival deadline set for May 9, R2G Capstone Studio students began meeting in early February with the festival planning committee members representing MVRRCR, Cornerstone Community Church, Oneida County Health Department, local artists, and Utica schools and businesses. The two staff members of the new Utica-based R2G Urban Studio were on

hand to convene the weekly meetings in Utica, which the students in the R2G Capstone Studio attended regularly via Skype. The following goals were collaboratively developed for the project: • through the festival, draw attention to Oneida Square's public realm and bring positive energy and affection to a part of Utica currently considered to be unsafe, negative, and neglected • forge, develop, and expand participation, inclusion, co-creation, and collaboration through all aspects of the festival's making and production to strengthen and build social capital and to catalyze ongoing community-driven revitalization • expand the visibility and value of art and culture to the neighborhood's sense of place and use art and culture as a primary community development vehicle Continual dialogue and reflection, which are integral to R2G's approach and process, facilitated progress toward these goals. The R2G Capstone Studio made a total of five trips to Utica, including a weekend-long stay during the festival. Students designed the festival logo and developed its website and social media for disseminating event information, tracking the event as it unfolded, and generating greater participation and buzz. Students also undertook mapping and analyses to assess and develop a festival geography aimed at tactically activating and beautifying the square (see Figure 22.1). Festival elements and programming took shape around the themes of "One World" cultural diversity, flowers, and Mother's Day. A \$3,000 grant to the 22.1 R2G Capstone Studio student Zoe Shively, at a community workshop uses a large-scale model to share and generate ideas for the festival's placemaking elements, tactics, and activities. Cornell University R2G Capstone Studio, Utica, New York, 2015.

R2G Capstone Studio from Cornell University's Engaged Learning and Research

initiative provided materials for creating low-cost, short-term elements that would

spur creativity, experimentation, and new placemaking ideas for Oneida Square.

Planning and development over the festival's four-month production period also

involved performance programming, obtaining permissions and permits, and overall

event promotion and advertising. The placemaking process fostered widespread inclusion and participation in

festival “making” and contributing to the making of change in Oneida Square. Making,

an essential and often-underemphasized ingredient of placemaking, fosters community

building and the development of a community’s social capital (Silberberg 2013). Festival-planning ideas and prototypes for co-created elements, activities, and

programs emerged from three participatory planning and making workshops, which

the Capstone Studio organized and cofacilitated. Students made elements such

as large sculptural flowers and Aqua-Resin globes, then distributed them to Utica

area youth and artists for further embellishing (see Figure 22.2). Local artists and

volunteers designed and assembled other elements, including planters and banners. Ultimately, the festival’s variety of elements and activities arose from the

combined efforts of many people and demonstrated the following inclusive iteration

strategies:

- undertaking a dialogic, community-engaged festival planning and development process through weekly meetings, planning and making workshops, an open access website, social media communications, and In Our Backyards (IOBY) fund-raising campaign
- broadening inclusion and participation in “making” through participatory design and making by local artists, youth, adults, seniors, and such groups as MVRCR, Thea Bowman House, Cornerstone Community Church, Fine Arc, Sculpture Space, and Midtown Utica Community Center
- ongoing postfestival placemaking through interviewing and reporting postevaluation; continuing R2G’s role in 2016 festival planning; engaging Oneida Square Project in social enterprise business development; continuing neighborhood use of globes, flowers, seats, and planters; and applying for and receiving a 2016 Levitt AMP [Your City] Grant for a free neighborhood summer concert series

22.2

Sculptural Aqua-Resin globes,
seen here being fabricated
by Cornell student Sarah
Schlichte then painted by a
Utica teen, added color and
artistry to Oneida Square.

Cornell University R2G

Capstone Studio, Utica, New
York, 2015.

Project Results

“It’s all about putting some love in Oneida Square,” said
one attendee as he

took in the scene unfolding on May 9, 2015. OWFF created a
palpable feeling

of optimism for neighborhood residents. By physically and
socially transforming

the square into an inviting place, the festival took a bold
first step in shaping the

area’s future. Brightening the square were thirty
multicolored planters, designed and

constructed by the Cornerstone Community Church’s Oneida
Square Project. They

brimmed with vibrant mixes of newly planted flowers. A
team of artists created

the sari banners waving from the square’s lampposts, and
thirty-five giant flower

globes, individually painted by area artists and youth,
enlivened the sidewalks.

A flower-shop mural by Utica high school students brought

new life to a derelict

building facade. Giant plywood flowers, painted by young and old from the Midtown

Utica Community Center and the Fine Arc Day Habilitation program held at the

Players of Utica theater, were fashioned into flower totems that appeared to be

“growing” throughout the square (see Figure 22.3). Artful custom mosaic trash

receptacles found a new home in the square, and their success helped launched a

social business enterprise, Oneida Square Public Art and Design, 1 which offers jobs

and training in the making of mosaic street furnishings to people with significant

barriers to employment. At the information booth, nearly five hundred crocheted flowers made by

seniors during community crochet nights at Utica’s Parkway Senior Center were

clustered together on a canvas banner so visitors could “pick” one (for free). Local

musicians and dancers performed on the sidewalks and in the street. People made

use of the 150 flower-topped moveable bucket seats painted by 4-H volunteers and

children at the Thea Bowman House after-school program. Giant banners, to be

permanently hung on buildings at a later date, portrayed historic seed catalog images

and provided a backdrop to a community chalkboard and placemaking station, where

Capstone Studio students invited people to share their concerns and hopes for the

neighborhood. While they had originally thought the festival would transform the square

for just a single day, the partners quickly changed tack as planning got under

way. They decided there needed to be more visible lasting change in the

festival's wake. The flower totems, mosaic receptacles, banners, and planters

would stay, and a summer watering and maintenance program would keep the

flowers thriving. Postfestival feedback particularly emphasized the optimism

created by the festival and the positive reception to the many placemaking

improvements, which endured. The festival mobilized the community and set

in motion creative placemaking and revitalization efforts, including a much

expanded second annual festival and a summerlong free neighborhood concert

series the following year.

22.3

Festival placemaking creations, resulting from the three-month-long shared "making" process by university and community

partners, ready for assembly and installation in Oneida Square. Cornell University, R2G Capstone Studio, One World Flower

Markusen, Ann, and Anne Gadwa. 2010. "Creative Placemaking: A White Paper for the Mayor's Institute on City Design." White paper, National Endowment for the Arts, Washington, DC.

Saltmarsh, John, Matthew Hartley, and Patti Clayton. 2009. "Democratic Engagement." White paper, New England Resource Center for Higher Education, Boston, MA.

Schneekloth, Lynda H., and Robert G. Shibley. 1995. *Placemaking: The Art and Practice of Building Communities*. New York: John Wiley and Sons.

Silberberg, Susan. 2013. *Places in the Making: How Placemaking Builds Places and Communities*. Boston: Massachusetts Institute of Technology. <http://dusp>.

US Census Bureau. 2016. "2009-2013 American Community Survey 5-Year Estimates." Accessed November 14, 2016. <http://factfinder.census.gov/faces/tableservices/>

Architecture instructors typically present their students with a design "problem" and

give a prescribed building type, program, and physical site to be developed. In the

Activist Studio, however, the nature of the problem is unknown at the beginning

of the semester, even to the instructor, and is discovered by the student through a

sequence of focused assignments and investigations, which encourages intimate

engagement with an issue. This close familiarity often results in a personal connection

to the cause, which changes the nature of the design approach, transferring the

focus from the designer to the client, or constituency. Student Julia Jovanovic's work

with the Ten Friends Diner illustrates this shift.

Project Context

In the spring of 2014, Ms. Jovanovic's research largely focused on issues facing

children and youth. A staggering statistic indicating high suicide rates among youth

in Ontario was uncovered, which directed research toward the topic of mental

health. It was discovered that in Canada, one in five individuals has or will suffer from

a mental health problem. Mental health care translates to 15 percent of the health

care burden but receives only 6 percent of Canada's health-care budget. Of particular

concern was the fact that eleven Canadians per day commit suicide, and 90 percent

of these suicide victims have a diagnosable mental health concern. Her research led Ms. Jovanovic to contact the Mental Health Consumer/

Survivor Employment Association of Essex County, which operates publicly as

Ten Friends Diner (so named because originally there were ten employees). Ten

Friends Diner is a nonprofit organization in Windsor, Ontario, that hires individuals

recovering from mental health setbacks, helping them attain the new skills and self

esteem needed to seek permanent employment in the greater community. Many

of these consumer/survivors (CMHA Ontario et al. 2005) cope with illnesses like

schizophrenia, depression, anxiety, and bipolar disorder. Ten Friends Diner is a safe

haven for these individuals, allowing them to work while gaining access to peer

support and counseling. Discussions with Ten Friends Diner Executive Director Carolyn Burton revealed

a need that could be addressed. Due to budget cuts in 2012, the diner operation

was relocated to a different building. The new space, although larger, presented

environmental and functional challenges, including poor

lighting conditions,

deteriorating ceiling insulation, gloomy decor, impeded work flow, high indoor

humidity, lack of storage, and disconnected employee areas. These conditions had a

direct, significant impact on the well-being and attitude of the consumer/survivors,

many of whom suffered from increased anxiety, confusion, and depression. "Our

old diner was cozy and warm," one consumer/survivor stated in an on-site interview,

"The current diner lacks the home feeling and casts off the sensation of being in

an institution. The color is dark and has no welcoming feel." Another noted that

"my mood in relation to the old diner was more work effective, brought on happier thoughts and a sense of freedom. I really love the added room in the new diner, but as for motivation, the decor lacks that inspiration." Project Goals The main goal for the redesign of Ten Friends Diner was to create a healthy, uplifting, functional environment that would contribute to the healing and long-term wellbeing of all its occupants. This general goal was refined into specific needs, including redesigning the lighting, fashioning a consolidated work space, reorganizing the work flow, creating additional storage space, mitigating high humidity and deteriorating ceiling conditions, and using the design of the diner to disseminate mental health awareness and inspire future initiatives. Jovanovic engaged in comprehensive information gathering on a range of mental health topics with various project constituencies through surveys and interviews. Her research included case studies on evidence-based design and how design decisions could affect the physical and mental well-being of users. All research that led to design suggestions was verified with the consumer/survivors, who rejected certain propositions that were anticipated to negatively affect a particular mental health condition. Project Results In meetings facilitated by Jovanovic, the consumer/survivors dictated the direction of the design, analyzing their needs and suggesting appropriate solutions (see Figure 23.1). Perhaps the most significant result was

that the consumer/survivors felt empowered and inspired to propose design ideas, raise funds, create publicity, and assist in the construction of the project. As required by the course format, Jovanovic maintained a cycle of soliciting ideas from consumer/survivors, presenting design alternatives to all constituencies, recording feedback, and returning with amended proposals for discussion, while documenting and presenting these experiences to her peers. Jovanovic also met the course requirements of using the identification of Social Economic Environmental Design (SEED) Network issues—specifically health, job training, empowerment, and strengthening community—to frame the critical needs of the project and using the Massive Change story formula (Bruce Mau Design 2005) to outline the narrative of project engagement. The community became involved by donating funds, labor, and materials. Volunteers skilled in building trades, marketing, and photography were also critical to advancing the project mission. These donations came about in part because Jovanovic prepared design-vision materials for inclusion in solicitation packages. There were a variety of public and private donors, and the newspaper Windsor Star became a primary media partner. Over the course of several months, the team at Ten Friends Diner raised

enough funds to execute the project, addressing all the goals set forth at the

conception of the design (see Figure 23.2). While the primary community partners

and stakeholders were the consumer/survivors, managers, and customers of Ten

Friends Diner, Jovanovic also worked to meet the goals of the Canadian Mental

Health Association (CMHA) and the Ontario Ministry of Health and Long-Term

Care. Furthermore, the project served as a beacon for other individuals in the

Windsor community who suffer from mental health challenges. Finally, Jovanovic 23.1 Preliminary rendering of Ten Friends Diner. Julia Jovanovic, Ten Friends Diner, Windsor, Ontario, Canada, 2015. 23.2 Interior of Ten Friends Diner. Julia Jovanovic, Ten Friends Diner, Windsor, Ontario, Canada, 2015. self-identified as a stakeholder in the project; she was personally and

emotionally engaged in both the process and the impact of Ten Friends Diner. Jovanovic and Burton collaborated in preparing a written agreement outlining the scope of Jovanovic's design work and the deliverables to be provided by the end of the semester. A portion of each student's final grade depended on meeting such expectations, revealed through assessment by their community partners. Orłowski instituted the requirement of this agreement to provide a sense of closure to the semester; it also allowed for the student and partner to maintain a working relationship after the semester ended, which proved in Jovanovic's case to be ongoing. Learning Objectives During the life of the project, Jovanovic met several course learning objectives: • use statistical and observational tools in research, focusing on identifying a problem, the ecosystem that perpetuates the problem, and the affected constituencies • create and document a participatory design process rooted in professional best practices, demonstrating an awareness of innovative and alternative models of professional practice • exhibit the ability to engage in inclusive and informed conversations about design in partnership with nonarchitects

23.3

Ten Friends Diner community

garden. Ten Friends Diner staff,

Ten Friends Diner, Windsor,

Ontario, Canada, 2015.

Positive changes were noticed in almost all of the thirty-plus employees of the diner,

whose attitude and general well-being significantly improved. Fewer employees

missed work or reported heightened anxiety or confusion. As the project was

completed, the consumer/survivors were inspired to devise further initiatives, such

as a community garden, which was constructed in 2015 (see Figure 23.3). The successful realization of this project not only created an uplifting,

functional environment for healing and business but also

directly reinforced the

goals of the organization: giving consumer/survivors confidence in their abilities and

building their capacity to seek and pursue future opportunities. The design process

helped Ten Friends Diner address its programmatic and social objectives.

Note

1 Sources: Statistics Canada, the Ontario Association for Suicide Prevention, and Children's Mental Health Ontario.

Bruce Mau Design and the Institute without Boundaries in collaboration with the Canadian Heritage Information Network. 2005. Massive Change in Action. Accessed August 23, 2006. www.massivechangeinaction.virtualmuseum.ca (site discontinued).

CMHA Ontario, Centre for Addiction and Mental Health, Ontario Federation of Community Mental Health and Addiction Programs, and Ontario Peer Development Initiative. 2005. Consumer/Survivor Initiatives: Impact, Outcomes, and Effectiveness. http://ontario.cmha.ca/public_policy/consumersurvivor-

vitality in need of engagement. This pedagogy asks students to confront and transcend

cultural boundaries and perceptions in order to be successful in such engagements. Within the urban boundary of Johannesburg lies the 2.6-square-mile township

of Alexandra. The township has long been a spatial manifestation of its nation's

complex history, a refuge from and resistance against oppression, and a place

of scarcity and insecurity in the face of underdevelopment and undervaluation. 1

Numerous built attempts by outside governmental and nongovernmental

organizations (NGOs) to revitalize the Alexandra community have ultimately been

underused by local constituents, leading to divisive and debilitating perspectives

of design interventions challenging the spatial legacy of apartheid (Swift 1983).

To the outside designer wishing to undertake a community-focused development

project in Alexandra, the public's wariness forms a complex web—one that must be

met with a responsive strategy of authentic community engagement. Alexandra's 6.4-hectare Youth Precinct is itself a microcosm of these spatial

politics and emerging cultural demands. Three community centers, four public

schools, and multiple outdoor sports and recreation facilities serve up to 1,500 youth

each day. Despite this emphasis on public programming, little consideration was

given to precinct planning as a unified whole. The public spaces envelop a series

of legally ambiguous private homes, many of which are held by families of original

landowners and are still contested today.

Preparatory Seminar

Three primary goals were established for the preparatory seminar. The first goal was

to replace students' preconceptions of South Africans with qualitative interpersonal

perspectives. Through direct, scaffolded interactions with South Africans over the

course of the semester, students came to understand and better interpret cross

cultural relations. Second, the seminar developed students' understanding of the public

interest design methodologies that international groups employ to develop design

rationales for humanitarian architectural projects. Students interrogated the design

methodologies and outcomes of such projects and presented their findings.

The module culminated with presentations of the author's work in South Africa,

including one convincing design methodology that nonetheless resulted in a "failed"

humanitarian outcome. This humbling dialogue of lessons learned offered students

the opportunity to examine and question designed outcomes and to understand the

challenges of work in unique contexts. The third goal was to develop a user-focused research and design methodology

for the forthcoming short course in Alexandra. Students tested the model by

engaging hypothetical clients in a mock community design workshop based on

their proposed research methodology. Through this process, students developed

research skills and faced the challenges of engaging "others." On-Site Short Course The city of Johannesburg and local NGOs prepared the events schedule and recruited participants in advance of the on-site short course. Youth group leaders from the nearby Phutedechaba Community Centre acted as intermediaries between the university students and the precinct's primary user group, Alexandra youth. These youth leaders proved invaluable to establishing a valid dialogue between the students and community stakeholders. Community participants led a precinct walking tour that successfully initiated authentic human relationships. Students informally engaged participants on positive aspects of their sociospatial experience, gleaning specific insights into community perceptions. Students' on-site presence and empathetic attentiveness to constituent testimonies disarmed the

prodigiously held community perception of outsiders. Concurrently, students conducted a spatial inventory, quantitatively studying concrete environmental attributes and documenting their findings in notes, drawings, photographs, and video. Iterative Development and Communication Strategies Groups gathered in community engagement workshops to disseminate the findings, consolidating their insights into concepts that could best summarize shared aspirations for the precinct's future (see Figure 24.1). While these themes may not have revealed specific design solutions, they did "begin close to the ground, looking at life stories and the human meaning" (Nussbaum 2011, 14) of design decisions for real people. The workshops revealed the importance of initiating design from the perspective of human experience, rather than from that of perceived need, and re-formed preconceptions the students may have generated. Participants designed a text-based mural to communicate the qualitative results of the workshops to the broader Youth Precinct community and to build consensus around the themes that emerged (see Figure 24.2). Over the following two days, participants painted the mural on an exterior wall at the eNtokozweni Community Centre. This experience validated the collegiality of the group, and the mural provided a tangible artifact of Alexandra youth perspective on their community. Design students then worked in an open-studio setting at the Thusong Community Centre, where participants observed and engaged in the design process. Student-generated design materials including axonometric site drawings and photo montages emphasized clarity and legibility functioning across a diverse group of users. A seven-minute video coproduced with Alexandra youth, particularly resonated with the community constituents. The video and design documents were presented to governmental agencies to heighten awareness of the precinct's condition and to demonstrate the community's capacity to address the issues.

24.1 Community engagement workshop. Alexandra Youth Precinct Project, Alexandra Township, Johannesburg, South Africa, 2013.

24.2 Community mural painting day. Alexandra Youth Precinct Project, Alexandra Township, Johannesburg, South Africa, 2013.

At two points in the process, full-scale community design charrettes were held to engage a broad range of constituents in the process; more than fifty people attended each charrette (see Figure 24.3). The first charrette was presented as a process-based presentation, dedicated to feedback from community members and synthesis of research and design. This process resulted in a diverse range of responses requiring sensitive negotiation and feedback. Learning Objectives As a result of this project, students were able to:

- synthesize

disparate stakeholder interests • develop a rigorous and meaningful design proposal focused on the needs and desires of constituencies • distinguish between complex cultural and spatial contexts

24.3

Community presentation, eNtokozweni Community Centre. Alexandra Youth Precinct Project, Alexandra Township, Johannesburg,

South Africa, 2013.

- discover the challenges of community-focused design methodologies while working on-site
- apply methods that incorporate local governing bodies and empower community members

Project Results

The results of this methodology revealed both predictable and insightful design

components. Quantitative environmental and security challenges, such as storm

water runoff and poor lighting, were largely predictable and easily solved from the

design sense. More nuanced, however, were the qualitative issues of otherness,

including contested spatial injustice and poor perception of community-focused

architecture based on perceived corruption and hidden agendas by outside

governmental forces. As the most critical design issues raised by stakeholders, these

perceptions also revealed the necessity for empathy, research and interpretation,

and effective feedback loops between constituents and designers in such an in situ

practice. This process helped students comprehend the problem of paying attention

only to the quantitative in neglect of the qualitative. The project results were similarly compelling on-site.

Heightened awareness

of precinct users' needs, assets, and capacities occurred at the neighborhood

scale, resulting in community-driven cleanup efforts, improved security measures,

and representation in local politics. Governmentally, the proposal resulted in the

Johannesburg Development Agency (JDA) implementing the design. Streetlights,

sidewalks, and landscaping are now in place, and circulation has been redirected to

the proposed route, solving community members' concerns over private property.

The JDA is incorporating the Youth Precinct into its designs for a bus rapid transit

network and transit-oriented development strategy. The precinct is now a node of

cultural development and will be strengthened by these future plans.

Note

1 Field research, May 2013.

Kapusćin'ski, Ryszard. 2009. *The Other*. Brooklyn, NY: Verso Books.

Nussbaum, Martha. 2011. *Creating Capabilities: The Human Development Approach*. Cambridge, MA: Harvard University Press.

Swift, Jon. 1983. *Alexandra, I Love You: A Record of Seventy Years*. Braamfontein, South Africa: Future Marketing and Alexandra Liaison Committee.

Evaluating Student Learning

Boyer, Ernest L. 1996. "The Scholarship of Engagement." *Journal of Public Service and Outreach* 1 (1): 11-20.

Cooks, Leda, and Erica Scharrer. 2006. "Assessing Learning in Community Service Learning: A Social Approach." *Michigan Journal of Community Service Learning* 13 (1): 44-55.

Dewey, John. 1938. *Experience and Education*. New York: Touchstone.

Hatcher, Julie A., and Robert G. Bringle. 1997. "Reflection: Bridging the Gap between Service and Learning." *College Teaching* 45 (4): 153-8.

Miller, Abbylyn. 2014. "The Politics of Radical Pedagogy: Transforming Power and Seeking Justice." In *Community Matters: Service-Learning in Engaged Design and Planning*, edited by Mallika Bose, Paula Horrigan, Cheryl Doble, and Sigmund C. Shipp, 151-66. Oxford, UK: Routledge.

Rios, Michael. 2011. "Operative Sites for Dialogue and Reflection: The Role of Praxis in Service-Learning." In *Service-Learning in Design and Planning: Education at the Boundaries*, edited by Tom Angotti, Cheryl Doble, and Paula Horrigan, 125-36. Oakland, CA: New Village Press.

26

Assessing Experiential

Learning in Design Education Bethany Lundell
Garver Assessing Experiential Learning in Design Education

The Practice Department

at the Boston Architectural

College

Bethany Lundell Garver

Pioneering public interest pedagogy and practice, the
Boston Architectural College

(BAC) is the oldest cooperative education (co-op) program
in architecture in the

United States. Founded in 1889 by patrons of the Boston
Society of Architects

and the Massachusetts Institute of Technology, the BAC
emerged as a movement

"broadening ... the possibilities of architectural

training” (Brown 2014, 11), making

design education more accessible by allowing students to practice in local offices

while simultaneously pursuing course enrichment. From the start, the spirit of

public interest design has been integral to the BAC’s curriculum, proving to be a

sustainable learning tool for aligning design education with ongoing changes in the

field. Scarcely any architectural education models support students in pursuing

continuous full-time work while in school (Salama 2015). The BAC, by contrast,

has long-standing relationships with design firms, public agencies, and nonprofit

organizations who serve as faculty, mentors, and employers for students. Through

flexible work-based learning, the college offers the only accredited degree-granting

programs in the country that complement academic course work with structured

qualitative and quantitative assessment of parallel cooperative education. In this

way, the community becomes the BAC’s extended campus, resulting in 97 percent

of graduates being employed in their design fields on graduation day, with many

holding leadership positions (The BAC 2016). Thirty-four percent of baccalaureate

graduates come from underrepresented populations in architectural education (Cox,

Matthews, and Associates 2016). Learning Model The Practice Department is a practice-meets-academy environment (Harriss and Widder 2014, 43) that supports the disciplines of

architecture, interior architecture, landscape architecture, and design studies as a vital educational component of the BAC. The department itself does not confer degrees; rather, it administers a required curriculum of applied learning cultivated outside the classroom that aligns with process-oriented evaluation. This aspect of the overall curriculum is commonly referred to as the practice component. The Practice Department model encompasses four strategies: Partnerships, Reflective assessment, Applied learning, and Career support. Using David Kolb's (1984) Experiential Learning Model as a framework, the department promotes public interest design through a lifelong cycle of "concrete experience, observation of and reflection on that experience, formation and synthesis of abstract concepts based on reflection, and active experimentation that tests the concepts in new situations" (Jacoby 2014, 6). The model leverages a multifaceted learning-doing curriculum to build a more productive school-community-profession relationship that prepares future designers for lives of civic responsibility and service (Brown 2014). Upon completion of Practice Department requirements, students achieve skill levels that reflect integration and synthesis of their academic studies within workbased learning settings. Students will be able to:

- make connections across disciplines among experiences outside the classroom by showing an enhanced ability to broaden perspective and build on prior learning to take on increasingly challenging problems
- exhibit organized preparation and confident delivery of a compelling message with a variety of supporting materials (graphics, written descriptions, and selfreflection) to increase audiences' knowledge and understanding
- collaborate across and among myriad contexts and organizations to accomplish a clear sense of civic identity, independent initiative in engagement activities, and collaborative commitment to community goals

These experiential learning outcomes are measured through students' accumulation of practice hours, written and graphic portfolio evidence, and one-on-one practice assessment meetings with Practice Department faculty (see Figure 26.1). A sustained high rate of student employment in the competitive field of design is an illustrative metric for evaluating the effectiveness of the model. Partner Evaluations

The Gateway to Practice Initiative demonstrates how the Practice Department model matches student learning with Kolb's (1984) concept of "concrete experience" that supports real-world issues. Gateway projects are voluntary and progress over two

semesters. The initiative gives students an opportunity to

connect community needs

with societal concerns. As multidisciplinary undergraduate and graduate student

teams prepare programmatic and schematic design proposals for community-based

clients, they simultaneously accrue practice hours. The weekly time commitment for

Gateway projects ranges from ten to twenty hours for each student.

26.1

This matrix reflects a sequence of requirements for the practice component of each degree program that the

Practice Department develops and administers; adapted from a self-assessment matrix in Gelmon, Agre

Kippenhan, and Cress (2013, 169)

Practice Department Requirements and Learning Outcomes Matrix New Student Beginner Engaged Advanced

Timeline of Reflective

Assessment Broadly introduced during new student orientation One-on-one Practice Assessment (PA) scheduled during Community Practice course at the end of the Foundation curriculum Every student signs up for one-on-one PA appointment prior to thesis preparation Every student signs up for one-on-one PA appointment prior to graduation

Practice Hours

(required minimum) Some students are eligible to receive credit for prior practice hours Architecture (0) Interior (0) Landscape (0) Architecture (2,200) Interior (450) Landscape (600) Architecture (3,000) Interior (900) Landscape (900)

Skill Level N/A Awareness and Understanding Integration Synthesis

Experience None or partial (may have prior practice experience) Foundational Some Deep

Personal Development Attention on self Awareness of self in broader context Linked to others Big picture

Reflection None or partial Broad Related Deep and integral

Connection to

Community Individual benefit Responds to relevant local issues and identifies community assets Linked to community in a personal way Facilitates new opportunities for expanded community linkages

Transdisciplinary

Approach Focused on self Willingness to make personal decisions that reflect awareness of others Acknowledges appreciation and respect for others Finds new connections and adapts naturally to others

Professional and/or

Civic Engagement Unknown Active participant Organizes next steps and manages tasks Initiates action on design projects and/ or social justice issues

Capacity to Work on

Design Teams and with

Diverse Communities Unclear Partial and directed Responds to requests that develop contextappropriate action Imaginative, motivated leader

Source: Bethany Lundell Garver, the BAC Practice Department, Boston, Massachusetts, 2016 Community partners evaluate students' attitudes and designs during presentations, workshops, and written critiques, commenting on how each team's goals and outcomes address community needs and benefit the client's mission. Following students' asset-based designs, feasibility studies, or on-site field observations, clients assess how teams exhibited ethical reasoning, integrity, and professionalism regarding diverse cultural factors. With encouragement from Practice Department faculty, clients offer open dialogue and honest feedback on group efforts, broadening students' interpersonal communication and conflict-resolution skills by exercising their ability to express differing ideas and values respectfully. Evidence of these experiential learning outcomes is enclosed in

students' required portfolios. Since 2008, 1,300 BAC students have engaged in more than one hundred sponsored Gateway projects, resulting in a combined effort surpassing fifty years of full-time work (The BAC 2013). In 2015, the program launched the Ada Louise Huxtable Fellowship for students specifically focused on design in environmental justice neighborhoods. Overall, Gateway builds student capacity to generate future opportunities for inclusive community decision making. These student-community partnerships impart self-confidence and reflection on the impact of design in underrepresented places otherwise unable to attain design services (see Figure 26.2). Reflective Assessment One-on-one practice assessments facilitate evaluation of students' work-based experience in specific knowledge areas. To gauge student performance, the Practice Department model relies on partnerships between educators, students, and employers, which are formalized through Student Learning Contracts (SLC). The SLC calibrates specific competencies, including critical thinking, presentation delivery, and technical skills. Competencies related to public interest design— such as social interaction, human-centered design, intercultural knowledge, and teamwork—are also measured (see Figure 26.3). Students report their hours in work-based and applied-learning settings. Then, progress is noted on their academic transcripts, and their compiled portfolio evidence is reviewed in practice assessments. This formal assessment process promotes institutional awareness of students' progress, incremental self-reflection, and identification of skill-development needs relative to students' specific interests. Applied Learning and Career Support Abstract concepts of public interest design are distilled into two credit-bearing classes administered through the Practice Department that are required for undergraduate and graduate students in all disciplines: CityLab (FND1006/3006) and Community Practice (FND2007). These foundation courses utilize applied learning projects to expose students to design stewardship and civic engagement early in their education (see Figure 26.4). They also introduce students to reflective practice

26.2

Select examples of Gateway to Practice Initiative partnerships at the BAC from 2008–2016.

BAC Gateway to Practice Initiative (Gateway) Community Partners **

- OneWorld Boston

- Boston Society of Architects *

- Asian American Civic

Association/Boston

Redevelopment Authority

(AACU/BRA)

- Allston Village Main Streets,

- American Legion Marsh Post

#442

- Arlington Children's Theater

- Belmont Housing Authority

- Benjamin Franklin Institute of

Technology

- Boston Chinatown

Neighborhood Center *

- Boston Green Academy

- Boston Parks and Recreation

- Boston Public Schools *

- Boys and Girls Club of South

Boston

- Boston Redevelopment

Authority (BRA); Boston

Planning and Development

Agency (BPDA) *

- Brockton 21st Century

Corporation

- Catherine Aragon

- Charlestown Municipal Garden

Association

- Children's Cooperative

Montessori School

- Church of the Covenant *

- Citizen Schools *

- City of Boston Mayor's Office *

- Codman Academy *

- The Community Design

Resource Center of Boston

(CDRC) * • Division of Capital Asset Management & Maintenance * • Department of Neighborhood Development * • Design Museum Boston • Dorchester Community Food Co-Operative • Egleston Square Main Streets • Fair Housing Center of Greater Boston * • Fen way Community Development Corporation • First United Parish of Everett • Four Corners Action Coalition • Four Corners Main Streets • Franklin Park Zoo • Friends of Lake Cochituate * • Friends of Modern Architecture • Friends of Modern Architecture Lincoln • Girl Scouts of Eastern Massachusetts • Greater Grove Hall Main Streets • Greater Love Tabernacle Church • Hale Reservation * • Hawthorne Youth and Community Center * • Higginson/Lewis School • Higher Ground • Hosmer School * • Housing Assistance Corporation of Cape Cod * • ImprovBoston • Innercity Weightlifters • Juniper Gardens Condominiums • Long Way Home • Maimonides School * • Massachusetts Department of Transportation (MassDOT) • Metal Oxygen Separation Technologies • Metro West Collaborative Developers • Metropolitan Waterworks Museum * • Mission Hill K-8 School • New Brook Farm, Inc. • New England Conservatory • Neighborhood of Affordable Housing, Inc. (NOAH) * • Nuestra Comunidad • PJ Kennedy School * • Roca Chelsea • Roxbury Community Cultural Arts Center • Salvation Army Harbor Light • Somerville Community Growing Center • Stonybrook Neighborhood Association • Students 4 Students • Town of Ashland * • Town of Hamilton Recreation

Department • Transition House • Triangle, Inc. • United
Neighborhood Design Alliance • Viet AID • West Branch
Somerville Library • William E. Carter School * • William
Monroe Trotter Institute at UMASS Boston • Women's
Lunch Place • YouthBuild Boston • Zoo New England

Source: Bethany Lundell Garver, the BAC Practice
Department, Boston, Massachusetts, 2016

26.3

Student Learning Contract categories and competencies
evaluated by the BAC Practice Department.

BAC Student Learning Contract (SLC) Competencies

Core Competencies Concentration Tracks

Conceptua

lization Professional Values and Organization
Representation Tools and Techniques Public Interest
Design, Service, and Research Practice Management and
Design Entrepreneurship Design Implementation and
Project Delivery

- Critical thinking
- Investigation, inquiry and analysis
- Creative thinking
- Problem solving
- Programming and feasibility
- Site/existing conditions analysis
- Use of precedents, reading and research
- Social interaction and human-centered design
- Intercultural knowledge and competence
- Environmental stewardship and global learning
- Integrative and applied learning • Written
communication • Oral communication and presentation
delivery • Information literacy • Ethical reasoning,
integrity and professionalism • Personal time

management • Conflict resolution • Interpersonal skills
• Teamwork and collaboration • Leadership and
service • Model building and fabrication • Building
information modeling • 2D and 3D CAD drafting • 3D
illustrative rendering • Web, graphic, or interactive
design • Raster and vector image editing • Manual
drafting • Freehand sketching • Diagramming •
Mentoring • Teaching and conducting workshops • Civic
engagement, service and volunteerism • Writing for
grant proposal or design publication • Design
competitions • Research project (ideate, document,
publish) • Attend community or professional lectures,
conferences • Committees and student groups • Prof
essional and community organizations • Business
practices and operations • Team building • Stake
holder roles • Budgeting and accounting • Schedule
and work plan development • Project management •
Bidding and contract negotiation • Marketing support •
Market research • Planning, zoning or permitting
regulations • Schematic design and design development
• Engineered systems (service, structural,
environmental) • Financial considerations and project
cost • Codes and regulations • Technical and
construction documents • Material, lighting, FF&E
selection • Specifications • Construction administration
and observation

Notes:

1. Competencies are evaluated using portfolio evidence gathered by each student and reviewed during scheduled Practice

Assessment appointments. Students' practice portfolios exhibit Understanding/Awareness (beginner), Integration

(engaged), and Synthesis (advanced) in targeted SLC competencies.

2. Competency-based metrics are adapted from Value Assessment of Learning in Undergraduate Education (VALUE)

rubrics from the Association of American Colleges and Universities, National Council of Architectural Registration Boards

(NCARB) knowledge areas, Council of Landscape Architectural Registration Boards (CLARB), National Council for Interior

Design Qualification (NCIDQ), and Social Economic

Environmental Design Network (SEED) principles.

Source: Bethany Lundell Garver, the BAC Practice Department, Boston, Massachusetts, 2016 through pre-course and post-course self-evaluations, portfolio documentation, and preliminary in-class practice assessments. Career support is offered through Practice Lab, the department's online job database, in addition to advisory meetings with dedicated career services staff, workshops, job fairs,

networking events, and annual student employment surveys. Students pursue work

based opportunities that target SLC knowledge areas. Since the Practice Department

only approves practice hours accompanied by regular supervisor evaluations, the model

also builds closer relationships between students, supervisors, and mentors.

Practice-Meets-Academy Public Interest Futures

Transdisciplinary in nature, the Practice Department reinforces the value of uniting

different design disciplines through an intellectual, practical, mission-driven

framework that goes beyond a singular perspective. Underscoring the role of

designers as collaborators with multiple stakeholders, students learn to become

citizens in dynamic, diverse places. By providing a structure for satisfaction of

practice-oriented degree requirements via transcript notation, the model shows

where, when, and how high-quality public interest design principles are learned.

More importantly, it articulates a range of ways for public interest design to fit in the

institutional context. This gives students the opportunity to reflect on public interest

design engagements the same way they might reflect on more traditional work

in design firms, allowing them to examine the relationship between the two with

deeper understanding (see Figure 26.3). By framing public interest design alongside other forms of professional

practice, the Practice Department seeks to break down perceptions of alternative

versus mainstream architecture and design-related fields. Accessibility of this type

of education inculcates the importance for students, educators, and practitioners to

27

Merging Research,

Scholarship, and

Community Engagement Michael Zaretsky Merging Research, Scholarship, and Community

Roche Health Center

Michael Zaretsky

In 2007 the Roche community (a village of approximately five thousand residents in

Tanzania) identified a critical need for a permanent health-care facility. Most people

in this region had to walk several hours to access health care. Residents asked the

nonprofit Village Life Outreach Project (VLOP) to collaborate on the project. The Roche

Health Center (RHC) opened April 1, 2011, and that summer, a two-month external

assessment of the project studied the impacts of RHC on the Roche community.

The assessment concludes: [t]he community fully supports the health center, and it is the preferred provider of health care in Roche. The community has taken ownership of it and is proud to be host to the health center. ... Their inclusion in the process of planning, building, and evaluating has helped them take ownership in the project and expect only the best. (Lucker 2011)

The RHC project emerged as a result of nonprofits, universities, and individuals

working together over many years. The project is one of many collaborations

between the following partners: VLOP, a Cincinnati-based nonprofit; Shirati Health,

Education, and Development (SHED) Foundation, a nongovernmental organization

in Tanzania; University of Cincinnati (UC) faculty and students; the Clinton School

of Public Service at the University of Arkansas; and residents of three villages in

Tanzania—Burere, Nyambogo, and Roche. VLOP merges research, scholarship, pedagogy, and outreach based on a set

of community-engagement principles. Through partnerships, VLOP seeks to improve quality of life, health, and education for the residents of rural Tanzania. Tanzanian villagers identify challenges that can be addressed in partnership with VLOP, SHED, UC, and others. UC faculty employ the research and teaching resources of a Research I university to address these issues. These resources include cross disciplinary design, engineering, and social science research to inform design decisions (see Figure 27.1). VLOP members use several principles when teaching and doing work related to any global project. These principles translate to the following learning objectives in UC courses that engage students with communities in Tanzania:

- assess inherent power imbalances and inequities between Western and nonWestern communities, as well as power imbalances within cultures
- evaluate who is benefiting from the design and construction projects
- relate and apply reciprocal learning in context
- analyze cultural, social, economic, constructive, and climatic conditions of work areas
- apply knowledge of existing conditions to all design and

construction decisions • incorporate principles of appropriate technology by using materials, tools, and techniques that local residents can replicate • create meaningful partnerships with local residents and nonprofit partners in all aspects of research, design, and construction • create design and construction proposals that are informed by the desires of the local community and contextual conditions • assess all design proposals on their cultural, social, economic, and technical value for the communities with whom we are working

27.1

Testing a photo voltaic panel

with the RHC committee.

Michael Zaretsky/Village Life

Outreach Project, RHC, Roche,

Tanzania, 2011.

RHC Teaching

Working with other UC faculty, Arup engineers, SHED, and members of the Roche

community, students in three RHC graduate architecture studios (ARCH713) explored,

developed, tested, and assessed design proposals for the RHC complex between

2008 and 2011. The first studio, in 2008, developed a master plan, infrastructure plan,

building system, and clinic designs. In addition to the studio, an external committee

consisting of architecture and engineering students, faculty, and practitioners,

including engineers at Arup Chicago through the Arup Cause, 1 explored the technical

challenges of the inherent design conditions given a lack of electricity, water shortages,

minimal availability of materials, few local contractors,

and economic limitations. Students in the following studio, in 2009, further developed the clinic plans

and details. The third studio, in 2011, explored the public edge of the complex along

the street, conducted a post-occupancy evaluation of the clinic, and researched

alternative construction methods that could be implemented in the construction of

the medical-staff housing. A subsequent UC Honors course, Humanitarianism: Design Thinking across the

Disciplines (SAID3010H), taught in 2011, 2013, and 2015, brought together students from

across the university to study and critique humanitarianism and aid to Africa. Students

explored how design thinking could provide a relevant approach to humanitarianism for

all disciplines and developed projects to be implemented in Tanzania.

Project Assessments

Ongoing assessments and evaluations of previous decisions have informed every step

of the RHC project. VLOP has partnered with the Clinton School of Public Service for

project assessments since 2010. Spencer Lucker, Masters of Public Service candidate

at the Clinton School, spent two months assessing the RHC project through interviews,

surveys, data analysis, and observation. The evaluation provided data that covered four

areas: demographics, service delivery, community satisfaction, and public opinion.

Lucker (2011) stated in the community-satisfaction assessment that "every person

who was asked if it [RHC] were an important part of the community either agreed or

strongly agreed (seventy-nine out of seventy-nine community members).” Students from the Humanitarianism course learned about RHC through

observations, drawings, and interviews with villagers, patients, and medical staff. 2

This learning led to discoveries of additional needs that had to be addressed to

improve the comfort of patients while they were waiting or being examined, such as

the need for more seating in the waiting area for family members of patients. Medical

housing construction, which was also influenced by design changes identified in the

student assessments from UC and the Clinton School, began in early 2015. The most important assessment of RHC comes from ongoing dialogue with

SHED and the Roche community. The community knows that the project partners are

27.2

Construction at RHC clinic. Michael Zaretsky/Village Life Outreach Project, RHC, Roche, Tanzania, 2011. committed and will leave only when the community indicates that they are no longer needed. During a March 2016 visit, villagers pointed out maintenance issues in the clinic that will affect the design of future buildings. For example, the oversized gutter, designed to show villagers how their roofs could be used for water collection, had been repaired several times due to the lack of caulking materials in the region. This knowledge led to a redesign of the gutter, which was implemented in the medical housing. The clinic does not resemble other buildings in the region, though it is built with local materials and tools (see Figure 27.2). Designing a building that looks different from other buildings in the area was a risk. However, it has been verified many times that the community is proud of this project. They are proud that people come to visit RHC, and they recognize its value beyond its function as a clinic: it is a meeting place for

the community (see Figure 27.3). Pedagogical Outcomes The student course evaluations for the RHC studios were very positive, with the majority of students stating that this course “made a strong contribution to my education overall.”³ There were several positive comments, such as the following:

27.3

RHC committee members meeting. Michael Zaretsky, RHC, Roche, Tanzania, 2015. This course was extremely successful in the integration of realistic challenges and conditions with the studio curriculum. One of the most successful components of the course was exposing students to these challenges and letting them figure out decisions through trial and error, collaboration with other professionals, and collaboration amongst their studio colleagues.

This type of feedback supports the pedagogical intentions; however, one challenge

was that most students in the studios did not actually get to engage the community

with whom they were designing. Two architecture students at UC, Emily Roush Elliott and Jesse Larkins, have

completed cooperative (co-op) internships in Tanzania with VLOP. Elliott spent her

co-op in Tanzania leading the design and construction of the health clinic in 2010.

She returned to UC to complete her Masters of Architecture degree; her thesis

was “Avoiding Imposition Through Methods of Making,” situated in Roche, Tanzania.

Elliott went on to become the first UC student to be awarded an Enterprise Rose

Architectural Fellowship. She is already recognized as a future leader in public

28

Reflecting Through Razor Wire
Julie Stevens
Reflecting Through Razor Wire

The Environmental Justice in

Prisons Project

Julie Stevens

The Environmental Justice in Prisons Project (EJPP) provides landscape architecture

and design students with opportunities to engage the often-misunderstood

prison population by working directly with incarcerated individuals and prison

staff to design and build therapeutic and productive outdoor spaces. A long-term

partnership between the Iowa State University (ISU) College of Design and the Iowa

Correctional Institution for Women (ICIW), EJPP uses design/build to expand the

social capacity and develop the vocational skills of both students and incarcerated

women. No classroom experience or book can provide life lessons and skills like a

few months on the front lines, as is evident in the student reflections throughout

this chapter. Between 2011 and 2016, five courses and three design/build projects were

completed with ICIW: Multipurpose Outdoor Classroom (2013) The ICIW warden selected the first design/build project: a multipurpose outdoor classroom located in a one-acre space at the heart of the new campus. The outdoor classroom was developed in partnership with counselors and women in the intensive treatment programs at ICIW. Three classrooms, a lawn mound, and an aspen grove provide opportunities to bring counseling and classroom activities outdoors, a stark contrast to the bleak building interiors (see Figure 28.1).

28.1

The Multipurpose Outdoor

Classroom looking east
through one classroom to
the lawn mound and aspen
grove where students and
incarcerated women are
working. Environmental
Justice in Prisons Project,
Iowa State University and the
Iowa Correctional Institution
for Women, Multipurpose
Outdoor Classroom,

Mitchellville, Iowa, 2013-2014. Staff Decompression Area
(2014) A second project, the Staff Decompression Area, was
inspired by watching ICIM staff and officers gather in the
parking lot to “decompress” between shifts. This
multileveled brick patio was located near the staff
entrance, outside the secure perimeter.

28.2

One crew blurs the lines
between students and
incarcerated women to
create a healing garden for
women with special needs.
Environmental Justice in
Prisons Project, Iowa State
University and the Iowa
Correctional Institution for

Women, Special Needs

Healing Garden, Mitchellville,

Iowa, 2015. Special Needs Healing Garden (2015) Project three, a Healing Garden for women with special needs is designed for individual or small group counseling or respite from mental fatigue. It is located near the health-care building with views and access from the acute and sub-acute mental health units. In addition to the Healing Garden, the crew also established the first production garden, approximately one acre in size (see Figure 28.2).

Reflection as Evaluation and Validation

Reflection is the “intentional consideration of an experience in light of particular learning

objectives” (Hatcher and Bringle 1997, 153). Reflection in community engagement is

not only a method for assessing student learning but also a means for understanding

how the experience has helped to expand students’ moral and social capacities. When reflection activities engage the learner in examining and analyzing the relationship between relevant, meaningful service and the interpretative template of a discipline, there is enormous potential for learning to broaden and deepen along academic, social, moral, personal, and civic dimensions. (Hatcher, Bringle, and Muthiah 2004, 39) Working in a prison is intense, and there is little time to think about the

social, emotional, and physical energy flowing between people and the project

at hand. Students often are unaware of what they have learned or are unable to

articulate their expanded perspectives until they have had some distance from their

learning experiences. Therefore, “reflection acts as a bridge between conceptual

understandings and concrete experiences” (Felten, Gilchrist, and Darby 2006). Free writing is used to collect reflections from students in real time, in their most

authentic voices. Specific survey questions allow for comparing and contrasting students'

experiences. "Through reflection, the community service can be studied and interpreted,

much like a text is read and studied for deeper understanding" (Hatcher, Bringle, and

Muthiah 2004, 39). These reflections, when shared with the Iowa Department of

Corrections (IDOC) and ISU officials, validate continuing and expanding the partnership. The student reflections quoted throughout this chapter describe the impacts

of this partnership. Responses were gathered via a survey of past and current

students; the responses were anonymous, as directed by ISU's Institutional Review

Board. All students who responded reported a significant shift in their perceptions

of incarcerated people. Prior to this experience, I felt that all people incarcerated were hardened criminals who were constantly serious and angry. Afterward, I realized many of the women in the prison are victims of their own upbringings. ... I definitely viewed these inmates more sympathetically than I did before. Building Gardens and Social Capital EJPP is challenging the notion that healthy environments are an amenity rather than a necessity by creating gardens in prisons to improve the health and well-being of incarcerated women and staff. Helphand (2006) summarizes our deep connection to the natural landscape, illustrating why it is essential: "From the long evolutionary perspective, our landscape preference and experience is that of a 'survivor landscape,' one that ultimately sustained life. It's part of what makes us human" (213). EJPP aims to shift tightly held beliefs by listening to the concerns and desires of both prison staff and incarcerated women, educating our community partners about the benefits of access to healthy landscapes, and then building understanding by constructing therapeutic outdoor spaces. Former ICIW warden Patti Wachtendorf often referred to this partnership as a win-win: the students gain real-world experience, and the prison an improved landscape. More importantly, this winning combination

creates understanding and empathy between students and incarcerated people. This result is not exactly what students were looking to gain when they signed up for a design/build project in a prison. The survey asked students to reflect on what they hoped to gain and what they actually gained from working with EJPP. Most respondents expressed a desire to gain professional experience with design and construction. Many were candid about wanting a great portfolio project, giving them an advantage over students entering the profession having never planted a tree or built a stone wall. EJPP provides opportunities for hands-on learning, and it does stand out in a portfolio. It helped me get a job right out of college at a great firm. The project was extremely unique and gave my interviewers a lot to speak about during my interview. The following comment represents a common shift in students' priorities from a purely personal agenda to a concern for the greater good: Through interaction with IDOC staff and offenders, I gained a deeper understanding and profound respect for the rehabilitative nature of the programs at ICIW. ... It is easy to think of prisons as solely punitive places, meant to separate offenders from the rest of society, but learning about these facilities showed me the emphasis placed on lowering recidivism rates, addressing mental health and/or substance abuse issues, and giving offenders professional and personal skills necessary to successful lives after incarceration.

Learning Outcomes and Project Results

There are the obvious outcomes: physical interventions completed through three

complicated design/build projects and the addition of a production garden program.

The project has also had often-unseen impacts on students and incarcerated women

working side by side to create beautiful spaces in a landscape typically void of life.

The women report feelings of accomplishment and pride in providing beautiful

gardens and healthy food to fellow residents. Students learn to negotiate power

struggles, security protocols, and challenges inherent in any construction project.

The real lesson students learn, though, is that few people have access to the benefits

of well-designed, healthy environments (see Figure 28.3). The following three learning objectives represent years of revisions based on

the deeply engaged nature of this partnership. Earlier learning objectives were more

basic and less meaningful, such as “describe principles of biophilic design.” The

29 29. The SEED Process for Academia

Bloom, Benjamin, ed., Max D. Engelhart, Edward J. Furst, Walker H. Hill, and Davis R. Krathwohl. 1956. *Taxonomy of Educational Objectives: The Classification of Educational Goals*. New York: D. McKay Co., Inc.

Saltmarsh, John, Matthew Hartley, and Patti Clayton. 2009. *Democratic Engagement White Paper*. New England Resource Center for Higher Education. Accessed February 10, 2017. http://repository.upenn.edu/gse_pubs/274.

SEED Network. 2017. "SEED Evaluator 4.0." Accessed February 10, 2017. <https://seednetwork.org/seed-evaluator-4-0/>.

30 30. SEED Academic Case Studies

CU Boulder. 2017. "Praxis." University of Colorado Boulder Program in Environmental Design. Accessed March 30, 2017. www.colorado.edu/envd/program-information/community-engagement/praxis.

Lama Foundation. 2017. "Detailed Information." Accessed January 15, 2017. www.lamafoundation.org/about/12-detailed-about.

Lama Foundation. 2018. "About Lama Foundation." Accessed March 28, 2018. www.lamafoundation.org/about-lama-foundation/. Case Study B Pleasant Street Pedestrian Project The Pleasant Street Pedestrian Project reimagined and transformed underused, sometimes derelict, public spaces into pedestrian-friendly environments that promote community inclusion and empowerment. Project-Specific Student Learning Objectives • analyze factors contributing to the inclusion or exclusion of a range of stakeholders in the design process • create engagement tools that generate site-specific discourse • use full-scale prototype designs to inspire social and pedestrian activity Summary Formerly located within the University of Cincinnati (UC) Research Institute, MetroLAB is a UC School of Architecture and Interior Design (SAID) program established to promote "learning through the process of making, applied research and innovation, and community engagement and impact" (UC DAAP 2018). 1 The graduate architecture course Advanced Integration Studio (ARCH 7005) is a MetroLAB public interest design offering in the College of Design, Architecture, Art, and Planning. In the summer of 2015, course faculty and fourteen students partnered with the Corporation for Findlay Market (CFFM) in the Pleasant Street Pedestrian Project, 2 one of several collegewide initiatives with CFFM to energize community voice along Pleasant Street—a neighborhood vulnerable to development in the heart of Cincinnati. The project launched what was to become a series of faculty- and university-led efforts over the next year to realize the benefits of community inclusion in the built environment. Issues Addressed Social: Gathering Spaces, Empowerment, Crime and Safety Community-Based Challenge Located just two miles from the UC campus, Pleasant Street encompasses four diverse city blocks connecting the recently redeveloped Washington Park in the south with the historic Findlay Market 3 in the north. 4 It is a corridor in transition, mixing newer condominium development with existing residential and rental properties, as well as many vacant lots. Considered an

anchor in the community, CFFM sponsored this initiative to identify and foster social-impact projects that promote community interests. These interests emerged as the social issues previously identified. Pedagogical Goals The project's primary goal was to cultivate thoughtful, responsive forms of community engagement that encompassed local residents and organizations 30B.6 The first Pleasant Street event featuring neighborhood mapping. MetroLAB, Pleasant Street Pedestrian Project, Cincinnati, Ohio, 2015. 30B.7 The first Pleasant Street event featuring a photo wall. MetroLAB, Pleasant Street Pedestrian Project, Cincinnati, Ohio, 2015. (including representatives from several neighborhood organizations), commercial stakeholders, and CFFM (Kern 2016). This goal was accomplished through a variety of instructive pedagogies applied to the creation of three temporary community outreach events, each corresponding to a phase in the design process. These events were hosted in empty lots on Pleasant Street, which were cleared and improved for this purpose. Produced by the students, each event promoted a distinct objective supporting qualitative data collection. The first event championed getting-to-know-the-community activities such as photo booths, a video-interview station, and neighborhood mapping. Attendees were encouraged to respond to prompts that began to define neighbors' collective place-based interests. The second event included participatory cooking demonstrations, playscapes for children, and lighting installations—activities that brought people together to share ideas and observations. The third event presented design prototypes responding to community input collected at previous events.

30B.8

Construction of Pleasant

Street Parklet. MetroLAB,

Pleasant Street Pedestrian

Project, Cincinnati, Ohio, 2016.

Select Teaching Strategies 5

- Learning through making: The Pleasant Street Pedestrian Project leveraged incremental and to-scale development of concepts that evolved directly from stakeholder feedback. Early in the process, students activated underutilized public spaces, using discarded materials as a viable way to

engage community. Discovering that empty lots could not be transformed into permanent gathering spaces, students explored alternative concepts and adapted to the evolving design restraints through iterative making.

- Applying design research: Design research was instrumental to experiencing generative project development. Students applied newfound understanding of community-identified challenges obtained through observations, interviews, events, and charettes, and they executed designs with knowledge of materials and construction research. Testing supported design and development, and the results were incorporated into design recommendations and prototypes.

- Activating community : The primary goal of the summer session was to activate neighborhood discussion and identify shared public-space interests through sponsored community events (Kern 2016). This strategy was furthered when the Cincinnati-based organization Design Impact hosted a community engagement workshop for students focused on the concept of empathy building, helping to ground understanding of inclusive design. A temporary studio near Pleasant Street offered regular contact between the students and nearby residents.

Project Results and Learning Outcomes

The community's desire for a pedestrian-friendly streetscape directed the MetroLAB

students to develop a solution that bridged several considerations, including the need 30B.9 Pleasant Street Parklet at night. MetroLAB, Pleasant Street Pedestrian Project, Cincinnati, Ohio, 2016. for safe and socially inclusive gathering spaces. Students introduced the design for a parklet—a broadening of the sidewalk into one or more parking lanes—at community meetings in 2015, where it garnered enthusiastic support. Students temporarily installed four full-scale prototypes at parking locations on Pleasant Street in early July. The celebration associated with these installations became the conclusive vehicle for collecting valuable stakeholder feedback. In spring of 2016, eleven of the original fourteen students returned to conduct an independent study focused on the construction of the final parklet design. The Pleasant Street parklet was built under a revocable street privilege between the city and CFFM, which required that the structure be modular and allow for disassembly, if needed. The parklet was installed May 29, 2016, with no

predefined programming beyond that provided by the community, which will direct its use over time. Upon conclusion of the summer session, students had acquired new skills in participatory practices and demonstrated agile ways of directing engagement processes that were responsive to the community context. Collaborating with diverse stakeholders, who often had differing views, revealed the complex reality of working in the public interest. Students were exposed to the full scope of project

30B.10

Pleasant Street residents

playing chess in the parklet.

MetroLAB, Pleasant Street

Pedestrian Project, Cincinnati,

Ohio, 2016.

development predicated on community-driven desires and were subsequently

challenged to innovate within these parameters. Partners: University of Cincinnati College of Design, Architecture, Art, and Planning; Pleasant Street Committee; Corporation for Findlay Market; People's Liberty; Pleasant Street residents; Over-the-Rhine Community Housing; Over-the-Rhine Community Council; City of Cincinnati Department of Transportation and Engineering Credits: UC: MetroLAB studio director and professor, Michael Zaretsky; SAID professor and structural engineer, Tom Bible; students, summer 2015 Advanced Integration Studio and spring 2016 independent study Funding: UC Pathway B Third Century Materials Grant, People's Liberty, Carol Ann and Ralph V. Haile, Jr./U.S. Bank Foundation

Notes

1 At the time of this project, MetroLAB was operating within the UC Research Institute.

2 See the Pleasant Street Pedestrian Project at www.daap.uc.edu/metrolab/pleasant-street-pedestrian-project.html.

Issues Addressed

Social: Education, Civic Engagement, Equity

Community-Based Challenge

As a discipline, interior design is integrated into many expressions of the built

and communicative environment. Interior design is central to social well-being as

positioned through the nexus of economic and environmental factors; subsequently,

students of interior design are in an agile position to leverage social-impact

opportunities in their field. Shifting focus from exemplars of international high design

to local expressions of design for social justice helped emphasize the criticality

of the community-based challenge: students were guided through a local design

inquiry that put them in direct contact with built projects conveying a social concern

significant to the students' semester study of public interest design.

Pedagogical Goals

The project, A Social Approach to Design, facilitated applied learning through the

cityscape of Toronto, enabling interior design students to gain firsthand experience

of public interest design in context. A team-based case-study assignment introduced

the city as a learning lab. Students were given a list of city organizations where the

architectural design or programming might embody social design considerations. Project

sites selected for the fall 2015 course included cultural

institutions, community centers,

temporary housing facilities, and religious organizations (Leu 2015). The class worked 30C.12 This diagrammatic analysis documents the social aspects of the Centre for Social Innovation located on the fourth floor of Daniels Spectrum. More dots are shown in areas that function as open spaces where collaboration and exchange can occur. Design Seminar students, social programming analysis, A Local and Social Approach SEED Evaluation, Toronto, Ontario, Canada, 2015.

30C.13

Generous hallways

function as impromptu

gathering spaces for Daniels

Spectrum organizations to

come together as a single

multicultural community.

Design Seminar students,

social programming analysis,

A Local and Social Approach

SEED Evaluation, Toronto,

Ontario, Canada, 2015.

30C.14

This ground floor diagram of the Artscape Lounge and Show Me Love Cafe in Daniels Spectrum analyzes programming for

casual social interaction in an affordable housing neighborhood. Design Seminar students, social programming analysis, A Local

and Social Approach SEED Evaluation, Toronto, Ontario, Canada, 2015.

collectively with organizational contacts and corresponding architectural offices to

research social priorities manifested through the design of the buildings. The social lens

was quickly expanded to include analysis of holistic triple-bottom-line considerations.

Student-led teams conducted site visits, meeting with organization staff, building

occupants, and architectural-firm representatives. Students thus observed the alignment

of design intent, outputs, and impact based on needs driven by the community or client.

Select Teaching Strategies

- Focused class discussion: Topical discussions, supported by critical readings and film viewings, introduced themes of social justice in design, focusing on the role of the designer in a contemporary practice. Class discussions of the designer as facilitator versus consultant increased cultural sensitivity and built empathy. Examining processes of engagement and ways in which designers are meeting the needs of clients as communities reinforced the possibilities of working beyond the commercial traditions of interior design.
- City as learning lab: Connecting students directly with organizations, stakeholders, and architectural design teams helped realize the value of first-person research. Being able to contextualize the site requirements and to balance those with the organization's needs and the design limitations allowed students to make important connections about the design process, especially pertaining to social, economic, and environmental considerations. Emphasis on local design shifted student learning to a space surrounding the Toronto campus, which helped achieve a secondary but related goal: students developed an understanding of pressing local issues.
- Design evaluation: A modified version of the Social Economic Environmental Design (SEED) Evaluator tool guided students in the process of analyzing design outcomes. Reporting on the historic, cultural, and social conditions of the community served by the design solidified students' primary research with field 30C.15 High contrast colors, nonglossy finishes, and indirect lighting helps people who are visually impaired navigate through the facility.

Design Seminar students, sensory analysis, Canadian National Institute of the Blind: Case Study Analysis, Toronto, Ontario, Canada, 2013.

30C.16

The sense of smell is incorporated at critical junctures within the building: the Fragrance Garden is located near the front entry and the Cafeteria is the heart of the building. Design

Seminar students, sensory analysis, Canadian National Institute of the Blind: Case Study Analysis, Toronto, Ontario, Canada, 2013.

30C.17

Adjacent to every room are tactile braille signs to assist staff and visitors navigating through the facility. Design

Seminar students, sensory analysis, Canadian National Institute of the Blind: Case Study Analysis, Toronto,

Ontario, Canada, 2013. contacts. Students researched how the design created positive social, economic, and

environmental impact; how it responded to the needs of the community; and how stakeholders were engaged in the design process over the life of the project. Students further identified key issues for their project sites or programs, along with analysis supporting how design outcomes responded to these issues (Leu 2015). Project Results and Learning Outcomes Students produced written and visual research based on original discoveries made through site visits. They documented their findings in photographs and drawings to highlight how designs met key issues addressed in the work. Social, economic, and

environmental issues were scrutinized as significant to the combination of factors

affecting design results. Diagrams expressed responses to social concerns in gathering

and entry spaces, transitional areas, public versus private areas, and programming

analyses. Built models further elaborated on manifestations of design meeting social

needs. The team-based project output was a comprehensive presentation of findings,

accompanied by a booklet detailing the site-specific research results, design and

program analyses, and design evaluation using the SEED Evaluator tool. As a result of this project, students were able to confront issues of ethical

and moral responsibility and identify gaps or opportunities for social justice

endeavors in their work as interior designers. Students distinguished the diverse

contexts that define design in the public interest and translated social, economic,

and environmental considerations expressed by stakeholders into design outcomes.

Student research documented the importance of building empathy through firsthand

observation and working directly with project partners.

Partners: Ryerson University, Faculty of Communication and Design, School of Interior Design; fall 2015 organizations: Salvation Army Harbour Light Ministries; Regent Park Aquatic Centre; Ronald McDonald House; University of Toronto Multi-Faith Centre; Artscape for Daniels Spectrum; Diamond and Schmitt Architects; MacLennan Jaunkalns Miller Architects; Montgomery Sisam Architects; Moriyama and Teshima Architects Credits: Ryerson University: fourth-year interior design instructor, Christine Leu; students, fall 2012-fall 2015 Design Seminar

Leu, Christine. 2015. "RSID Fall 2015 IRH401 Design Seminar." Assignment sheet.

Pagliacolo, Elizabeth. 2016. "8 Top Interior Design Schools: Ryerson University, Toronto." Azure Magazine, January 14. www.azuremagazine.com/article/interior-design-schools-ryerson-university-toronto/.

RSID (Ryerson School of Interior Design). 2016. "Bachelor of Interior Design." Ryerson University. Accessed November 23, 2016. <http://rsid.ryerson.ca/program>.

Case Study D

Cooperative Education at the Detroit

Collaborative Design Center

The Detroit Collaborative Design Center (DCDC) provides integrated, engaged

learning opportunities for cooperative (co-op) education students pursuing a practice in public interest design; students work side by side with DCDC designers and university faculty on a range of projects serving Detroit communities. Project-Specific Student Learning Objectives • use iteration to create effective visual communication presentation materials for public interest design contexts • practice building trust with stakeholders through a range of community engagement strategies • discover the design and administrative practices of a university community design center Summary The University of Detroit Mercy (UDM) School of Architecture (SOA) is home to DCDC, a full-service, multidisciplinary, nonprofit community design firm. Among the oldest community design centers in the country, DCDC got its start in 1994 as a neighborhood design studio merging community need with student and professional talent (DCDC 2017). With more than twenty years in practice, DCDC

supports a mission of civic engagement and strives for sustainable community outcomes that promote resiliency. DCDC has provided a range of design services to over one hundred nonprofit organizations and low-profit limited liability companies (DCDC 2017). The center is recognized for its commitment to design-facilitation processes and neighborhood-level community-engagement workshops, as well as for its long-term citywide initiatives. UDM architecture students are required to complete two semesters of co-op internship credit working in a design office. 1 Students typically take Professional Experience I (ARCH 3010) in the third year and Professional Experience II (ARCH 3020) in the fourth year. DCDC provides a special opportunity for co-op students seeking experience in public interest design methodologies. An average of eight to ten architecture students apply for three or four internship positions at DCDC each semester (fall, spring, and summer). Interns contribute to public initiatives and are exposed to the full spectrum of design and community-engagement processes. Issues Addressed Social: Civic Engagement, Education, Equity Community-Based Challenge The Livernois Community Storefront (LCS), a DCDC project, was a catalyst for community connectivity and renewed neighborhood investment along the Livernois Avenue corridor in northwest Detroit. At the time of this project, the economic decline of the historic Avenue of Fashion, a once-celebrated shopping district, threatened the future vitality and cohesion of the corridor—the connective tissue between stakeholders that include businesses (both long standing and emerging), two universities (including UDM), and community organizations (ULI 2011, 11-12). Reimagining the Livernois Avenue corridor as a vital hub for commerce and

culture prompted the storefront initiative, which operated from May 2013 through

September 2014 as a pop-up venue and site for community events (Chadha and

Stanard 2013). The sustained momentum of the LCS project in collaboration with

local partners has aided in the corridor's on-going revitalization.

Pedagogical Goals

The LCS project provided co-op students with an applied-learning context: the project

demonstrated the phases of a community development project during its one-and-a-half

year life. Students supported the launch of the storefront on May 31, 2013, and played

an important role in facilitating the space's relationship with the community. Working

alongside DCDC designer-educators and UDM SOA faculty, students applied technical

skills developed in course work and newly acquired facilitation skills to professional

and community-engagement contexts relevant to the LCS project. Students attended

client meetings, participated in community-engagement workshops, prepared design

documents, and assisted with hands-on design/build projects. The co-op experience

through the LCS project and its leaders mentored students in their active engagement

with a high-visibility and transparent public project. 2

Select Teaching Strategies

- **Community engagement:** Co-op students are embedded in the DCDC community design center environment and are expected to participate in project-engagement efforts. Students gained experience incorporating community expertise into design development by documenting and participating in community meetings. They built relationships with local businesses and organizations in street-side conversations that allowed them to practice talking about their work. Students helped organize and staffed storefront events that interfaced with different stakeholder groups. Their activities helped promote LCS neighborhood inclusion, resulting in the creation of organizational items, such as a community bulletin board, calendar of events, and Livernois map.
- **Iterative production:** Co-op students come to the internship with varying levels of proficiency needed to be successful in the DCDC environment. The

30D.18

Co-op students work on iterations of the wall installation map of the Livernois corridor highlighting local businesses. DCDC, LCS

Wall Map, Detroit, Michigan, 2013.

30D.20

A DCDC co-op student

installs finishing touches on a neighborhood bulletin board.

DCDC, Fitzgerald Community

Bulletin Board, Detroit,

Michigan, 2014.

30D.19

A co-op student and a project

manager assemble the wall

map for the LCS. DCDC, LCS

Wall Map, Detroit, Michigan,

2013. experience grows competencies and student confidence through an openness to iteration and exploration. Working with other interns and staff, students use skill sharing to accomplish project goals. During the LCS project, students explored iterative production through a variety of team-developed project components. Tasked with the storefront window design, students created visual concepts, responded to input, developed prototypes, researched implementation options (laser cut vinyl, for example), and ultimately installed the work alongside project managers. Additionally, students workshoped their concepts at a design charette with members of the American Institute of Architecture Students (AIAS) to help determine construction and assembly methods for the Livernois map and community bulletin board installation.

- Teaching-hospital model: The teaching-hospital model

embedded within DCDC helps co-op students acclimate to the requirements and full scope of professional practice in a project-based public interest design context (Pitera 2014, 10-11). Students actively participate in the range of required interactions that support project decision making and implementation. For the LCS project, students researched, conceptualized, proposed, adjusted, and implemented a series of modest, scale-appropriate projects under DCDC mentorship. Using the methods typically deployed by DCDC and modeling these within their own projects helped realize learning outcomes and student-stated goals. By participating in a studio-based teaching practice, students are afforded hands-on learning in field experiences that promote their education through immersion.

Project Results and Learning Outcomes

During its operation, LCS hosted over one hundred events, including community

celebrations and organizational events that promoted and fostered the unique cultural 300.21 A co-op student installs exterior lettering on the LCS. DCDC, LCS Facade, Detroit, Michigan, 2013. identity of Livernois. Co-op students were active participants in LCS placemaking efforts that moved well beyond the confines of design/build. The storefront is still functioning as a pop-up space but is no longer run by DCDC. As a part of the UDM SOA co-op course requirement, students submit monthly evaluations that demonstrate their professional accomplishments and lessons learned. The evaluations are reflective documents that offer insights into students' expectations and the reality of their professional experiences in a community design setting. These evaluations help DCDC project directors and managers regularly adjust to student needs. Student learning objectives provide measures for learning outcomes, which are tracked over the course of the semester. Students exit the co-op internship able to adapt to diverse public interest design requirements, which encompass skills in community outreach, communication, design thinking, and rapid prototyping, among others. Partners: Detroit Collaborative Design Center, School of Architecture, University of Detroit Mercy; REVOLVE Detroit; Livernois Avenue businesses; University Commons Organization; Challenge Detroit; Detroit Design Festival; Surdna Foundation Credits: DCDC LCS Project: project director, Virginia Stanard; project managers, Ceara O'Leary and Krista Wilson; additional project leaders, Dan Pitera,

Christina Heximer, and Monica Chadha; co-op students during 2013 and 2014 semesters

300.22

The Livernois wall map on
the opening day of the LCS.

DCDC, LCS Wall Map, Detroit,
Michigan, 2013.

Notes

1 Co-op internship credit variables include full time (two credit, three-hundredhour equivalency over twelve weeks) and part time (one credit, one-hundredfifty-hour equivalency over six weeks) options.

2 See page 123 of Syncopating the Urban Landscape. Author Dan Pitera (2014) shares DCDC's three-pronged model for "knowledge-sharing" engagement, which includes "inform, feedback, [and] exchange"—a model realized in the LCS project with co-op students.

Chadha, Monica, and Virginia Stanard. 2013. "Impact Detroit as a Catalytic Converter." American Architectural Foundation. Accessed January 20, 2017.

DCDC (Detroit Collaborative Design Center). 2017. "About." University of Detroit Mercy School of Architecture. Accessed January 20, 2017. www.dcdc-udm.org/about/.

Pitera, Dan. 2014. "Amplifying the Diminished Voice." In Syncopating the Urban Landscape: More People, More Programs, More Geographies. Detroit Collaborative Design Center, University of Detroit Mercy School of Architecture, 9-12.

(ULI) Urban Land Institute. 2011. "Detroit, Michigan: Reviving Livernois Avenue as a Thriving Urban Main Street." ULI Daniel Rose Fellowship Program City Study Visit Report, Urban Land Institute, Daniel Rose Center for Public Leadership in Land Use, January 18-21. http://uli.org/wp-content/uploads/2012/06/detroit_2012_rose_F_web.pdf.

Case Study E

Com(m)a

Com(m)a is a multimodal project created in response to the 2010 earthquake in Chile.

Students and faculty worked with partner organizations and community members to

address reconstruction scenarios appropriate for a postdisaster community, resulting

in a series of design/build projects and workshops.

Project-Specific Student Learning Objectives

- recognize how collaborative, community-based design can affirm productive actions
- relate disciplinary practices to global contexts and needs
- formulate solutions that empower student- and community-centered assets

30E.23

An informational board used by Com(m)a Studio students to explain the scope of their project to the local community and to

Chilean academic partners. Com(m)a Studio, Enlaces, Talca, Chile, 2011. Summary In 2011 the faculty of the Department of Architecture, Interior Architecture, and Designed Objects (AIADO) at the School of the Art Institute of Chicago (SAIC) selected the Com(m)a project proposal for their annual GFRY Design Studio. 1 A transdisciplinary collaborative initiated in 2005, Motorola and SAIC have partnered through the GFRY Design Studio to support students in public-innovation projects (SAIC 2012). One proposal is selected every year for this high-profile, two-semesterlong opportunity where projects are developed from concept through implementation, a process that fosters original thinking and making (SAIC 2012). In spring and summer 2011, twelve graduate students and three undergraduate students, in disciplines such as sculpture, art therapy, interior architecture, architecture, designed objects, and performance, were selected for inclusion in the Com(m)a initiative. Issues Addressed Social: Disaster Response, Learning, Local Identity Community-Based Challenge On February 27, 2010, an earthquake registering 8.8 on the Richter scale ravaged central Chile. This event

destroyed homes in and around the city center of Talca, the historic regional capital of Maule, located approximately 158 miles south of Santiago. The site of the Com(m)a initiative was the Paso Moya neighborhood southwest of

Talca's historic center. An alliance between community groups and the Com(m)a

team realized substantive connections to this neighborhood where the earthquake

revealed social inequity: with the damage to housing came an assault on the social

fabric of a community and its local identity. Nongovernmental organizations, Surmaule, a Talca-based social action and

empowerment group, and Reconstruye, an affiliation of professionals and academics

committed to the advancement of justly built environments, were project partners

(Ciudades 2012). These two groups acted as intermediaries to connect the Com(m)a

team with local resources, including the Paso Moya neighborhood association that

participated in the process of identifying community need. 30E.24 The public billboard installed on the exterior fence allowed neighbors to leave messages for one another, and the community center to announce events taking place in the neighborhood. Com(m)a Studio, Diario Mural, Talca, Chile, 2011.

30E.25

The quincho located in

the center of the building

courtyard created a shaded

public space for neighborhood

events and gatherings.

Com(m)a Studio, Quincho,

Talca, Chile, 2011. Pedagogical Goals A goal of the Com(m)a initiative was to teach students how to solve complex embedded social, economic, and environmental problems. In small steps, remotely and on site, students tackled postdisaster response and in the process learned how to empower and mobilize community voice through design. Students were taught that they could be catalysts for positive development and productive conversation. By identifying a complement of community strengths and student abilities, the Com(m)a team developed a program of scale-appropriate, tangible design solutions. Com(m)a subsequently created a GFRY Design Studio precedent for locational learning—learning supported by preparatory activities off-site in advance of working on-site with a host community. Intrapersonal learning nurtured a deep connection to stakeholder needs while application of technical skills realized student potential to facilitate design responses in context. Select Teaching Strategies • Intercultural preparation: Preparation for cultural immersion came through a series of interventions that grew in scope over time. First, the spring semester course introduced students to the Talca community and the impact the earthquake had in Paso Moya. Next, secondary research provided historical and cultural lenses for generating student understanding and building empathy. With this context, students created initial design proposals that responded to an early appreciation of the issues affecting the community.

30E.26

The front yard of the community center was paved and furnished for families to enjoy the playground equipment also designed

and built by Com(m)a Studio students. Com(m)a Studio, Pavimento, Talca, Chile, 2011. In March the Com(m)a team conducted their first nine-day site visit to Talca where they directed site-mapping and analysis exercises along with programming and design studies in collaboration with community groups. In April the Reconstruye team traveled to Chicago to provide feedback on six project proposals that responded to community-identified need. Reconstruye and Surmaule facilitated weekly Skype meetings with stakeholders and conveyed feedback between the neighborhood association and Com(m)a.

- Quick-response templates: Through preliminary and remote research, teams developed working processes, or

“templates,” that could enable rapid response following a disaster. These strategies were accomplished through an instructor-created “Task, Tool, Jig” methodology. Big problems were broken down into smaller manageable parts appropriate for student initiation. In an effort to scale the enormity of the multise­mester project and practice an asset-based strategy, students self-identified individual strengths and related these to team tasks that they could feasibly accomplish within the stated goals and timeline. Connecting the task to tools for execution allowed other students to become technical skill-set collaborators. Jig operated as a systemic framework for guiding design process and implementation. Students were encouraged to work quickly and iteratively while acknowledging the relevance of their own expertise, as well as the expertise of their peers and the community they were working with. • Resource mapping: An emphasis on mapping social and material capital would determine project feasibility. Reconstruye and Surmaule functioned as primary contacts for on-the-ground development and worked with the neighborhood to organize and identify community resources and project goals. Through this asset-based lens, the Paso Moya neighborhood identified two areas for project development: (1) a series of community workshops that encouraged participants to confront grief and loss through the postearthquake rebuilding effort and (2) a series of design/build efforts that addressed improvements at the community center. These projects were developed between April and May; then the team returned to Talca for a three-week (June 20 to July 8) construction and implementation phase. Students worked within the limitations of the local conditions to determine material specification, use, reuse, and recycling or upcycling options available for their on-site construction. Co-creation activities were at the heart of their programming; this required a detailed understanding of the unique capacities of the community with which they were collaborating. Project Results and Learning Outcomes Com(m)a resulted in four community-center design/build projects (a quincho, 2 a playground, a courtyard, and a participatory message board) and four workshops (art making, art therapy, furniture repair, and video/documentary), conceived to support community members in coping with loss. 3 The final day of construction concluded

30E.27

The day before the group

departed, neighbors organized
an art sale and barbecue while
community partner, Surmaule,
provided live music. Com(m)a
Studio, Final event, Talca,
Chile, 2011.

with a celebration acknowledging the efforts of students
and neighbors alike. The

Com(m)a team left the neighborhood association with the
tools that the team

had purchased and guidelines—including blueprints—for
continued improvement

of the community-center facility. Surmaule monitored
facility use and organized

community-center events. Projects supported community goals
while offering

students the chance to gain expertise with technical,
hands-on craft and building

skills. Student learning came in pluridisciplinary forms
emphasizing reciprocity and

trust. Intrapersonal skills, such as listening and written
and verbal communication,

challenged students to adapt new ways of conveying
information. Partners: School of the Art Institute of
Chicago, Academic Studio Commissioner and Grant Writer;
Motorola Foundation, Grant Provider; Thornton Thomasetti,
Structural Design Consultant; Reconstruye; Surmaule; Paso
Moya neighborhood association and community members
Credits: SAIC: instructors, Odile Compagnon and Paul
Tebben; students, spring and summer 2011 GFRY Design
Studio

Notes

2 A quincho is similar to a pergola and is used as a
sheltered gathering space.

3 See the GRFY 2011 website for before
([www.odilecompagnon.com/
GFRY_2011_COM%28M%29A/AS_WE_FOUND_IT.html](http://www.odilecompagnon.com/GFRY_2011_COM%28M%29A/AS_WE_FOUND_IT.html)) and after (www.habitat.aq.upm.es/dubai/12/bp4419.html).

Ciudades para un Futuro más Sostenible. 2012. "ONG Reconstruye: Iniciativas en red para reconstruir de forma sustentable (Santiago de Chile, Chile)." Escuela Técnica Superior de Arquitectura de Madrid, Universidad Politécnica de Madrid Grupo de Investigación en Arquitectura, Urbanismo y Sostenibilidad, Departamento de Estructuras y Física de la Edificación – Departamento de Urbanística y Ordenación del Territorio. Accessed October 17, 2016. [http:// habitat.aq.upm.es/dubai/12/bp4419.html](http://habitat.aq.upm.es/dubai/12/bp4419.html).

(SAIC) School of the Art Institute of Chicago. 2012. "Com(m)a: GFRY 10-11." Accessed December 16, 2016. <http://www.saic.edu/academics/departments/aiado/comma-gfry-10-11> Case Study F The Farm Rover The Farm Rover is a mobile farming home base that provides shelter, access to basic facilities, secure tool storage, and temporary living space for farmworkers operating in flood-prone farming regions. Project-Specific Student Learning Objectives • apply principles of participatory action research (PAR) to a design/build project • formulate a plan for stakeholder engagement that uncovers needs related to traditional farming practices • practice community-based strategies for working across political, ecological, and fiscal divides Summary The Center for Sustainable Development (CSD) at the University of Texas at Austin School of Architecture (UTASOA) sponsors a summer program in public interest design. The program, which identifies a new challenge every year, consists of two complementary course offerings: a ten-week design studio (Advanced Design/Build Practicum, ARC W696) and a five-week seminar (Community Design Engagement Seminar, ARC F386M). The combination of studio and seminar explore the creative tension between design/build methods and community-based endeavors in support of building trust through a relatively brief period of stakeholder engagement. Reflective and experiential learning between the studio and seminar supports a mix of undergraduate and graduate students in architecture, landscape architecture, and community and regional planning. In summer 2015, Austin's Office of Sustainability challenged sixteen students to develop a response to urban floodplain farming that connected well-being with access to healthy foods. The challenge evolved into a project, developed in cooperation with two partner organizations: the Multicultural Refugee Coalition (MRC), an organization

devoted to the resettlement of the refugee community in Austin; and the New Farm Institute, the nonprofit educational branch of Green Gate Farms (GGF), a certified organic farm committed to sustainable farming in the spirit of community-supported agriculture. Issues Addressed Social: Refugee Empowerment; Economic: Entrepreneurship; Environmental: Environmental Education Community-Based Challenge A result of the Balcones Fault, Austin is divided east and west by an escarpment which exposes the city to flooding during storm events. Rapid development of Austin's urban core coupled with the propensity for urban flooding created an opportunity for the exploration of a floodplain farming problem scenario (Public Interest Design Summer Program, 2015, 16-19). While this land typically cannot be developed for purposes such as housing, for example, it could provide a sustainable use alternative: urban farming, and thus local food production, in zoned areas that promote the cultivation of land for the purpose of growing fresh, accessible food (Bossin and Frambach 2013). The mutual interest in promoting urban agriculture reinforces the agency of the partner organizations involved. Austin's Office of Sustainability sought solutions that explored floodplain food production (Public Interest Design Summer Program 2015). Together, MRC and GGF had a need for mobile infrastructure that would provision the productivity, comfort, and well-being of community farmers working in potential floodplain farm zones. These issues were addressed in combination and relative to Austin's floodplain infrastructure.

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Interest Design Summer Program, 2015, 16-19). While this land typically cannot be

developed for purposes such as housing, for example, it could provide a sustainable

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in potential floodplain farm zones. These issues were addressed in combination and

relative to Austin's floodplain infrastructure.

Pedagogical Goals

While GGF, located east of downtown Austin, is not a floodplain property, it

provided an accessible farm location for MRC participants and UTASDA students,

who were able to work together on-site in the development of this case study

project. This farm has a history of sustainable agriculture, is committed to education

and outreach, and was able to facilitate a valuable partnership between project

stakeholder groups and students. The on-site farming context was beneficial in

connecting students to the traditions, culture, and requirements of refugee farmers

relative to the design problem. Over the ten-week summer session, students were

exposed to a breadth of skill development that ranged from the interpersonal to the

technical.

30F.29

Students building on-site.

UTA summer 2015 Advanced

Design/Build Practicum, Farm

Rover, Green Gate Farm,

Austin, Texas, 2015.

30F.30

The Urban Farming rover

prototype featuring the

kitchenette with integrated

cistern, shaded areas for

rest, and storage spaces.

UTA summer 2015 Advanced

Design/Build Practicum, Farm

Rover, Green Gate Farm,

Austin, Texas, 2015. Select Teaching Strategies Faculty constructed learning scenarios that included stakeholders from diverse social, economic, and political contexts. Adopted strategies included those pertaining to research, cultural immersion, and design/build. • Research: Drawing upon principles of PAR, students undertook participant observation, key informant interviews, and spatial mapping to understand 30F.31 A student demonstrates the rolling shade screen. UTA summer 2015 Advanced Design/Build Practicum, Farm Rover, Green Gate Farm, Austin, Texas, 2015. how refugees' past farming practices might inform this project's design/build outcome (McIntyre 2008).

- Cultural immersion: Faculty fostered students' cultural immersion through activities that aimed to expand understanding and bridge differences among diverse stakeholders. Students worked with refugees at gardening plots that included Lanier High School (LHS), Festival Beach Community Gardens (FBCG), as well as the GCF farm site. Understanding the unique needs of this multi-actor farming community was a top requirement.

- Design/build: Drawing upon empirical research, students created design concepts that supported intercultural, community-based farming. They were resourceful in creating proposals and solutions that responded to environmental issues and ensured resilient practices. Material reuse and new fabrication thoughtfully responded to community need and context of use.

At the start of the project, students leveraged their research into design concepts

that benefited from stakeholder input. From this, students integrated a variety of

techniques and theoretical perspectives into predesign development across all three

partner organizations. Consistent participation at LHS, FBCG, and GGF allowed for

consideration of how existing gardening practices and spaces relate to a range of

proposed conditions. By participating in farm work activities alongside MRC project

stakeholders, students were encouraged to reflect upon the relationship between

design and empathy. Upon selection of design direction, students worked iteratively

in teams devoted to one of three areas: (1) "frame" (floor, frame, and roof systems),

(2) "fill" (interior components), and (3) "flip" (entry and access points) (Public Interest

Design Summer Program 2015, 37-43). Project Results and Learning Outcomes The integration of engaged research into the concept, design, and construction of the Farm Rover advanced a model for reflective design practice and provides a multifunctional response to floodplain farming and farmworker necessity (Perkes 2009). Welded to a mobile-home chassis, the portable structure is twenty feet by seven feet; it can support basic human needs and provide tool security and shelter for people working in the field. In this context, the Farm Rover resolves a number of farmworker-related requirements in one single functional system: it provides shade, rain shelter, personal storage for tools, a kitchenette, water supplied by a fifty-five-gallon cistern, a composting toilet, and areas for rest and community gathering. The exterior walls incorporate perforated metal and gas-powered hinges, which allow an operator to respond to various weather events. Technical achievements such as these will be increasingly important for exploring and testing how design disciplines respond to local conditions of global processes. The students completed the project with recommendations and plans for three variable rover units that respond to the evolving nature of the project and the processes to which it responds. Urban Farming (unit B), which maximizes space for seating while including resting space, was the concept that was built and deployed; two other units, Community Gardening (unit A) and Rural Farming (unit C), each provide spatial enhancement variables for rest, storage, or

seating (Public Interest Design Summer Program 2015, 51-55). The students embraced the goal of adaptable use in their programming, anticipating it in the generation of this first prototype. Testing of the Urban Farming unit in floodplain-farming applications is forthcoming. Partners: University of Texas at Austin School of Architecture; Center for Sustainable Development (UTA School of Architecture); City of Austin Office

30F.32

The Urban Farming rover

prototype features gas

powered hinges which allows

an operator to respond quickly

to different weather events.

UTA summer 2015 Advanced

Design/Build Practicum, Farm

Rover, Green Gate Farm,

Austin, Texas, 2015. of Sustainability; Green Gate Farms, New Farm Institute; Multicultural Refugee Coalition
Credits: CSD: studio instructor, Coleman Coker; seminar instructor, Kristine Stiphany; project manager, Sarah Wu; teaching assistant, Kaethe Selkirk; students, summer 2015 Advanced Design/Build Practicum and Community Design Engagement Seminar

Bossin, Meredith, and Heather Frambach. 2013. "Grow Food, Grow Local." *Imagine Austin* (blog). Accessed June 13, 2017. www.austintexas.gov/blog/grow-food-grow-local.

McIntyre, Alice. 2008. *Participatory Action Research*. Thousand Oaks, CA: Sage Publications.

Perkes, David. 2009. "A Useful Practice." *Journal of Architectural Education* 62 (4): 64-71.

Public Interest Design Summer Program. 2015. "The Field House: An Investigation into Floodplain Food Production in Austin, Texas." Center for Sustainable Development, School of Architecture, University Texas at Austin. <https://www.soa.utexas.edu/publications/2015-pid-report>.

Case Study G

On Site: Public Art and Design

Two studio courses—one in public art and the other in public interest design—

were joined to afford a unique opportunity for creative placemaking in a suburb of

Washington, DC. Ten temporary installations in a neighborhood “Superblock”

party became catalysts for community engagement that activated public space and

stimulated conversations about the future of the community.

Project-Specific Student Learning Objectives

- develop temporary art and design works that respond to and connect underutilized community spaces
- use art and design to build partnerships and advocate for local engagement
- analyze the physical and psychological meanings of place through interdisciplinary form making

Summary

In spring 2013, the Montgomery Housing Partnership of Montgomery County,

Maryland, and the Long Branch Business League approached faculty from the

Department of Art and the School of Architecture at the University of Maryland (UMD) to discuss an idea for a pilot public art and design course focused on the Long Branch neighborhood. Located 3.5 miles northwest of campus, Long Branch is a culturally diverse neighborhood in transition: it is expected to be heavily affected by the forthcoming light rail Purple Line, which will connect Long Branch to the Washington Metro transit system in 2022. This university-community partnership focused faculty and student efforts and neighborhood-created synergies on the potential of placemaking during a time of change. The course, “On Site: Creating a Sense of Place through

Intervention and Transformation,” united a three-credit undergraduate advanced sculpture studio

30G.33

A poster created for

distribution during the

Superblock Party with

information and locations of

all ten installations. Design:

Kristen A. Fox and Alison

Boliek Supinski, On Site, Long

Branch, Maryland, 2013. 30G.34 Located in the local playground, discarded plastic bottles were woven together with wire thread to form a translucent pavilion gently formed around existing trees that pierced through the structure’s roof. Renard Edwards, Kristen A. Fox, Alison Boliek Supinski, and Kristen Yeung, Thirsty for Change, Long Branch, Maryland, 2013.

elective (ARTT 4380) with five students and a six-credit graduate architecture studio

(ARCH 601) with twelve students. Students, faculty, and community partners

together played a critical, timely role in affirming the collective identity of the

neighborhood as it prepared to represent itself in local and regional planning and

infrastructure-investment discussions. Issues Addressed
Social: Local Identity, Strengthening Community;
Environmental: Capitalizing, Reimagining, and
Interconnecting Underutilized Spaces Community-Based
Challenge The Long Branch neighborhood in Silver Spring, Maryland, is characterized as a first-ring suburb of Washington, DC, and is composed of multiple and diverse communities that support numerous small, locally owned businesses. Challenged by a lack of investment in existing public infrastructure, lack of cultural amenities, and the development of the Purple Line, Long Branch sought to

increase the visibility and recognition of its existing assets and anticipated needs in seeking public-private partnerships like the one generated with UMD. Pedagogical Goals This first iteration of On Site was a proving ground not only for what might be possible in a community-based public-private partnership of this kind at UMD, but also for the potential of the course to evolve. The faculty recognized the challenges inherent in bringing together undergraduate and graduate students from two related but different disciplines. The benefits of the experience far outweighed any deterrents, however. By emphasizing the shared qualities of their respective disciplines, students were able to fuse sculptural and architectural form making with the spatial conditions of site-specific installation. Beyond the making, students had to understand the complexities of environment, place, and people, and cultures to propose appropriate site interventions responsive to community issues.

30G.35

Composed of neon

construction string tied to
the upper library courtyard
railings and fixed to the
ground below, this work
converged at different points,
creating colorful triangular
planes that interacted and
intersected with one another
and introduced a new spatial
geometry to adjacent spaces.

Stephen Neuheuser, Matthew

Miller, and Kristen Yeung,

In Plane Site, Long Branch,

Maryland, 2013. To achieve this goal, students worked in

cross disciplinary teams to generate

proposals that answered the project challenge: create a sense of place through

temporary interventions (Haslam 2013). This prerogative was supported by a series

of explorations that bridged two dominant themes in the course: one devoted to

formal, material, and spatial explorations and the other to social, cultural, and political

issues. Together, these themes helped frame the following activities: research

through precedents, site observations, photographic documentation, stakeholder

discussion groups, and reciprocal listening; technical skill development exploring

formal responses to materiality, building, space, site, and community contexts;

conceptual formulations responding to issues, physical environments, community

identities, and cultures; and design/build interventions, inviting interactivity,

exploration, and discovery.

Select Teaching Strategies

- On- and off-site project development: Students were guided through a sequence of assignments, both in the community and on campus, that helped them understand the possibilities for making work driven by community concerns. A combination of research-based inquiries and technical investigations merged meaning with making. The proximity of Long Branch to campus ensured that students spent time in the community as a structured part of their research practice, which was critical to understanding the scope of embedded issues.
- Iteration : Students managed the full scope of project development in each of ten team-developed installations inclusive of early prototyping, full-scale design

mock-ups, and installation and de-installation plans. Supported by 30G.36 Through color and form, Chairs 1, 2, 3 encouraged playful interaction—a place to sit, a place to relax, a space to move through—activating the library plaza and unleashing its potential as a community public space. Joseph Largess, Kurt Pung, Rochelle Heyworth Cusimano, and Rachel Mihaly, Chairs 1, 2, 3, Long Branch, Maryland, 2013. ongoing stakeholder feedback, students tested their work, verified material compatibility, oriented their designs to a specific location, and engaged local partners for required permissions and permits. • Communication and documentation: The Superblock party, held on May 11, 2013, in the Long Branch Library plaza, was a milestone in the semester-long project. Together with faculty and local partners, students organized, promoted and documented the event and served as “project ambassadors,” available to discuss their ten interactive works displayed on nearby Flower Avenue. The temporal nature of the project created an opportunity for students to gain experience telling the story of their work using communication and documentation methods so that the ideas and messages lived on. Project Results and Learning Outcomes The Superblock party helped reimagine Long Branch public spaces as engaged, vibrant, connected environments—places people want to be. The interactive installations displayed from May 6 to May 20 explored issues relevant to the community’s infrastructure challenges and provoked direct engagement with those issues. Since the academic collaboration, Long Branch has continued to affirm its identity through several artistic and cultural enhancement initiatives, including a highly visible mural program and pop-up performances (myMCMedia 2015; Lowry 2016). The pilot offering of this public art and design course has evolved into several subsequent site-based iterations that promote transformative placemaking and collaboration in communities throughout Maryland (Long Branch 2014).

30G.37

The team used hinges to
connect the triangular panels
to one another with the
understanding that the form
would stabilize once fixed to

the ground. Despite building
a series of physical and digital
models, the students were
amazed to see that the idea
worked when tested at full
scale in the studio. Kurt Pung,
Matthew Miller, Carolina
Uechi, and Rochelle Heyworth
Cusimano, Passage, Long

Branch, Maryland, 2013. 30G.38 This temporary gateway
offered an artful suggestion as to how one might
permanently connect disjointed areas of the neighborhood
in festive, unique, and beautiful ways. Kurt Pung,
Matthew Miller, Carolina Uechi, and Rochelle Heyworth
Cusimano, Passage, Long Branch, Maryland, 2013. Partners:
University of Maryland Program in Architecture, School of
Architecture, Planning, and Preservation, Department of
Art, College of Arts and Humanities, National Center for
Smart Growth Research and Education, and Art and
Architecture Libraries; Impact Silver Spring; Long Branch
Business League; Montgomery County Public Libraries;
Montgomery Housing Partnership; Montgomery County
Department of Parks; Arts and Humanities Council of
Montgomery County Credits: UMD: architecture faculty, Ronit
Eisenbach; studio art faculty, John Ruppert; teaching
assistant, Mark Earnhart; students, spring 2013 advanced
sculpture and architecture studios

Note

1 See the website Long Branch: Exploring Sites in
Transition ([http://artinplace.
wixsite.com/long-branch/10-installations](http://artinplace.wixsite.com/long-branch/10-installations)) for an overview
of all ten student projects and subsequent work in Long
Branch.

Haslam, Maggie. 2013. "UMD Students Debut Public Art
Installations." UMD Right Now, May 8.

Long Branch. 2014. "Art in Place: 10 Installations, Spring
2013." Accessed December 15, 2017.

<http://artinplace.wixsite.com/long-branch/10-installations>.
Lowry, Sean. 2016. "Paratext and the World of a Work in Public Space: Eisenbach and Mansur's Placeholders." *Unlikely: Journal for the Creative Arts*. Issue 2, Field Work, November.
<http://unlikely.net.au/issue-2/placeholders>. myMCMedia. 2015. "A Project to Beautify the Long Branch Business Community," YouTube video, 2:00. Posted by Montgomery Community Media, July 7. Accessed December 20, 2016. www.youtube.com/watch?v=7FMvvTfHAs0. Case Study H South of California Avenue The South of California Avenue (SOCA) project is a multimodal incubator that has ignited a series of placemaking efforts, generating numerous community-building activities that include the development of a nonprofit organization and a community center in the planning stage. Project-Specific Student Learning Objectives • develop community-based leadership skills • facilitate communication and relationship building with stakeholders by establishing a common design language • use design to leverage resilient community transformation Summary Louisiana Tech University School of Design (LTU SOD) offers two courses that unite its service-learning and social-justice initiatives: the Community Design Activism

30H.39

Runners take to the streets

in the inaugural SOCA Sprint

5K. CDAC, SOCA Sprint 5K,

Ruston, Louisiana, 2009.

Center (CDAC) is available to graduate architecture students (ARCH 545) and to

third- and fourth-year undergraduate architecture students as a repeatable course

(ARCH 445). An alternative to a field internship, CDAC promotes engaged learning

by providing access to ongoing social-impact projects in Ruston and surrounding

communities. One such project is SOCA, a long-term plan initiated in 2008 with

a twenty-year vision for the co-creation of a sustainable neighborhood south of

campus and California Avenue. SOCA challenges students to take a holistic approach

to community design problem solving by exploring embedded contextual themes,

such as well-being and education, as an entry point for understanding the social

conditions of people and place in the built environment.

Issues Addressed

Social: Education, Gathering Spaces, Strengthening Community

Community-Based Challenge

Ruston has a population of approximately twenty-two thousand people, of which

39.1 percent live in poverty, nearly three times the national poverty rate (US Census

Bureau 2016). With this concern at the forefront, SOCA arose out of a reciprocal

interest in building community between LTU SOD service-learning capacities and

assets in the impoverished neighborhood near campus. Five years of relationship

building between university facilitators, students, community partners, and city

leaders led to formalizing community interests, including improving education,

providing gathering spaces, and strengthening community among others. Addressing 30H.40 CDAC students facilitate painting of fence pickets for the SOCA community garden. CDAC, SOCA, Ruston, Louisiana, 2011. these human issues as design issues became a way of combatting the localized social strain of poverty. Coalition building by LTU SOD faculty and community partners through the SOCA project resulted in the development of Neighborhoods Unified for Hope (NU-Hope), an independent nonprofit. NU-Hope's mission

is to mobilize a constellation of partners and volunteers from across the city who seek to improve their community. CDAC functions as the design arm of the organization; there, student-led projects are instigated and enacted with a variety of partner organizations and stakeholder groups. Pedagogical Goals Students are integral to the long-term plan for SOCA. Service-learning activities are woven into course work and articulated based on the stated needs of the community challenge under investigation. Relying on predetermined phases, students explore the following (Singh 2010, 599-600): • understanding (discovery, research, documentation) • awareness (promotion of problems, community contacts) • expertise (best practices, precedents) • planning (charettes, community discussion, roundtable meetings, fund-raising) • design (with the community, university, and city) • implementation (building proposed projects, fund-raising)

30H.41

Completed SOCA garden

sign and entry. CDAC, SOCA

community garden, Ruston,

Louisiana, 2011.

These phases reinforce SOCA student learning objectives and emphasize the

cultivation of leadership skills, design facilitation through relationship building and

communication, and collaborative transformation of resilient communities.

Select Teaching Strategies

- Teaching leadership: Student teams tackle new or ongoing SOCA initiatives determined by community feedback and input. These challenges are framed through the six phases (listed earlier) and offer opportunities for students to engage in conversations and work with the community. Leadership skills are nurtured through students' ability to observe, listen, and discover— intrapersonal proficiencies that can build confidence by bridging understanding 30H.42 A student helps with arts and crafts projects at the 2016 block party. NU-Hope, SOCA block party, Ruston, Louisiana, 2016. and fostering mutual

respect through shared goals. Students can then apply leadership skills through the mentored organization, design, and promotion of events that build awareness of and generate funds for SOCA projects. • Building trust: Teaching leadership skills works hand in hand with building trust between students and stakeholders. A series of CDAC-sponsored annual events has helped build that bond, including fall block parties, a fivekilometer run, and year-round community-service outreach. Students become embedded in the neighborhood by participating in activities that promote inclusion and build fellowship. • Developing citizen designers: CDAC students are given opportunities to identify with and share the interests of the community. Shifting emphasis from building structures to building relationships creates a space for connecting with people and their needs where design problems and solutions emerge from the community context. The multiyear engagement process of SOCA is ongoing, with long-term benchmarks that support students in expanding skills beyond the technical. To understand their in-progress design challenges, students typically use methods like qualitative observations and analysis, interviews, mapping and diagraming, asset-based design, local media and government support, and stakeholder advisory groups. Project Results and Learning Outcomes Since 2008, SOCA has produced results ranging from community-interest events to planning and implementing a community garden, which has since served as an impromptu meeting space. Through these scaled developments and in the creation

30H.43

CDAC students review

feedback from a community

meeting and discuss next

steps to pursue. CDAC, SOCA

project, Ruston, Louisiana,

2017.

of NU-Hope, the need for a community center has emerged. In collaboration with the

city, which donated land for the center (Bergeron 2017), the Hope House will serve

as a gathering space, provide educational outreach, and strengthen community ties

by hosting programs of interest to the neighborhood. This project has spurred others

activated by a desire for enhanced connectivity, including redeveloping an abandoned

rail line as a shared-use path and planning sidewalks that promote safe walking and

biking. Students demonstrate learning in these initiatives through participation and

leadership, in weekly reflective journal entries, and in the results of their diverse

community design activities. Students are actively engaged in designing the Hope

House and procuring the necessary support for the project to be considered a

success to the neighborhood and the city. Partners: Louisiana Tech University School of Design Community Design Activism Center; Neighborhoods Unified for Hope; City of Ruston; North Central Louisiana Master Gardeners; North Central Alliance Partners in Prevention; Paul E. Slaton Head Start Center; Kiwanis of Ruston; Rotary Club of Ruston; North Central Louisiana Arts Council; Origin Bank; First National Bank; Ruston High School; local churches; local drug court; and numerous other organizations across the city Credits: LTU SOD: lead instructor and director of CDAC, Kevin J. Singh; students, CDAC (since 2008)

Bergeron, Nancy. 2017. "Aldermen Approve Revitalization Projects: Community Gardens, Center Aim to Unite Neighborhoods." Ruston Daily Leader, March 7.

Singh, Kevin. 2010. "Rebuilding a Community: Social Justice, Diversity, and Design." In 98th ACSA Annual Meeting Proceedings, Rebuilding, 597-603. Association of Collegiate Schools of Architecture. Accessed November 7, 2016. <http://apps.30H.44> Rendering of the proposed Hope House. CDAC, NUHope, Hope House, Ruston, Louisiana, 2017.

30I.45

What if a bus stop was reimagined as a community center?

CPID, With Sacramento, Sacramento, California, first bus stop

anticipated in fall 2017.

30I.46

Designing a participatory process for transit stop design that can offer community amenities, identity, and gathering spaces.

CPID, J. Nicole De Jong, With Sacramento, Sacramento, California, first bus stop anticipated in fall 2017.

organizations and the city and county of Sacramento, California. Initiated by the

Sacramento Area Council of Governments (SACOG), this collaborative brought

together CPID students, local governments, and the Sacramento-based organizations

La Familia Counseling Center and Mutual Assistance Network (MAN) to strategically

address issues of disinvestment in Sacramento. 1 Driven by social, economic, and

environmental challenges and their public health impacts, the With Sacramento project

asserts an inclusive process for assessing immediate and long-term community needs.

The project leverages anticipated cap-and-trade carbon tax credits for California public

transit improvements in the South Sacramento and Del Paso Heights neighborhoods.

CPID graduate architecture students, undergraduate seniors, summer interns, and

student fellows contributed to the ongoing research and development of this project.

Issues Addressed

Social: Strengthening Community; Economic: Access to

Services; Environmental:

Sustainability

Community-Based Challenge

SACOG worked with CPID to identify South Sacramento and Del Paso Heights as ideal

partner neighborhoods, each with strong organizational alliances through La Familia

and MAN. The state of California had identified the regions these communities are

located near or within as “disadvantaged” and eligible for access to the Greenhouse

Gas Reduction Fund (CALEPA 2014, 20). Characterized by urban infrastructure

disinvestment, these communities vocalized needs and opportunities around

community well-being and quality of life. Through student-generated community

engagement and outreach, vacant properties, safety, and access to goods and

services emerged as critical issues (CPID 2016). Public-transportation accessibility was identified as a significant factor of community interest and became a focal point for CPID research—one potentially supported by California’s cap-and-trade legislation. Pedagogical Goals With Sacramento proposes multiple opportunities for focused pedagogy. As a multifaceted, embedded community-based project, it offers students a unique applied context for honing outreach and research skills, working on-site with stakeholders through a variety of engagement techniques. The project also realizes the value of design process as a gateway to building relationships, community networks, and communication platforms. These nontechnical skills are not only necessary but vital when designing with public constituents. Because CPID establishes longer-term project partnerships, students experience projects at various stages of research and development, replicating the qualities of real-life work and enhancing students’ understanding of workflows, project roles, and life cycles. CPID also underscores team building between

individuals and student cohorts; by emphasizing responsibility to project goals, CPID constructs a legacy of knowledge among participating students beyond the conclusion of the academic term. Project faculty have facilitated additional goals: practicing methods of coproduction and design; using human values to motivate design thinking; and researching, building, and deploying a range of low- and high-tech tools to deepen community engagement. Select Teaching Strategies • Amplify community voice: Students explored varied engagement techniques supporting the open inclusion of diverse stakeholder groups. Students relied on community-organization networking and the inherent social capital

30I.47

Community input as

design research. CPID, With

Sacramento, Sacramento,

California, ongoing. generated with residents at engagements in Sacramento. Students canvassed neighborhoods and used mapping and diagramming to document their findings. They conducted observations and interviews, participated in public forums, created interactive games, and used descriptive writing, drawing, and asset-based design to verify the voice of the community. Students also helped refine the With Sacramento online engagement tool, which provides enhanced access beyond direct contact with project partners.

- Systemic integration: CPID emphasizes the concept of integration within the curriculum and in its projects. This concept is manifested in project problems and possible solutions where students evaluate social, economic, and environmental factors and the impact of these on the stakeholders. Students are encouraged to look holistically at the design intervention and consider systems, processes, and programs that expand solutions through design and development.
- Scale appropriateness: Students are guided through a planning process that frames small-scale design interventions as a way to build capacity and effectiveness with communities facing large-scale concerns. The incremental development of a project teaches students about the possibilities of modularity and the progressive organic growth of ideas toward long-term goals. Controlling

project scale (or tackling smaller aspects of a project) helps students work through problem solving and application scenarios iteratively, which serves both long-term planning goals and specific small-scale interventions. 30I.48 An architecture student speaks with Del Paso Heights residents about how they travel to, from, and within their community. CPID, With Sacramento, Sacramento, California, ongoing. Project Results and Learning Outcomes Since 2014, With Sacramento has generated the following outputs: • research materials representing both neighborhoods • a series of low-tech participatory events • visioning documents • a master plan for a sports facility in Del Paso Heights • reappropriation of an unused school for community activities • a design guide that empowers the local community and designers to participate in community-centric public-transit infrastructure The design guide promotes multifunction bus shelters: bus stops that are also community centers. Four bus-shelter concepts have been presented, each functioning as an in situ community center and gateway to the neighborhood. With Sacramento also collaborated with Ecosistema Urbano, using its Local(in) platform (Ecosistema Urbano 2010; CPID 2016, 80-90) to customize an online engagement tool specific to this project. This version of the community engagement tool is currently in testing prior to full release. Once launched, the tool will further support including the widest breadth of community voice. Students have participated in all phases of the project to date. Learning outcomes in the form of design proposals indicate a wide and deep understanding of community civic engagement techniques coupled with the requirement for coalition building through local, organizational, and political outlets relevant to this project (CPID 2016, 46-79). Design solutions respond to a varied set of circumstances and requirements, from large scale to small. Finally, the importance of a well-articulated design process that

30I.49

Diagram of project concept

from vacant lot to pop-up

shop to building. CPID,

Woodrow Merkel, With

Sacramento, Sacramento,

California, ongoing.

responds to the community context is evident; students engaged with and promoted

the inclusion of their partners in this work where commonly held values were tangible. Partners: Center for Public Interest Design, Portland State University School of Architecture; La Familia Counseling Center; Mutual Assistance Network; South Sacramento and Del Paso Heights residents; Sacramento Area Council of Governments Credits: CPID: instructors, Sergio Palleroni, B.D. Wortham-Galvin, and R. Todd Ferry; students since spring 2014, graduate-level Urban Design Studio (ARCH 580), undergraduate Urban Design Studio (ARCH 480), summer internships, and student fellowships; Ecosistema Urbano; Place Studio

Note

1 See the With Sacramento project at www.centerforpublicinterestdesign.org/cpid-sacramento-transit-guide/.

CALEPA (California Environmental Protection Agency). 2014. "Designation of Disadvantaged Communities Pursuant to Senate Bill 535 (De León)."

CPID (Center for Public Interest Design). 2016. Community-Centered Transit Stop Planning Guide. Portland State University School of Architecture, July 21.

Ecosistema Urbano. 2010. "Local(in), Online Mapping Tool." Accessed January 16, 2017. <http://ecosistemaurbano.com/portfolio/localin/>

31 31. Afterword: A Public Interest Design Educational Platform

Darling-Hammond, Linda. 2008. *Powerful Learning: What We Know About Teaching for Understanding*. San Francisco: Jossey-Bass.

Internet Live Stats. 2016. "Internet Users." Accessed August. www.internetlivestats.com/internet-users/.

Parker, Geoffrey, Marshall Van Alstyne, and Sangeet Paul Choudary. 2016. *Platform Revolution: How Networked Markets Are Transforming the Economy and How to Make Them Work for You*. New York: W. W. Norton.

Glossary

Allen, Stan. 2012. "The Future That Is Now: Architecture Education in North America Over Two Decades of Rapid Social and Technological Change." *Places Journal*, March. Accessed July 21, 2016.

<https://placesjournal.org/article/the-future-that-is-now/>.

Anti-Oppression Network. 2015. "Allyship." Accessed August 1, 2016. <https://theantioppressionnetwork.wordpress.com/allyship/>.

Argyris, Christopher, and Donald A. Schön. 1974. *Theory in Practice: Increasing Professional Effectiveness*. Oxford, UK: Jossey-Bass.

Bergan, Sjur, and Hilligje van't Land, eds. 2010. *Speaking Across Borders: The Role of Higher Education in Furthering Intercultural Dialogue*. Council of European Education Series, no. 16, back cover summary. Strasbourg, France: Council of Europe Publishing.

Boyer, Ernest L. 1990. *Scholarship Reconsidered: Priorities of the Professoriate*. New York: John Wiley and Sons.

Boyer, Ernest L. 1996. "The Scholarship of Engagement." *Journal of Public Service and Outreach* 1 (1): 11-20.

Boyte, Harry C., and Erick Fretz. 2010. "Civic Professionalism." *Journal of Higher Education Outreach and Engagement*, 14 (2): 67-90.

Brown, Don Robert. 2014. *Designed in Boston: A Personal Journal-History of the Boston Architectural College*. Boston, MA: Boston Architectural College.

Brown, Tim. 2017. "Design Thinking." IDEO University (website). Accessed April 20. www.ideo.com/pages/design-thinking.

Buchanan, Richard. 2001. "Human Dignity and Human Rights: Thoughts on the Principles of Human-centered Design." *Design Issues* 17 (3): 35-39.

Butko, Daniel, and Anthony Cricchio. 2014. "Designing the Build Experience Through Inhabitable Deliverables: Three Case Studies Housing Project-based Instruction." Paper presented at the 102nd annual meeting of the Association of Collegiate School of Architecture, Miami Beach, FL,

April 10-12.

Center for Art + Public Life. 2017. "What We Do."
California College of the Arts. Accessed March 29.
<http://center.cca.edu/about>.

Collaborative for Neighborhood Transformation. n.d. "What
Is Asset-Based Community Development (ABCD)." Asset-Based
Community Development Institute. Accessed March 17, 2017.
<https://resources.depaul.edu/abcd-insti>

Corporation for National and Community Service. n.d. "How
to Develop a Program Logic Model." 10-12. (Adapted from
the W.K. Kellogg Foundation Evaluation Handbook, 2004.)
Accessed May 9, 2017. www.nationalservice.gov/sites/

Dubbeling, Marielle, Henk de Zeeuw, and René van
Veenhuizen. 2010. Cities, Poverty, and Food:
Multi-Stakeholder Policy and Planning in Urban Agriculture.
Rugby: Practical Action Publishing. Dweck, Carol. 2006.
Mindset: The New Psychology of Success. New York:
Ballantine Books. Fitzgerald, Hiram, Karen Bruns, Steven
Sonka, Andrew Furco, and Louis Swanson. 2012. "The
Centrality of Engagement in Higher Education." *Journal of
Higher Education Outreach and Engagement*, 16 (3): 7-27.
Fuglei, Monica. 2015. "Radical Empathy: Teaching Students
to Walk in Others' Shoes." Concordia University-Portland.
Accessed August 1, 2016. <http://>