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**INSTRUCTIONS TO AUTHORS/MANUSCRIPT PREPARATION** Page 124
After I announced my university retirement last year, I was courted by the local Land Trust to become a board member. After all, I'd been teaching natural resource conservation planning for over 30 years. “Give me a year of retirement,” I responded. Well, it's been only eight months and I just signed on to the board. So much for keeping promises!

It wasn't the traditional role of land trusts, or conservancies—keeping private land private but protecting it from development while giving financial rewards and environmental benefits to the owners—that twisted my arm. Rather it was what the Palouse Land Trust wanted to use as a strategy for sustainability and growth that got my attention.

For a workshop to explore their future, organizers assembled a panel of local citizens, board and staff members, experts and regional and national advisors. And what emerged can only be described as a community engagement plan. The Land Trust sought to sustain its mission by expanding its image, widening the community's awareness of the Land Trust, and partnering with other local organizations in a symbiotic way—the local non-profit hospital, urban farmers and city schools, to name a few. Mental health and obesity can be managed by exercising in natural environments, and the Land Trust owns lands where groups of people could practice yoga, meditate, read, paint, and walk. Urban farms provide local foods that are fresh and healthy, and they too needed greater exposure and better protection in the region. And schools represent our future.

All of this is very new to an organization traditionally focused primarily on preserving natural resources and keeping working lands from becoming developed, but it speaks to the diversity of ways in which we can engage within our communities. The Land Trust is now dedicated to making regional communities more vibrant places in which to live and recognizes that by helping to sustain the communities it works in, it also sustains its own mission. A community organization can only sustain itself if it has goals that are shared with the community in its many forms. An engaged community, particularly one in which disparate organizations and agencies build bridges between each other, is also a resilient community.

This is not hyperbole. My challenge to all of you as you read this issue of JCES, is this: Read beyond the narrow confines of your discipline or expertise, and see for yourself how the myriad connections that make up these engaged communities of ours can change your world.

Trina Van Schyndel's book review sets a perfect stage for this challenge by introducing us to the notion of a next generation of scholars.

In Community Perspectives Keisha Ivey and her colleagues remind us of the need for a shared and common language of engagement—free of jargon. A shared language facilitates trust and this trust is even more important as our engagement challenges become more interdisciplinary.

Jessica Taylor, James Canfield, and Kajsa Larson, working from the observation that because universities are often embedded within a local or regional community, reveal how problems facing the community often become campus issues. They worked with teams of students to examine the issue of food insecurity and in so doing were intimately exposed to how a community frames an issue and how it uses resources and knowledge to help solve it.

Thomas Barth writes about change when he reflects on his career working to close the divide between communities and universities, and within the academy. This gap is often the result of lack of real incentives for engagement work in the tenure and promotion systems for faculty. He goes on to chide members of the academy for failing to share the benefit of engagement work with fellow academicians often enough. He concludes, “Perhaps most importantly, an engaged professor is able to demonstrate to students and practitioners alike the value of a university working closely with their community.”
Chinweike Eseonu and Jacob Hammar describe an Oregon State University program that is working to address the need for more culturally aware approaches to engineering design education and practice that can combat the culture of disengagement in engineering programs. They do this with a cross-disciplinary team of engineering, liberal arts, and Extension faculty working with teams of senior engineering students on nontraditional engineering design projects.

Elizabeth Gilbert and her team provided voice to marginalized communities (injection drug users) that enabled self-definition of problems, description of needs, and authentic engagement recommendations. Their work also helps define the nature and power of community, thus making intervention programs more effective.

Desre Kramer and her coauthors implemented a theory-informed community-change model that underscores the need for shared vision, evidence-based knowledge, a diffused but linked leadership, and rebuilding a sense of place and pride. They report on a community’s efforts to remediate environment damage from severe industrial pollution and celebrate the long-term, evolving, emergent process that brought a myriad of partners and community interests together.

Laura Nabors and her team from the University of Cincinnati provide an illustration of next generation engagement with their social interaction approach to involve and assess high school students as health coaches for younger children.

Johanna Schuch not only engaged in a critical socially relevant issue of Hispanic immigrant youths’ access to the labor market, but in the process, she also added to our knowledge of participatory action research.

Kaija Zusevics and her research partners studied the very 21st Century issue of genetic testing for inherited diseases among adopted people. Trust was found to be central to successful counseling and takes on three key dimensions: Trust in the intention of the research, trust that the adoption community will benefit from the results of research, and trust in the protection from misuse and abuse of genomic data.

To end I share a short quote from Desre Kramer, et al., “The restoration of the environment was a mutually reinforcing process: The greening of the city gave pride to its residents and attracted back those who had left and enticed newcomers to make Sudbury their home. In turn, this initiated even more community engagement activities, perpetuating a positive cycle.”

The Palouse Land Trust is not alone.
In early January, I joined 10 volunteers for a nocturnal bird survey in the coastal marshes of Louisiana. Our target was black rails, elusive birds the size and shape of chicks that hide deep within the cover of thick marsh grass. Researchers recently confirmed the year-round presence of this rare bird in rural Cameron Parish, and surveys were being conducted to locate and band the birds and get a better handle on their population.

The survey consisted of one person holding each end of a 50-foot long dragline, to which four noisemakers were attached about 12 feet apart from each other. One to two volunteers with nets flanked each end of the line, and the rest of us walked behind it, lighting our way forward with spotlights, and when necessary, lifting the noisemakers over obstructions like scrub trees. Two additional volunteers armed with nets walked behind the line with us, in case our quarry flew toward the middle of the line.

The group set off with high hopes and expectations, and two things became quickly apparent. First, environmental conditions were not ideal; it was very difficult to traverse the uneven grass that was 3–8 feet high throughout the marsh, sometimes over our heads. The terrain was also quite uneven, and it was easy to fall. It was also cold, with temperatures in the low 40s when we began our search at 6 p.m., and which dropped into the 30s as we towed the line. Second, our bimodal age distribution was a factor; about half the group were volunteers in their 20s. This cohort had an easier time negotiating the marsh than the rest of us, whose ages were 50+.

A small cheer went up as we flushed our first bird after about 10 minutes of walking; it was a Virginia rail, and a 20-something volunteer galloped after the bird like a gazelle, following its trajectory as we lit her way. She successfully netted the bird and most of us rested while the experts quickly determined the size and sex of the bird, took a blood sample for DNA analysis, then banded and released the bird. Although not a black rail, information about this specimen could still be used in research.

We resumed our positions and continued our tortuous path. We repeated this drill each time a bird was flushed by our dragline, with a yell or cheer, followed by a chase. Sometimes, netters were unable to capture the birds. More Virginia rails flushed, as did clapper rails and sora. Yellow rail was the most common species caught; each time we stopped, most of us relished the rest, while the researchers practiced their trade with sure hands and full transparency, answering questions that volunteers had. We also stopped for falls, as several of the volunteers (including me) lost their footing, one numerous times.

After the first half of our survey, with no black rails captured, the majority of the upper half of our bimodal age distribution bade their goodbyes and went to the lodge. I thought about quitting myself, but stuck with it despite near exhaustion. I did not want to miss a chance to observe a black rail, and I am typically game for a physical challenge. The second half of the survey was more difficult than the first, not only because I was more tired, but because we flushed almost no rails and there were almost no rest periods. I began to fall behind the line; I kept my spotlight high and did my best to light the way, but toward the end of the survey, the volunteers stopped and waited 20 seconds for me and my spotlight to catch up. I apologized for “not being able to hang,” but they laughed and reminded me that we were a team. I held my own the rest of the way, and was beyond happy when we reached the dirt road that marked the end of the survey.

The survey was supposed to take three hours; because of all the birds that were banded during the first half of our survey, it wound up taking four. We didn’t flush a single black rail.
My participation as a volunteer in this dragline survey reminded me a lot of community engagement and some of the articles in this issue of *JCES*. While participating in this survey was exhausting and uncomfortable on the one hand, it was uplifting on the other. Volunteers buoyed each other along with jokes, encouragement, and easy conversation. We lit each other’s way forward with our spotlights. When someone fell, others helped her or him up. When I fell behind, the others waited for me to catch up. And while the ultimate outcome wasn’t successful in terms of netting a black rail, the process of working together to try to find one was.

In community engagement, participation can be simultaneously exhausting and uplifting, because those of us who toil in the trenches of community engagement buoy each other. We take advantage of our diverse roles and our hearts (spotlights), work together, and cut each other slack when necessary. Even if it takes longer than expected, we get there together. And if the black rail represents something elusive, like equality or justice, even if we don’t succeed in finding it on our journey, we still gain something through the process of looking for it. And we try again tomorrow.
Escaping the Vines of the Ivory Tower: Reflections of an Engaged Professor

Thomas J. Barth

Abstract
Public administration faculty have an obligation to engage their communities to improve conditions and the efficiency and effectiveness of government and nonprofit organizations. Engagement is also important in transmitting to students the “craft” knowledge of the profession of public administration through applied projects, internships, case studies, and community-based projects. Furthermore, faculty develop professionally through engagement by gaining a deeper understanding of relevant theory and practice that can be shared in the classroom. Reluctance by faculty to invest time and energy in their communities because of traditional university biases toward more theoretical work can partially be addressed by wider dialogue on the benefits of engagement. This paper contributes to this needed dialogue by reflecting on how engagement has informed the teaching and understanding of public administration theory and practice as well as been a benefit to the agencies and communities served.

Introduction
Over the past few years, two comments from local practitioners have remained with me. In a planning retreat with our Master of Public Administration (MPA) Community Advisory Board, a city manager lamented the lack of a deeper connection between the university and the community, wondering why this is so and what can be done to increase collaboration. On another occasion, after a visit by my ethics class to his facility, a local nonprofit executive director stated, “We are all delighted to know that you have your feet planted in the terra firma and not entwined by the vines in your ivory tower” (D. Skinner, Personal Communication, 2014). The divide between universities and their communities reflected in these comments is puzzling to me, because as a professor of public administration at a regional comprehensive university, there are so many opportunities to become engaged in your community and the mutual benefit is clear. Indeed, the numerous examples of foundations, conferences, and university units focused on engagement imply that faculty members have an obligation to use their expertise to improve conditions in their community and enhance the efficiency and effectiveness of government and nonprofit institutions (nerche.org/index.php; https://communityengagement.uncg.edu/icce/; communityengagement.uncg.edu). The civic obligation is compelling, and it is evident that such engagement can have a positive impact on the community (Meltzer, 2013; Gazley, Bennet, & Littlepage, 2013). The importance of engagement in transmitting to students the “craft” knowledge of the profession of public administration through non-classroom projects, internships, case studies, and community-based projects is also well documented (Farmer, 2010). However, the cost to faculty of such engagement is also clear, particularly when it takes away from time needed to write and participate in more theoretical forms of scholarship more readily recognized by the academy (Saltmarsh, Giles, Ward, & Buglione, 2009). I agree that one of the reasons for this divide between communities and universities is the well-documented lack of incentives for this work in the tenure and promotion systems for faculty, but another factor is that faculty do not reflect and share the benefits of engagement with other academics as often as we should.

At the same time, there is also a cost to the communities that engage with universities, and all too often you hear communities complain about faculty and students who “helicopter in,” do their work taking up the time and resources of staff and clients, and then leave without any real impact on their operations and conditions. Academics have an ethical and professional responsibility to consider what their community clients have learned as well (Butin, 2010; Casey, 2014).

The purpose of this paper is to contribute to this needed dialogue, and reflect on how engagement has informed my teaching regarding public administration theory and practice in both the local government and nonprofit sectors, but also how it has enhanced the learning experience of students and the agencies in ways that are most difficult to accomplish in the classroom.
Specifically the article reflects on three questions:

1. How has engagement provided "teachable moments" for my public administration students and enhanced their preparation for professional careers?
2. How has engagement informed my understanding of public administration theory and practice?
3. How has this engagement been a benefit to the agencies?

This article will first outline the range of engagement activities that provide the basis for these observations, then reflect on the teaching lessons and impact on students and agencies, and conclude with not only how these experiences resonate with the theory and lessons provided in public administration textbooks and literature I utilize in human resources, leadership, strategic planning, and ethics classes, but how this engagement has made an impact on the leaders, staff, and clients of the agencies.

**Engagement Activities**

As a public administration faculty member, I have had the opportunity to develop relationships and build credibility in the community through a number of avenues, including consultations/facilitations, supervision of internships and community-based student projects, development of community advisory boards, and inviting practitioners to speak to classes. It is not feasible to respond to every request, so I attempt to identify those opportunities that are likely to provide useful experience for my classes and bridge theory and practice. For example, having the experience as a president of a nonprofit board provides useful examples and insights for my leadership class, such as building a culture and shaping a vision for an organization. Community facilitation roles provide an opportunity to observe and examine how theories on conflict resolution or strategic planning relate to practice. These connections also provide exciting opportunities for student projects, particularly in skill-based classes such as strategic planning, human resource management, and leadership. Students not only gain experience using tools and techniques, but they also learn about concepts not easily transmitted in the classroom, such as politics, group dynamics, and self-awareness.

Equally important, the engagement activities selected are a result of close collaboration with the agencies to ensure their needs are addressed. I have been amazed and inspired by the thirst of government and nonprofit agencies for interaction with university faculty and students. Based on my experience and dialogue, this desire for engagement by practitioners is for three primary reasons. First, there is the convening and facilitation power of the university. Universities provide an objective, relatively safe place for contentious community actors to come together to discuss difficult issues. Faculty without agendas can play the role of facilitator by structuring effective conversations in an atmosphere of trust. Second, university faculty have needed expertise in areas like strategic planning that community agencies may not possess. Third, faculty and students bring new energy and frameworks for addressing problems when agency resources are constrained. The following statement from a community client (a city manager) captures these benefits well:

University/community engagement is integral to both entities becoming best in class! In this era of scarce resources and challenging opportunities, effective partnerships and engagement becomes most crucial. As a partner, universities often bring untapped resources (physical, human, and others) to leverage creative resolution of issues. They also offer a safe place to share, discuss, and debate such matters. They are often seen as an independent source to facilitate community issues in a manner that assures all perspectives are shared. Lastly, as a significant economic engine in communities, universities have a vested stake and responsibility for active involvement and engagement in the communities they serve (S. Cheatham, Personal Communication, February 15, 2017).

The following list describes the array of personal engagement activities and student projects that provide the raw material and observations for this paper.

**Faculty Engagement Activities**

*Co-Facilitator of County Safer Schools Task Force*

At the request of the district attorney, I co-facilitated a task force of 16 public school personnel and community leaders in the wake of the Sandy Hook school shooting to assess safety conditions in the schools and develop a set of recommendations to reduce the risk of school violence.
Co-Facilitator of County Health and Human Services Consolidation Study
At the request of the county manager, I co-facilitated a group of managers from the Public Health and Social Services departments and other community stakeholders to develop a proposal for consolidation of the two departments. This effort also involved a team of students conducting focus groups and surveys referenced here.

Board President of Local Nonprofit Organization
Served as board president of a nonprofit that provides emergency and transitional shelter for children and families facing homelessness.

Board Chair-Elect, United Way Local Chapter
Served on board and community investment committee for the local United Way that collects and disburses over $2.5 million each year to local nonprofit agencies.

Co-Facilitator of Police-Resident Neighborhood Conversations
As part of a community task force on youth violence, I co-facilitated nine small group conversations between residents and police officers in high-tension neighborhoods.

Facilitator of Development of Organizational Core Values
At the invitation of the leadership team of the town of Leland, I designed and facilitated the development of a set of core values through a process that engaged the entire staff of the agency.

Facilitator of Strategic Planning Process
I was invited to facilitate the strategic planning process for the Mecklenburg Disability Awareness Coalition.

Student Engagement Activities

Client Satisfaction Interviews and Community Focus Groups for Health and Human Services Consolidation Study
I supervised students in design and implementation of focus groups with local church and nonprofit directors and conducted personal interviews with 174 clients of the public health and social services departments. Efforts were designed to obtain feedback on the quality of services and identify areas of duplication and inefficiency.

Employee Satisfaction Survey of Police Department
I supervised a team of students in working with the police department to survey officers on levels of satisfaction with working conditions and human resources policies.

Strategic Planning Projects With Local Agencies
I supervised teams of students in the design and delivery of strategic planning sessions with local government and nonprofit agencies. Students facilitated the examination and development of mission and vision statements, SWOT (strengths, weaknesses, opportunities, and threats) analyses, and identification of strategic issues facing the agencies. The variety of agencies included:

- Homeless shelter
- Rape crisis center
- County sheriff’s judicial division
- Disability resource center
- Employment center for displaced individuals
- Abused children center
- United Way Board of Directors
- Local government public utilities department

Study of Collaboration Within a Commission for the Prevention of Youth Violence
I supervised a team of students in an examination of the levels of collaboration between key community partners utilized by a local nonprofit in efforts to reduce youth violence by providing a variety of youth development services and programs.

Organizational Assessment of Communities in Schools Program
I supervised a team of students conducting interviews of staff on what is going well in the organization, what are the barriers to effectiveness, and what would they like to see changed.

Examination of High School Dropouts
I worked with a team of students to conduct 11 focus groups including 114 students, parents, and teachers to gain a better understanding of why students drop out and ideas on what the schools and community can do to lower the dropout rate.

Teachable Moments for Students and Community Members
To be prepared for the professional workplace, students in a graduate public administration program must not only be steeped in the literature
but have the opportunity to learn by applying theories and concepts in the field. Community members also benefit by being exposed to different frameworks or approaches to challenges they face. The following discusses five salient learning lessons for students and agency staff engaged in the various community-based projects described.

**Trust the Process**

In the comfort and controlled environment of a classroom, it is relatively straightforward to walk through Bryson’s (2011) SWOT analysis. I take the students through a measured discussion of the definition of each component, and manage the time allotted to each step of the process to stay within the class schedule. Bryson provides a wonderful conceptual map for how the strategic planning process should flow in a controlled setting. However, when the students go into the field and apply the model with agency staff, they experience a different world. Under time pressures, students experience staff jumping in with solutions before the SWOT analysis has been done. Some participants are convinced they know what the problems are, and they do not truly appreciate why there is time to be taken to first go through what they see as a painstaking group SWOT discussion to uncover what they already know. Students have to learn to tactfully acknowledge these contributions and feelings, but firmly ask the participants to honor the process and task at hand, reminding them of the value of getting as much feedback from everyone at the table first. The process then produces ideas and information that participants may not have known, and better solutions with more shared understanding and buy-in. The agency partners in turn have the rare opportunity to step back and focus on the substance of the conversations, and can rely on someone else to keep them on track. This is particularly useful when there is strong disagreement over fundamental elements of a mission or vision statement expressed by strong personalities or powerful stakeholders. Having a well-structured process helps to ensure that all voices are heard and fully vetted.

This lesson was evident to students to the benefit of the local United Way Board of Directors when students facilitated a process to identify the strategic issues facing the organization. Although intimidated by leading an audience of experienced, strong-minded corporate executives, they followed the process and assisted the group in identifying the need for a committee to focus on developing a new communications strategy for the agency. This effort led to the execution of a series of focus groups with potential donors and a new emphasis on social media and new venues for sharing their message. The CEOs shared that they could not have gotten there without the structure provided by the students. Students and participants learned the value of the phrase, “trust the process.”

**Power of the Facilitator Role**

Classic textbooks on organization development and process consultation address the fundamental importance of the role of the outside expert providing assistance to an organization (French & Bell, 1998; Schein, 1998). Students are taught the basic difference between a consultant providing technical expertise and one providing facilitation. If you are brought in as a technical expert, you have the responsibility to use this expertise to provide solutions to problems. However, if you are brought in as a facilitator, your role is to design and foster a process that provides an opportunity for participants to hear each other, develop a shared understanding, and find their own answers. In his work on catalytic leadership, Luke (1998) describes the power of the facilitator role in bringing diverse interests together by focusing on common problems rather than having a stake in one particular response or solution. The power and value of the facilitator role is the absence of a perceived independent agenda or opinion; you are there to make sure the process provides an opportunity for all participants to be heard and decisions are made with legitimacy. Thus a skilled facilitator is careful to report back accurately only what is shared. This fundamental difference between a consultant providing technical expertise and a facilitator shepherding a process must be experienced to fully appreciate. In the field, students quickly recognize the power of this role when disagreements are raised. For example, when a statement by the student as facilitator is challenged by agency staff, the students learn to respond not by arguing but by referring the individual back to the data collected from the participants themselves; this technique returns the focus to the data and the other participants who provided the data instead of the facilitator. Students gain confidence and an appreciation for the power of the facilitator role by going through such an experience (and also the importance of accurately reflecting participant statements and feedback!). Public administration students need to experience the value of being a process rather than content champion. Agency partners react in a positive
fashion to students in this facilitator role because they realize the inexperienced students do not have any answers, so a more relaxed, less threatening climate is evident compared to when a more experienced, older facilitator is present. The agency staff in a sense adopts the students as part of their team and the focus is on shepherding each other through the process, which is precisely the goal of a facilitated session. A local government department director summed up her experience by sharing, “…the university serves as a neutral convener or facilitator, which allows us to bring together community interests or groups that otherwise would not sit down together” (B. Schrader, Personal Communication, February 17, 2017).

Relating to Diverse Citizens

Students in graduate professional degree programs like an MPA often come from the professional or upper classes, with little exposure or understanding of the lives of citizens from other socio-economic, racial, or cultural backgrounds. In ethics class we examine what it means to serve in the public interest, and discuss the six constitutive standards of the public interest articulated by Goodsell (1990). One of these standards is “agenda awareness,” which focuses on the role of the public administrator in demonstrating concern for the needs of the poor and powerless rather than responding primarily to pressures from powerful and well-represented groups. A useful way of emphasizing the importance of this standard is providing opportunities for students to interact with citizens outside of their comfort zone. An excellent example is a series of personal interviews conducted by students of a random sample of individuals in the waiting area of the local Department of Social Services. These individuals were of all ages, genders, colors, and economic backgrounds, waiting to apply for any number of services, including Medicaid and food stamps. Some students waded right in, sat down next to people, and started chatting with them, explaining the purpose of the interview and how the information would be useful. However, other students were visibly uncomfortable and hesitant about how to approach individuals. One female student in particular struggled and had difficulty gaining cooperation for the interviews. Perhaps not surprisingly, she was very well dressed, with makeup, jewelry, and well-coiffed hair. She reported back to me in distress, noting that not only did people refuse to be interviewed by her, but she was convinced they made sure no one else in the waiting room would speak to her. Upon reflection, it was clear that the background and life experience of the students mattered. Coming from a fairly sheltered, upper-class background, the lack of comfort by the student was sensed by the clients, suggesting judgment of their circumstances. Her physical appearance exacerbated the situation, as she had the look of someone going to an expensive lunch downtown. Other students had the foresight from experience to dress down a bit to jeans, no makeup, etc., so that they could blend in better. Needless to say, this experience made a lasting impression on all of the students. Another teachable moment for the students was the discovery that one of the people waiting in line for food stamps was another university student; this discovery provided an understanding that recipients of social services are not as different from them as they might think!

Another experience that addressed cultural diversity was the focus groups of high school dropouts. The vast majority of graduate students likely have reasonably positive experiences and success in elementary and high school settings or they would not be in a position to pursue a professional graduate degree. It was instructive for them to listen to African American students and parents share their level of discomfort with schoolteachers and administrators, and their strong perception of a double standard for white and black students in the application of discipline measures. Furthermore, focus group discussions with incarcerated youth revealed the lack of appreciation for how education can make a difference in the quality of their lives; there was a strong sense that these youth lacked positive role models and basic socialization from parents and community regarding the benefits of education that graduate students may take for granted. It is one thing to read this in a book or article; it is quite another to hear it up close inside a detention facility where one can feel the hopelessness and resignation to a life on the margins. These student experiences speak to Farmer’s (2010) concept of the “othering” of certain citizens to mere recipients of services, where they are treated “…as of little or no account, as of little or no importance, as of second or no class” (p. 134). The theme here is for the importance of MPA programs, which are preparing students for careers of service to the whole community, to sensitize students who are often the products of what is disturbingly still a society largely segregated along racial, cultural, and economic lines. As a local government official
The Importance of Adaptability

An important skill inherent in teaching about leadership is the ability to adapt to the situation. Northouse (2013) cites the importance of Hersey and Blanchard’s theory of situational leadership, where an effective leader must adapt his or her style to the context of the situation, including the nature of the task and the developmental level of people involved. Kouzes and Posner (2012) discuss how exemplary leaders are “in the flow” (a state of optimal performance) by mastering the ability to “continuously assess their constituents’ capacity to perform in the context of the challenges they face” (p. 257). Again, it is possible to simulate this skill in the classroom with scenarios, but student experience in the field is more powerful. In the process of conducting field interviews to examine the effectiveness of collaboration in the community, students learned a very hard lesson about the need to adjust interview questions when it became apparent that their presence in the community was becoming disruptive to the relationship between a new board and executive director (J. Jones-Halls, Personal Communication, 2014). In their zeal to collect data, the students were not sensitive to the changing interpersonal dynamics and lack of trust between the board and executive director. In a similar vein, students learned they had to adjust the survey questions being asked of the police officers. Again, the questions they developed were appropriate to addressing employee satisfaction levels, but they discovered that in the real world there are questions that the leadership is not ready to address. This experience is also an illustration of the concept of “meeting people where they are,” meaning that one must assess the readiness of an organization for a message or decision. Students learn that they must be ready to veer from a pre-determined process or plan. Finally, students learn from having to adapt to the messiness of the world outside of the classroom. A group of students engaged in an organization development project with a local after school enrichment program was excited to collect insightful data from staff about concerns with the leadership of the agency, including perceptions of favoritism and inconsistent treatment that was damaging staff morale. However, when the students shared these findings with the entire agency, the executive director exploded, informing me that the students have done “untold damage to the agency” (L. Hicks, Personal Communication, 2013). Of course, what she really meant is that this data was an indictment of her leadership and made her look incompetent to the staff. With coaching, I demonstrated to the client that she had the opportunity to be a great role model to her staff by showing she is willing to listen to them and make adjustments to her leadership style. However, the students learned a hard lesson about the nature of sensitive information and the importance of clearing such information through appropriate channels before making a presentation to a wider audience.

It’s All About Focus and Perseverance

The world of the practitioner can be captured well by colorful images, such as the ranger putting out forest fires, the stretch figure being pulled in multiple directions, or the swimmer fighting to escape a whirlpool or riptide. Mintzberg (1987) notes the importance of strategy to focus effort and promote coordination of activity, otherwise you can be “rearranging deck chairs on the Titanic” (p. 26). Another relevant principle is the “80/20 rule” or Pareto Principle; when applied to organizations it means that your greatest gains come from 20 percent of your efforts, or conversely, we spend 80 percent of our time on the least important matters! (Koch, 1998). These images and concepts help students understand the daily challenges of practice in the government and nonprofit worlds, where there are multiple pressures from stakeholders of every stripe providing distractions and emergencies that regularly disrupt carefully crafted plans and timelines. The work can be exhausting and dispiriting, with tangible signs of real progress difficult to decipher. Although such images help, students benefit from the opportunity to experience this world and understand the challenge of keeping focus on what is truly important and persevering against multiple obstacles. In their projects facilitating strategic planning sessions, students experience the challenge of keeping agency staff with a range of styles, ideas, and solutions to focus on what is truly fundamental to agency success. They also learn the sheer energy and resolution required to communicate with management and staff, obtain responses to requests for information, and simply get people to the table. They also learn that not everyone lives in the world of social media, email, and text messaging; sometimes there is no substitution for a real voice or personal interaction!

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For example, despite the challenges of connecting with a small nonprofit in a rural community in a separate county, the president of the agency reported the following:

The MPA students had a great impact on Pender County Christian Services. They provided help in various areas such as developing manuals for the Board of Directors, employee manuals and strategic planning for the Board. The students also revised our mission statement and developed a vision statement as well. I was impressed with the knowledge these students had acquired in their studies and [how they] utilized their skills to enhance our mission. They were truly a blessing to our organization and I am grateful for the opportunity to have worked with them (S. Harris, Personal Communication, February 13, 2017).

Connections to Public Administration Theory and Practice

Beyond providing teachable moments, observing and working with community members has also provided several connections to public administration theory and practice that have deepened my appreciation and understanding of the literature I discuss in the classroom and provided useful lessons for agency staff. Five of these connections are particularly salient.

Implementation Can’t be Emphasized Enough

Translating ideas into action is one of the clearest challenges for a leader. There is no shortage of talkers, but far fewer doers. Hrebiniak (2006) suggests that “the problem with poor performance is not with planning, but with doing. Making strategy work is more difficult than strategy making” (p. 12). From my experience as a community facilitator and board leader, I don’t think the answer is simply that people lack commitment, time, or energy. That may be partially the case, but I think it is also due to a failure of leadership and structure. There is a great deal of attention in the literature about the need for leaders to be transformative by inspiring people with great vision and passion (Burns, 2003). Although not nearly as exciting, I would suggest that more emphasis be placed on the need for leaders to communicate specific goals and clarify the roles of followers in achieving those goals. People are energized by knowing exactly what is expected of them and how their work is essential to the agency’s performance. Conversely, energy is sapped by ambiguity and vagueness. Grand visions are wonderful, but just tell people what needs to be done today or this week! There is also a great deal of discussion in the literature about fostering creativity and empowering employees, but people still respond to structure where there are clear timelines, areas of responsibility, expectations for products, and accountability. As Rainey (2009) notes, this observation reinforces the relevance of the path-goal theory of leadership, where “effective leaders increase motivation and satisfaction among subordinates when they help them…see the goals, the paths to them, and how to follow those paths effectively” (p. 319). In my work with community task forces and commissions, I consistently hear members lamenting about how all they do is talk; they have great ideas and stimulating conversations but they cannot seem to make concrete progress (D. Sobotkin, Personal Communication, December 6, 2016). This is particularly true of organizations that lack a process champion, and is most evident when a process champion is lost. As an outsider with fresh eyes and a degree of legitimacy as a faculty member, I have been able to work with such organizations to identify champions and give them responsibility for taking the lead on specific, concrete tasks. Furthermore, organizations must celebrate victories and the achievement of milestones; this is difficult without established benchmarks. Although his focus is at the national level, Volcker (2014) is speaking to this very issue when he quotes Thomas Edison as stating, “Vision without execution is hallucination” (p. 440). Grand talk and ideas are wonderful, but what this country needs is more attention to the daunting challenges of implementation, and Volcker challenges public affairs programs to focus less on policy and more on management and performance measurement. Finally, in his argument for why CEOs fail, Charan (2007) suggests it is not the lack of vision or strategy, but the absence of the emotional strength to implement through “execution, decisiveness, follow through, delivering on commitments” (p. 5).

Creating a Sense of Urgency and Sustained Momentum

In the wake of the Newtown school shootings, New Hanover County commissioned a task force to examine their school safety policies and programs. Other school systems across the country have done likewise. However, this task force completed its work one year after the shooting, and
eight months beyond that they were still working on piloting the recommendations in select schools. This experience raises several questions for the world of public administration. First, how does one instill a sense of urgency in large bureaucracies with diffused responsibility, especially when the risk seems removed? The “it can’t happen here” syndrome is evident, even though it is clear from the history of these school shootings that it can indeed happen anywhere. Secondly, how does one sustain momentum driven by an initial crisis amidst ongoing competing daily pressures? I find this experience resonates with Luke’s work on catalytic leadership (1998), where he suggests that one of the fundamental tasks of public leaders is raising awareness by focusing public attention on an issue. He captures the need to go beyond just statistics and make the issue salient through personal experience and anecdotes that make an emotional connection with citizens. Our local district attorney has an innate sense of such catalytic leadership, taking advantage of every public forum he has to share compelling stories of the youth violence he experiences in his daily interactions in the criminal justice system. He gives both the young offenders and the victims a face. At the organization or task force level, the challenge of urgency and sustained attention to an issue speaks to the classic bystander effect that Cooper (2012) addresses as an ethical challenge in bureaucratic organizations. Organizations or groups can diffuse an individual sense of responsibility unless care is taken to create a “constitutional” organization where participation, authority, and accountability are shared and expectations for all levels are clearly articulated. Importantly, a constitutional organization does not have authority and responsibility focused at the top or among any small number of participants, thus discouraging the idea that the problem is someone else’s job to address.

The Power of Organizational Culture

Working with both the New Hanover County Health Department and Department of Social Services drove home the relevance of organizational culture in order to understand different agencies. Schein (1985) defines culture as the “deeper level of basic assumptions and beliefs that are shared by members of an organization, that operate unconsciously, and that define in a basic ‘taken-for-granted’ fashion an organization’s view of itself and its environment” (p. 6). Furthermore, these assumptions are manifested externally by language, symbols, and other physical evidence that he calls artifacts. I was struck immediately by the different “feel” of the two department waiting areas. The first thing you encounter at the Social Services Department is a street level, isolated building where upon entering you encounter a metal detector staffed by two to three security guards. You then proceed to one large windowless room with people either sitting down or in line to see a receptionist at a window. Something is playing on the televisions but there is no sound. It has the feel of a department of motor vehicles office. You do not see many smiles. In contrast, the Health Department is located adjacent to the campus of the regional medical center. You walk upstairs where you are greeted by a smiling security guard, and there is no metal detector. Instead of one large room, there are different waiting areas with staff in white coats calling people in to the inner offices when their name is up. CNN is on the television monitors with sound. It has the feel of a doctor’s office. The point of this comparison is that these artifacts reflect deeper underlying assumptions about how the agencies view themselves. Social Services is a processing model, where people are potential recipients of services who must be screened to determine eligibility. The Health Department is a medical model, where people are patients in need of treatment or assistance. You process things; you treat people. Not surprisingly, the client satisfaction levels were much higher in the Health Department. However, you must physically sit in these waiting areas for a period of time to truly appreciate the different cultures. This experience reinforces the classic writings of Cyert, March and Simon cited by Gary and Wood (2011) in their discussion of the influence of mental models: “managers have limited information processing capabilities and rely on simplified mental models of reality to organize their knowledge and make sense of the world” (p. 570). The mental model of “processing” versus “treating” reflects a deeper culture of assumptions and beliefs that permeates these organizations and can operate at an unconscious level.

My work with a town in Brunswick County also demonstrated the power of leadership to shape the organizational culture. The local government leaders saw an opportunity for the entire organization to build a stronger set of core values with a move to a new building. I was asked to facilitate a series of sessions with different department employees to
develop a new set of core values that could form the basis for a renewed sense of shared mission and direction. This effort produced a set of five core values: Communication, Respect, Collaboration, Supportive Work Environment, and Service Excellence. A year later, a department head who oversees the initiative reported a “marked improvement in employee morale” and much more communication occurring among employees who have been working on task forces focused on developing new policies to further imbed each of the core values. He noted that the key to success was the use of an external university facilitator to bring the employees together and the continued reinforcement of the values by the town manager (G. Vidmar, Personal Communication, February 15, 2017).

Building Trust by Focusing on Common Goals and Values

My involvement in several community facilitation projects has provided an opportunity to observe up close how it is possible to take a group of professionals with entrenched, opposed interests and zero trust to come together and have productive discussions. In North Carolina, new legislation provided county commissioners with the authority to consolidate their public health and social services departments and have them report directly to the commissions or the county manager. This represented a radical, threatening change to departments that for years had been governed by boards independent of the commissioners. The stated purpose of the legislation was to more closely align the authority with the responsibility held by the county commissioners, but it raised the specter of much more politicized health and social service agencies. In New Hanover County, the commissioners wanted to see if such a consolidation was warranted, and appointed a study group comprised of representatives of the two agencies and their boards to craft a set of options for them to consider. Not surprisingly, there was little to no interest in developing proposals that at best would mean sharing scarce resources and reduce the treasured autonomy of each agency. Nonetheless, participation in the study group was mandated. This situation is not unlike a host of other situations in the public sphere where those with what appear to be opposed interests are forced together: liberals vs. conservatives, gays vs. straights, open vs. closed border advocates, pro-lifers vs. pro-choicers, right to bear arms advocates vs. gun control zealots, etc. After first listening to all of the differences they had in order to clear the air, progress only began when the facilitator suggested they focus on what both sides wanted for their community and common values they share. Examples from their list were as follows:

- Focus on the consumer of services; enhance and continue to be consumer/patient/client-centered
- Maintain the integrity of programs that work and communicate those factors across department (best practices); identify opportunities to improve services to the community; continue to build upon strong programs at the Health Department
- Increase collaboration to increase positive impact (begin with Departments of Health and Social Services and expand out to schools)
- Improve communication between agencies and with the clients; have an efficient way (“air traffic control”) to route people to the correct person the first time
- Focus on impact on employees/workers
- Not negatively impact the stature/standing of the Health Department (New Hanover County Government, 2013).

This exercise released the energy in the group by redirecting attention away from their differences to the values and desires they held in common. This skilled facilitator was demonstrating precisely what Weinberg (1996) describes as Mary Parker Follett's concept of integration, where participants in a conflict are asked to adjust their thinking away from predisposed positions and focus on the creation of something new that interweaves their various desires and concerns. This process builds trust by providing participants an opportunity to share what they really care about, but also demonstrates how by putting aside their own individual “pretty little pieces of colored glass,” they can build a rich mosaic rather than merely a “kaleidoscope of community” (p. 280). In a similar vein, Schmidtchen (2013) notes that from his experience with the Australian Public Service Commission, that we get in trouble when we forget that people are not “oxen”; that what people give to an organization is discretionary and one must create conditions based on confidence and trust in order to secure commitment and engagement with organizational goals.
Leadership Is Asking the Hard Questions

In my positions as chair-elect and president of the boards of the local United Way and a human services nonprofit agency respectively, I have learned that leadership is fundamentally about change. But more specifically, it is about how to facilitate that change. Leadership is not only about using influence to inspire people to follow a vision, but it is about asking the hard questions that people around the table avoid. They avoid certain questions because they are uncomfortable as discussing them may ruffle feathers by taking on sacred cows or the answers might mean changing customary ways of doing business and investing the time and energy to learn something new. Toughest of all, asking hard questions raises the possibility that the current people in the organization may no longer be a good fit for where the agency needs to go. But perhaps most important of all, asking the hard questions forces a focus on the right issues needed to either move the organization to the next level, or sometimes just to survive in a changing environment. As a university faculty member with tenure, I have the advantage of raising hard questions without the fear of consequences felt by agency staff. On more than one occasion, I have been thanked for raising questions that no one else in the room wanted to bring up, such as why a particular agency needed to even exist (B. Butler, Personal Communication, December 6, 2016). Raising this question forced a very useful discussion about the unique nature of the agency’s mission, reinforcing the value of the agency and creating new energy and solidarity in the room. This observation is very consistent with the core practice of “challenge the process” discovered by Kouzes and Posner in their study of exemplary leaders (2012). After all, if everything is going swimmingly, an organization doesn’t need a leader; they merely need a manager to keep things humming. Great leaders are always questioning the status quo, looking for new opportunities and testing the self-perceived limits of individuals and organizations. To the classic phrase, “managers do things right, leaders do the right thing,” I would offer a supplemental phrase suggested by Sinek (2009) in his work on leadership: “managers ask how, leaders ask why.”

Conclusion

Professors of public administration have many opportunities to engage their communities in ways that not only are beneficial to agencies and citizens, but also provide invaluable field experience for students and deepen understanding of public administration theory and practice. This paper reflects on the most salient points from many years of supervising applied student projects, community facilitation projects, and service in leadership positions. Theories and concepts taught in the classroom come alive for students when they have the ability to apply them in a real setting and experience the subtle contextual factors that impact effectiveness. The faculty member gains the ability to compare and contrast material from textbooks and the literature while reinforcing key points with rich examples from the world of practice. Perhaps most importantly, an engaged professor is able to demonstrate to students and practitioners alike the value of a university working closely with their community. The CEO of a United Way reinforces this point well:

I believe strongly that universities should be actively engaged with the communities in which they are located. By active engagement, I mean sharing university resources and soliciting involvement in the university by community organizations and residents. If done with the intent of improving the community, this relationship benefits both the university and the community (C. Nelson, Personal Communication, February 14, 2017).

References


**About the Author**

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Community Driven Technology Innovation and Investment: Early Reflections on Efforts to Cultivate a Culture of Engaged Engineering Scholarship at Oregon State University

Chinweike I. Eseonu and Jacob Hammar

Abstract
The engineering curriculum does not often consider social aspects of engineering design and practice. This is problematic because the Organisation for Economic Co-operation and Development (OECD), lists science- and technology-based innovation as central to sustained economic development. Although land-grant Extension services translate benefits of research in agriculture, biology, and related sciences to communities, there is little emphasis on translating outcomes from engineering and technology research and innovation to communities. There is also little recognition of research of this nature in traditional promotion and tenure cases, or among traditional grant-making agencies. The Community Driven Technology Innovation and Investment (CDTII) program introduced in this paper could provide a first step to address this disconnect by developing an engagement process to help engineers forge trust-based partnerships while converting community demands into engineering design solutions and economically viable businesses. To this end, the paper contains two preliminary case studies of engineering engagement on community projects using the CDTII approach. We conclude with lessons learned and plans for future work.

Introduction
Science- and technology-based innovation is required for sustained economic development. The focus of this article is on transforming the traditional approach to engineering design education to one that places significant emphasis on social consideration. This is important because the current approach to engineering design, research, and practice is arguably disengaged from true social engagement (Cech, 2014). In the following section, we discuss the current approach to engineering design education. Next, we discuss the culture of disengagement that this approach to engineering design inadvertently fosters. Next, we highlight some of the financial and pedagogical factors that foster this culture of disengagement. Finally, we introduce the CDTII approach to engineering design that could address some of the issues with disengagement in the current engineering design education approach.

Engineering Design Education
In the traditional engineering design process, students are taught to solve problems through a seven-step iterative sequence in which they identify a problem, identify constraints, brainstorm alternative solutions, evaluate and select viable alternatives, develop and test design prototypes, select and complete final design, and implement final design. Students are generally taught through case studies or projects in clearly defined engineering environments. These environments create a system in which students learn to find right answers and understand linear design processes, but might be unable to handle ambiguity in highly amorphous situations, such as in community driven projects.

Students are asked to evaluate design alternatives by identifying evaluation criteria and assigning a weight to each evaluation criterion. As an illustration, in a team for which aesthetic quality was assigned a weight of 5, and safety was assigned a weight of 10, each of three students would evaluate each alternative generated in the brainstorming session by assigning a numerical value, or satisfaction rating (e.g. 0, absolutely does not satisfy criterion; to 5, completely satisfies criterion). The average of the students' ratings of the extent to which each alternative satisfies an evaluation criterion (e.g., safety) is then multiplied by the weight assigned to the criterion being measured (e.g. 0, absolutely does not satisfy criterion; to 5, completely satisfies criterion). The average of the students' ratings of the extent to which each alternative satisfies an evaluation criterion (e.g., safety) is then multiplied by the weight assigned to the criterion being measured (e.g., 10 for safety). The equation for this calculation is \( \text{average satisfaction rating}_i \times \text{criteria weight}_j \), for alternative “i” and each criterion “j”. Finally, the students calculate the sum products – \( \Sigma \) (average satisfaction rating; X criteria weight) to determine final ranks for the list of alternatives. The team selects the alternative assigned the highest sum product, or rank.
Engineers follow this system in an attempt to reduce personal bias. However, Cech (2014) argues that this approach unintentionally increases bias by discounting social criteria that are difficult to quantify. Explicit laws, technical rules, and other such guidelines are often substituted for true social engagement or consideration (Van Gorp & Van de Poel, 2008). This is problematic for a number of reasons. First, science and technology based innovation is central to sustained economic development (OECD, 2000). Second, community members perceive engineering as inapplicable to their lived experience and engineers as unconcerned with their community well-being. This leads to reduced trust and further disengagement. Third, students are attracted to, and persist in, disciplines they perceive as relevant to their daily experience (Davis & Finelli, 2007; Pintrich & Zusho, 2002; Wigfield & Eccles, 2000), so sole focus on explicit policy prescriptions in place of social engagement could reduce interest in engineering among future and current students.

There are calls for a more culturally aware approach to engineering design education and practice (Amadel, 2004) that is resilient to social and other alterations. One such call argues that the paradigm for engineering design education and practice must be transformed for design in low resource environments (Niemeier, Gombachika, & Richards-Kortum, 2014) to form a common basis for design knowledge based on fundamental principles upon which students and practitioners can make adjustments to suit their environments.

In order to discuss strategies for increasing social consideration in engineering design, it is important to first discuss some of the root cause factors that contribute to the apparent lack of social engagement in engineering design education. The focus of the following section is on a prominently held reason for the disconnect from social consideration. Next is a discussion of the pedagogical and financial incentive structures that impact social consideration in engineering design research, teaching, and practice. In the final sections, the focus is on the proposed community driven technology innovation approach and two preliminary case studies.

A Pervasive Culture of Disengagement

Previous literature emphasizes the need to create and sustain reciprocity in engaged research and practice. For engineering faculty and students, this means that community needs and criteria truly define the design process and are seen as integral to criteria selection and weighting in the alternative evaluation stage of the design process. For community members, this means institutional constraints like the Institutional Review Board (IRB) and accreditation requirements, which are difficult to address in non-academic settings (Richardson, Plummer, Barthelemy, & Cain, 2009), should be considered in the decision making process.

Cech (2014) identified three ideological pillars that reduce social engagement in engineering. The first ideological pillar, ideology of depoliticization, describes the view that any non-technical or non-quantifiable factors are unrelated to real engineering. The second pillar, technical/social dualism, describes the tendency to view technical consideration as independent of social consideration. The third pillar, meritocratic view of society, describes the tendency to view social systems as fair and objective systems in which adherence to rules leads to success.

Corporate voices are an essential and valid driver of engineering innovation. The investment and hiring opportunities that corporate voices provide support important technological advances. However, as Figure 1 illustrates, this approach potentially robs the engineering community of innovations outside the current corporate need set. Rural communities have engineering challenges, such as wastewater treatment, food production and processing, distributed energy generation, and other community revitalization projects. Under the current approach, agricultural solutions and related disciplines are the primary foci of Extension activities.

The goal of this paper is to document nascent strategies for combating the culture of disengagement in an engineering program. We highlight some of the financial and pedagogical barriers to social engagement in engineering disciplines, and introduce the CDTII program, the aim of which is to increase sociocultural engagement among engineering students.

Financial Barriers and Conflicting Incentives

The recent financial downturn poses a challenge for state government budget and benefit structures (Levine & Scorsone, 2011). The associated decline in government financial support for education, and associated search for funding through alternative sources places pressure on university-driven initiatives (Fethke, 2011). The literature is still unclear on the effects of responsible management practices, such as strategic planning, on the ability of state and municipal authorities to create financially resilient systems (Jimenez, 2013).
State governments have created goals, such as the 40-40-20 goal in Oregon. This goal calls for 40 percent of Oregonians, by 2025, to have a baccalaureate degree or higher, 40 percent to have an associate degree or higher, and for the remaining 20 percent to have completed high school. In resource poor, opportunity/idea rich environments, university researchers must allocate their time and resources in view of returns, such as tenure and associated requirements (e.g. funding, students, and publications).

There is an important role for engineering research and practice in developing and sustaining a vibrant, highly competitive economy in line with the OECD findings and state government goals. However, funding requirements increasingly outweigh declining state budget allocations for education. As a result, engineering innovation is increasingly dependent on, and responsive to, corporate voices. While corporate voices play an important role in ensuring a vibrant society, sole focus on response to corporate voices comes at the expense of community benefit. This is especially problematic in land-grant institutions, where community benefit is central to the mission of the institution. In addition to financial challenges, there are apparent pedagogical limitations to the degree of social consideration or engagement in engineering disciplines.

Pedagogical Limitations
The engineering body of knowledge is arguably prescriptive and deterministic. Prescription, in engineering, is necessary because the subject matter is, by nature, deterministic. There are physical laws that are not open to interpretation, or non-empirical modification; the effects of gravity and Newton's laws are cases in point. Cech (2014) describes these pillars of engineering education and practice as necessary but detrimental to social exposure. Engineering programs are also subject to review by the Accreditation Board for Engineering and Technology (ABET) that requires delivery of specific content in order to maintain accreditation.

Engineering students are increasingly involved in team-based assignments, components of education in the humanities, and other aspects of a broad core curriculum outside the engineering discipline. It is possible that these courses are seen as less valuable fillers in the periphery of normal engineering coursework. However, most engineering students undergo a capstone course in which they are expected to incorporate lessons from their entire program of study into the design of a product, system, or service. These courses rely on the seven-step engineering design process previously mentioned. Table 1 is a preliminary mapping of the engineering design process to questions that foster engagement.

Figure 1. Overview to Extending Land-Grant Mission

<table>
<thead>
<tr>
<th>Theoretical Constructs</th>
<th>Socio-technical Entrepreneurship</th>
<th>Community Resilience</th>
<th>Conceptualization and Identity Formation</th>
<th>Behavioral Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Questions</td>
<td>How do technology and engineering-focused research labs successfully transfer innovations to communities?</td>
<td>What is the impact of university-sourced STEM innovations on STEM identity formation in rural communities?</td>
<td>What factors determine successful integration of community voices into the engineering design process?</td>
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<tr>
<td>Interventions</td>
<td>Community/University Engagement</td>
<td>Pyramid of Mentorship</td>
<td>Cross-disciplinary problem-based learning courses</td>
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<td>Research Methodology</td>
<td>Survey Analysis</td>
<td>Qualitative and Quantitative Analysis</td>
<td>Observation and Interviews</td>
<td>Historical Data and Report Analysis</td>
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<tr>
<td>Expected Outcomes</td>
<td>Quantitative and qualitative documentation of drivers of rural (social) entrepreneurship with focus on university-sourced technology companies</td>
<td>Framework Development 1. Lab-to-business design process 2. Community-driven engineering design</td>
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<tr>
<td>Significance</td>
<td>1. Improve understanding of the factors and conditions that enhance economic and social opportunities for rural businesses 2. Develop a framework for transferring new knowledge and innovations from the lab to the entrepreneur 3. Identify strategies to promote community and regional innovation in workforce development through science, technology, engineering, and mathematics in rural areas</td>
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</table>
This process gives ample room for community involvement. There is a need for revisions to the manner in which engineering design is taught. This paper contains a description of preliminary work at Oregon State University aimed at cultivating a culture of socially aware, context relevant engineering design. Context relevant engineering design seeks to address the triple bottom line of social, environmental, and financial profit. The aim of the CDTII program is threefold: engagement, innovation, and workforce and economic development.

CDTII as a Vehicle for Engaged Engineering

To address the challenges of poor social engagement in engineering design, a cross-disciplinary group at Oregon State created a three-pronged program of engagement, innovation, and economic development to investigate the effect of an engaged approach to engineering design on engineering student perceptions of engineering and the role of engineers in society.

The goal of the program is to extend the land-grant mission to engineering and technology-based innovations. Specifically, the CDTII triple aim is to build on the existing engagement infrastructure (Open Campus, the Center for Latino/a Studies and Engagement, Rural Studies, and others) to gain social capital for effective engineering in direct social contexts, as opposed to the indirect social contact of the current design process. Figure 1 is an overview of the multi-faceted approach to extending the land-grant mission to engineering and technology in a manner that ensures long-term community benefit, while improving engineering education.

In this paper, the focus is on introducing the approach and highlighting experiences from the first two preliminary project runs. This discussion is important for land-grant universities because the ability to translate products of university-based research to practical benefit for rural communities is a central tenet of the land-grant mission. Extension services traditionally excel at this translation in fields such as science and agriculture. Given the OECD designation of technology-based innovation as key to sustained economic development, there is a need for frameworks that broaden the Extension mission to encompass products of engineering and technology research. The remainder of this paper provides an outline of attempts to develop such a framework through CDTII.

Demographic and infrastructural challenges often make rural communities less attractive to for-profit organizations. Where incentives, like tax breaks, are used to attract companies, there is a larger threat of socio-economic displacement of indigenes, and of eventual relocation of companies when incentives expire, or when a better deal is offered elsewhere. Using the Asset Based Community Development approach to technology focused social entrepreneurship, we seek to investigate (1) best practices for transferring innovations from engineering research labs to rural entrepreneurs, (2) factors that determine successful integration of community voices into the engineering design process, and (3) the impact of university sourced engineering innovation on engineering identity.

Table 1. Community-Centric Translation of the Engineering Design Process

<table>
<thead>
<tr>
<th>Engineering Design Process</th>
<th>Questions to Foster Community Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the problem</td>
<td>Who is the partner? What are the partner’s needs? Who is impacted? What is the nature of impact? What are the technical aspects of the problem?</td>
</tr>
<tr>
<td>2. Identify constraints</td>
<td>What are partner preferences, incentives, and limitations? What conflicts exist? How do these conflicts influence design decisions? What are the non-negotiable engineering design constraints? Does partner understand these constraints and the conversion to design criteria? Will a numeric scale for criteria importance help defuse potential tensions in advance of brainstorming and evaluation?</td>
</tr>
<tr>
<td>3. Brainstorm alternative solutions</td>
<td>What are partner ideas for a solution? What has been tried? What lessons have been learned from previous attempts?</td>
</tr>
<tr>
<td>4. Evaluate and select viable alternatives</td>
<td>How do alternatives from Step 3 rank on the scale developed in Step 2? Is there a clear selection? What modifications are needed to the criteria in Step 2, to the list in Step 3, or to the winning selections (in the event of a tie) to address relevant concerns?</td>
</tr>
<tr>
<td>5. Develop and test design prototypes</td>
<td>Are partners involved in the development and testing process? Is the process sufficiently representative of actual operation to allow effective partner input?</td>
</tr>
<tr>
<td>6. Select and complete final design</td>
<td>What modifications are needed? Are expectations for final performance clear and accepted by all partners?</td>
</tr>
<tr>
<td>7. Implement final design</td>
<td>What follow up plans are needed to ensure proper integration and use? Are there training, access, and other issues to address? What infrastructure is needed to sustain outcomes?</td>
</tr>
</tbody>
</table>
formation. The investigation of identity formation is twofold: conceptualization of, and attraction to, engineering in rural communities, and conceptualization of the role of engineering in society among current engineering students.

An ecosystem in which university and community conceptualization of engineering as an important facet of socio-technical benefit can improve community resilience. Here, resilience is the ability of a community to “bounce back” from a socio-economic shock, such as the decline of the timber industry in Oregon. Figure 2 is an outline of the CDTII approach in which socially engaged engineering design can help promote technology-driven rural entrepreneurship, highlight the social benefits of engineering, and increase the long term attainment of the 40-40-20 goal. This ecosystem contributes to this goal because research suggests that demonstration of social benefit is a strong determinant of attraction to and retention in engineering and STEM disciplines.

Overview of Preliminary Projects

The CDTII team conducted two pilot community projects (Project 1 and Project 2) during the 2014–2015 school year. Each project was staffed by a team of three final-year engineering students, who completed work on the CDTII project as part of the requirements for their capstone course. The capstone course is a comprehensive project-based course that all engineering students must complete at the end of their four-year program. The course gives students an opportunity to demonstrate competence—develop engineering identity (Carlone & Johnson, 2007)—by solving a real-world problem with minimal help from faculty. Projects are generally industry based. The three students on Project 1 were from the same department as the lead author. The second author was one of these three students. The students on Project 2 were from a different engineering department at Oregon State. All the members of both teams were engineering students. All engineering students receive similar training, but discipline specific specialization might result in slight variations in problem solving approaches. However, the broad approach to problem solving should be largely similar, if not identical.

Project 1 was initiated in partnership with a group of rural entrepreneurs from a neighboring county. The goal was to design a food-processing machine that could make Sopes (a traditional Mexican food item). The entrepreneurs—three Latina women—planned to start a company that would sell Sopes to a local co-op. The team was to develop a system that would enable them to produce a standardized product at a rapid pace. Standardization was important because aesthetics is important in grocery sales. Speed was important because the entrepreneurs had day jobs on which their families depended. Extension officers affiliated with “Office A” facilitated this project connection.

Project 2 was also initiated in partnership with a community intrapreneur at a neighboring county office. The goal was to design a remote kiosk that tourists could use to charge phones and view interactive maps. The device would improve tourism in the county, reduce conflicts between tourists and farmers (through notifications on the dynamic mapping system), and enable the county to share real time information, especially important in public emergency situations. Extension officers affiliated with “Office B” facilitated this connection.

Aim 1: Engagement

There is a level of trust and relationship building that is required for effective engaged research that is not necessarily needed for outreach focused activities. Although the focus is on change management in organizations, this concept of trust building and “buy-in” is increasingly common in engineering research and practice. For instance, the literature suggests that process improvement initiatives, such as lean manufacturing implementation, are faced with a high failure rate—over 70% (Blanchard, 2007), because the focus is largely on tool application (outreach mindset) instead of cultural transformation, which is engaged, painstaking, and potentially transformative. To this end, there is a growing body of knowledge that addresses approaches for engineering managers to effectively

1 “Going to Gemba” is a process improvement term used to remind engineers of the high value of firsthand knowledge based on their daily experience with Gemba: “the actual place” where work gets done.
communicate goals with team members (see Farris, Van Aken, Doolen, & Worley, 2008), and develop context specific training programs (see Wiseman, Eseonu, & Doolen, 2014). In lean process improvement, this approach of seeking to truly understand the problem through immersion before proffering solutions is called “Going to Gemba.”

The goal of the engagement aim is to “go to Gemba” in an attempt to include community voices in the conceptualization and design phases of the engineering design and innovation process. The existing approach in engineering design often requires community adaption to an existing design. In this mindset, designers solicit feedback from community members and the general public after preliminary or final design. By requiring students to weigh community inputs as important design requirements, the CDTII approach could enhance understanding of the impact of technology in these communities. This understanding empowers engineers to engage with community partners, while enabling community partners to articulate opportunities for technology innovation.

Trust is an essential component of effective university-community partnerships, especially given the power disparity in these relationships (Fisher, Fabricant, & Simmons, 2004). In keeping with recent efforts at engaged scholarship (Archer-Kuhn & Grant, 2014), the CDTII approach is to use power for collaboration and to create spaces for bilateral learning. To this end, the CDTII team applies the transformational relationship approach (Enos & Morton, 2003; Stewart & Alrutz, 2012) outlined in Table 2.

The Project 1 team held a kick-off meeting in the community library so that the rural entrepreneurs met the team in a setting that was familiar to them. This also signified equal empowerment. One of the students (the co-author) spoke Italian, which he sought to convert to Spanish. The entrepreneurs recognized this as a sign of respect and seemed to open up to him. The goal of the kick-off meeting was to discuss the problem statement that had been previously provided by the rural entrepreneurs and to discuss the engineering design process. The rural entrepreneurs left the meeting excited about the project after setting dates for campus visits.

During the first campus visit, the rural entrepreneurs were invited to teach the engineers to make Sopes in the university test kitchen. This was an important step because the community members—women from an ethnic minority who had never been at the university and were uncomfortable communicating exclusively in English—were seen as experts who were invited to impart their knowledge. This turned out to be a very important bonding session, as the entire team kneaded dough on instructions from the women, placed the dough on pans, prepared the hot Sopes (while rushing to dip fingers in cool water), and eventually shared a meal together.

Project meetings were then alternated between the community and campus. This arrangement was selected to demonstrate the desire of the CDTII team for equal partnership, to provide students and other researchers an understanding of the potential impact of engineering design, and to identify and seek to understand community values and goals. University based meetings were intended to familiarize community members with the university, recognize them as competent experts on their recipes and on the use of the technology being designed, based on the competency, performance, and recognition identity triad (Carlone & Johnson, 2007). Community-based meetings were attended by the community partners, the engineering students, CDTII faculty, the graduate students in charge of daily supervision of the project team, and the instructor for the capstone course. Campus based meetings were

<table>
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<tr>
<th>Table 2. The Transformational Relationship Approach</th>
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<tbody>
<tr>
<td><strong>Number of students</strong></td>
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<tr>
<td><strong>College</strong></td>
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<td><strong>Subject Matter</strong></td>
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<tr>
<td><strong>Supervision</strong></td>
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<tr>
<td><strong>Community Engagement</strong></td>
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<tr>
<td><strong>Client</strong></td>
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attended primarily by community partners, the engineering students, and two CDTII faculty from engineering and liberal arts.

Project 2 was less successful in true engagement. The team invited the client to a kick-off meeting on campus and was unable to travel to the client location due to scheduling conflicts. The team was technically sound and understood the client requirements as written. However, there appeared to be less commitment to the client beyond the confines of the capstone course. This was also a considerably busy term for members of the Project 2 team who needed to liaise with CDTII staff outside their home department—albeit within the College of Engineering—and manage a busy job interview season alongside normal coursework. Table 3 contains details of the two engineering student teams that worked on these projects.

Implementation of Aim 1
Aim 2: Innovation

In the innovation portion of CDTII projects, engineering student teams create new engineering designs in a manner that directly addresses the needs of the community. The key difference from traditional engineering innovation is that the explicit focus is on community benefit. While this often includes the ability to operate a successful business, the team seeks to take the social entrepreneurship view to innovation.

Traditional university research and commercialization often leads to revolutionary technology and products such as the Gatorade drinks at the University of Florida, cottonseed technology at Texas Tech, and nanotechnology for distributed energy generation, cardiovascular remedies, and home dialysis, at Oregon State.

Table 3 illustrates the current scenario for engineering innovations. The goal of Projects 1 and 2 was to help us better understand how to extend the engineering innovation-to-commercialization framework beyond the current focus on industry partners to include community partnerships. Some of these lessons are discussed later in this article.

Aim 3: Economic and Workforce Development

The focus of the third aim, workforce and economic development, is on creating conditions for sustainable long-term economic growth in the community. This aim encompasses economic development in the form of social entrepreneurship, short term employee training to fill newly created jobs, and long term training of children from the communities in modified programs aimed at developing rural entrepreneurs who have the social capital and investment to return to these communities. STEM attraction and retention is a major thrust of the third aim. The literature suggests nontraditional students are attracted to, and stay in, STEM disciplines if they can see the social benefit of STEM products.

Table 3. CDTII Approach to Ensuring Transformational Partnership, adapted from Enos & Morton, 2003; Stewart & Alrutz, 2012.

<table>
<thead>
<tr>
<th>Transformative Relationship Criteria</th>
<th>CDTII Interpretation</th>
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<tr>
<td>Focused on ends beyond utilitarian goals</td>
<td>The technology and potential business is a by-product of the larger learning, socio-economic, and cultural growth.</td>
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<tr>
<td>Positively alters group identity and larger definition of community</td>
<td>Students and partners belong to a unified project team. The fusion of communities (academic and geographic) is aimed at altering conceptualization of place and fit for all partners.</td>
</tr>
<tr>
<td>Pushes institutional boundaries by examining goals</td>
<td>Core to the CDTII program is the belief that students at a land grant university should be decidedly different from their counterparts at other universities in terms of their understanding of their place and role in larger society, knowledge of the tools their training provides to impact socio-economic change in corporations, and in local and global communities.</td>
</tr>
<tr>
<td>Focused on ends beyond utilitarian goals</td>
<td>Community and university partners drive the engineering design process in CDTII.</td>
</tr>
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</table>

Figure 2 illustrates the envisioned ecosystem of community/university partnership for technical innovation. Trust is essential for university/community partnerships. The existing Extension service infrastructure plays an important role in training engineers to interpret community goals, and in setting community expectations of the engagement program.
Offices, such as Open Campus and the Center for Latino/a Studies and Engagement at Oregon State played this role in the pilot projects.

Lessons Learned

The students in Project 1 developed a prototype that the entrepreneurs now use. Several factors appear to have contributed to the outcome observed in Project 1. Students involved in Project 1 were under the direct supervision of CDTII faculty. This project also had a designated liaison from “Office A.” The liaison worked with the team of students and CDTII faculty to set up regular meetings with the rural entrepreneurs. “Office A” sought to alternate meeting locations with the aim of building trust and empowering the entrepreneurs as subject matter experts in what was a detailed, and otherwise intimidating, engineering design process. Students gave presentations to the entrepreneurs in their native language and went through several in-person feedback iterations. The students developed a sense of ownership, expressed in statements by one of the students: “Other teams develop products for a company in which several engineers can tweak and improve on the prototype, but in this case, we are ‘it’. We have to make this work for the ladies.”

Project 2 was less successful than Project 1. Here are some lessons learned from the outcome of Project 2:

1. Responsibility-authority parity: Game theory suggests that the human brain is wired to act in ways that preserve and maximize personal gain. Students are, thus, conditioned to prioritize actions that directly impact their grades and chances of employment upon graduation. Due to the structure of university courses and ABET accreditation, CDTII faculty served as advisors with no input on student grades. This complicated deliverables and broader quality issues.

2. Student self-selection: Students in Project 1 selected their project from a list. Project 2 was assigned the CDTII project. It is possible that there is a level of prior social exposure, and engagement, that drives student interest in work of this nature. Future projects will rely on self selection as we seek to incorporate social engagement strategies into the engineering curriculum and design process.

3. Extension personnel: The envisioned ecosystem in Figure 2 relies on the Extension service as an important “translator” to facilitate partnership between the engineering and community teams. Project 1 relied on a dedicated Extension liaison from “Office A,” which facilitated community relationships and highlighted best practices for presentations and other community forums. Personnel changes in “Office B” meant Project 2 did not have an Extension liaison. Students communicated with the client by email and in an on-campus meeting at the beginning of the project. The team was unable to visit the client due to time constraints.

Conclusion and Future Work

The CDTII project seeks to include engineering students and researchers in the function of the land-grant institution. To do this, a cross disciplinary team of engineering, liberal arts, and Extension faculty worked with two teams of final-year engineering students on a nontraditional engineering design project. The goal of this approach was to (a) conduct “proof of concept” tests in a low-risk environment, (b) identify supports and barriers to this form of community/university engagement, (c) help us better understand how to partner with community members to achieve shared goals, given the perceived power differential (Fisher et al., 2004), and (d) explore the modification of the current technology commercialization model, to include social entrepreneurship.

Additional teams are being recruited through the capstone pipeline, with focus on the departments in which CDTII faculty members have direct grading authority. The team will continue to investigate the community driven technology innovation by (a) continuing engagement with current rural entrepreneurs, (b) creating non-rural partnerships to increase our understanding of the social entrepreneurship focus by mirroring the existing technology commercialization framework, and (c) conducting interviews with the students and community partners at various points during the project to identify personal factors that affect the outcomes we observe.
References


About the Authors

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FUEL NKU: A Campus Community Hunger Initiative

Jessica Averitt Taylor, James P. Canfield, and Kajsa Larson

Abstract

Regional universities are often embedded within the community, and so community issues off campus are reflected on campus. For example, college students at Northern Kentucky University (NKU) face many of the same food challenges present in the larger region. This paper presents a case study of a faculty-led, student-run campus hunger initiative, FUEL NKU. Social work students determined to address hunger on campus developed FUEL NKU as a student organization overseeing several initiatives to increase awareness of hunger and get food and toiletries to students in need. Using innovative techniques and social media, the student-led, faculty-supervised initiative developed an awareness campaign and food pantry to help students facing hunger across campus. This case study provides an example of how on-campus programming must reflect the issues off campus. In addition, it provides a blueprint for others to replicate the efforts taken by the social work students at NKU.

Introduction

Hunger is a major issue facing American cities, with an estimated 17.2 million people confronting food insecurity (Coleman-Jensen, Nord, Andrews, & Carlson, 2011). In addition, more than 15% of the population lives within a food desert (Anderson & Burau, 2015). The U.S. Department of Agriculture defines food deserts as any locale devoid of access to fresh and whole foods or with limited access to larger supermarkets with at least 500 residents or 33% of the census tract living outside one mile of a grocery store (Nutrition Digest, n.d.). Poor nutrition stemming from hunger has wide-ranging effects, including poor educational outcomes for children, higher levels of obesity from an overreliance on processed food, and even death (Gunderson, 2014; Healthy People, 2020, n.d.).

College students are sometimes overlooked in examining hunger and food insecurity. However, university student bodies are often a reflection of the region and face the same issues as the larger community. This reflection may be more pronounced at regional universities where the vast majority of the students live in and are from the surrounding areas. This is evident from a brief examination of economic circumstances in the regional area served by NKU. The U.S. Census Bureau for 2014 reported a national poverty rate of 14.8% (see http://nlihc.org/article/new-census-report-income-and-poverty-united-states), but Kentucky’s poverty rate was higher, 18.8%, (see https://www.census.gov/quickfacts/fact/table/KY/PST045216). Cincinnati, Ohio, in 2016, had a poverty rate of 29.9% (see https://www.census.gov/quickfacts/fact/table/cincinnaticityohio/PST045216).

Furthermore, 64.39% of NKU undergraduate students are in financial need, and approximately 49.7% of first-time degree-seeking freshmen enrolled in fall 2016 were first generation college students (Northern Kentucky University, 2017; NKU Institutional Research, personal communication, January 12, 2018). Therefore, given the similarities among the local populations and campus populations, any issues facing a local population will likely appear on the nearby college campuses. The existence of the College and University Food Bank Alliance (CUFBA, n.d.), with 320 active member institutions nationwide, adds additional weight to the perspective that college students face the same issues as the larger communities. The purpose of this paper is to describe a student-led, faculty supervised community engagement initiative addressing hunger on a regional college campus.

Literature Review

Community Engagement

Higher education has a compelling responsibility to engage our larger communities. This responsibility entails an intentional step away from the ivory tower perspective, to serve both our own universities and the communities that comprise our neighborhoods and towns. Several decades ago, higher education was publicly encouraged to refocus on the larger communities in a foundational commentary by the former president of the Carnegie Foundation for the Advancement of Teaching (CFAT). In his commentary, Ernest Boyer noted that colleges and universities must “become a more vigorous partner in the search for answers to our most pressing social, civic, economic, and moral problems” (1996, p. 11).
In this search for answers, students and faculty should partner with communities to concretely link classroom teachings to real-world responsibilities. Personal and social responsibility should be "anchored through active involvement with diverse communities and real-world challenges" (National Task Force on Civic Learning and Democratic Engagement (NTSFCLDE), 2012, p. 3). This personal and social responsibility will ideally translate to the development of more civic-minded campuses, and a more civic-minded society in a longer-term perspective. The initiative discussed in this paper involved the four major components of a more civic-minded campus, as outlined by NTSFCLDE, including civic ethos, civic literacy, civic inquiry, and civic action.

The needs of our communities are imperative, especially as linked to the well-being of our institutions. Campus Compact summarized this imperative in a 1999 statement:

Higher education—its leaders, students, faculty, staff, trustees, and alumni—remains a key institutional force in our culture that can respond, and can do so without a political agenda and with the intellectual and professional capacities today's challenges so desperately demand (p. 1).

CFAT recognizes colleges and universities dedicated to community engagement, with a classification of “institutions of community engagement” (Driscoll, 2008, p. 38). NKU was an inaugural institution in this classification, and maintains the classification through university-wide commitment to community engagement (CFAT, 2015; Driscoll, 2008). The imperative to embrace community engagement in higher education has resulted in numerous classification standards, foundations to advance efforts, and long-term partnerships. A summary of several major organizations and their contributions is shown in Table 1.

This project initially employed community engagement in a social work setting. For that reason, community engagement in social work is the concentration in the following discussion.

Community Engagement in Social Work

Experiential learning is a particular focus of social work education, with the traditional emphasis on elements such as field experience and practicum placements. The experiential learning aspect of education moves students from materials learned in class, typically through traditional teaching methods, to direct application of those materials through experiences (Campbell, 2014). As an essential component of experiential learning, service learning offers a unique opportunity for students to learn in class and then apply those concepts in direct service (Arches, 2013). Through service learning, social work students are able to engage in the field without the more intense commitment of a practicum placement.

Service learning in social work education solidifies the competencies expected by our accrediting body, the Council on Social Work Education (2015). The current competencies were approved by the Council in 2008, and revised in 2015. The newly revised competencies were formally adopted by vote over the summer of 2015. In the interest of providing updated information, the focus for this discussion centers on the 2015 competencies. In particular, service-learning experiences may be directly related to each of the revised social work competencies:

1. Competency 1—demonstrate ethical and professional behavior
2. Competency 2—engage diversity and difference in practice
3. Competency 3—advocate human rights and social, economic, and environmental justice
4. Competency 4—engage in practice-informed research and research-informed practice
5. Competency 5—engage in policy practice
6. Competency 6—engage with individuals, families, groups, organizations, and communities
7. Competency 7—assess individuals, families, groups, organizations, and communities
8. Competency 8—intervene with individuals, families, groups, organizations, and communities
9. Competency 9—evaluate practice with individuals, families, groups, organizations, and communities

Students in courses that incorporate service learning show measurable positive differences in several areas, including community engagement, social justice perspectives, diversity attitudes, and political awareness (Sigler, 2006; Simons & Cleary, 2006; Thompson & Davis, 2013; Wang, 2013). These are all valued learning measures in social work education, as linked to our CSWE competencies. Service learning is absolutely adaptable to many disciplines; however, it is a particularly appropriate fit for social work education.
Social work is uniquely suited to address food insecurity, as the focus on social justice naturally incorporates advocacy efforts in this area. In conjunction with many other disciplines, academic social workers address food insecurity on campuses.

**Food Insecurity**

Food insecurity is described by the United States Department of Agriculture as limited access to food due to lack of money or other resources (Coleman-Jensen, Rabbitt, Gregory, & Singh, 2015). The U.S. Census Bureau collects data about food insecurity through an annual representative survey, which is given as a supplement to the Current Population Survey. In 2014, the survey included 43,253 households, out of the 124 million households in the United States (Coleman-Jensen, et al., 2015). The survey questions assess the ability of households to afford balanced meals, as well as the need to cut meals or go hungry due to lack of money. Households are then categorized based on the conditions they reported. Thus, food insecurity is tied to economic hardship, as well as other factors such as the ability to manage a budget.

In 2014, the percentage of food insecure households remained consistent with that of 2013 and 2012 at 14.0% (17.4 million households). In addition, 5.6% of households (6.9 million total) had very low food insecurity, and 9.4% of households (3.7 million) surveyed reported food insecurity with children living in the home (Coleman-Jensen, et al., 2015). Previous research has reported the severe consequences of food insecurity, including poor health in children and adults, depression and anxiety among adolescents, and thoughts of suicide (Alaimo, Olson, & Frongillo, 2002; Casey, Szeto, Robbins, Staff, Connell, Gossett, & Simpson, 2005; Casey, Goolsby, Berkowitz, Frank, Cook, Cutts, Black, Zaldivar, Levenson, Heeren, & Meyers, 2004). Food insecurity has also

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<tr>
<th>Table 1. Summary of Organizations and Major Contributions to Community Engagement Work in Higher Education</th>
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<tr>
<td><strong>Organization</strong></td>
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<tr>
<td>Association of American Colleges and Universities</td>
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<td>Campus Compact</td>
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<td>Carnegie Foundation for the Advancement of Teaching, Carnegie Classifications</td>
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<td>National Task Force on Civic Learning and Democratic Engagement</td>
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<td>Scottish Community Development Centre</td>
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been linked to poor academic performance in the K–12 setting, including behavioral and attention problems, absenteeism and tardiness, psychosocial dysfunction, low academic performance, and school suspension. (Alaimo et al., 2002; Casey et al., 2004; Chilton & Booth, 2007). These studies have been conducted in the K–12 context.

Food Insecurity on Campus

Students enrolled in higher education are not immune to food security difficulties. To date, only two known studies have been published about this topic in the United States (Patton-López, Cancel-Tirado, & Vazquez, 2007; Chaparro, Zaghoul, Holck, & Dobbs, 2009). The study by Patton-López (2014) reported that 59% of a sample of college students that attend a midsize rural university in Oregon responded that they were food insecure. Chaparro et al. (2009) listed a slightly smaller amount (49%) of respondents at the University of Hawai’i at Manoa. Regarding food insecurity among students, Cady (2014) also lists two other unpublished studies from Ohio and California that respectively reported 19% and 32% of survey respondents as food insecure (Koller, 2014; Lerer, 2013). Another community college study in New York found that 39.2% of students were food insecure (Freudenberg, Manzo, Jones, Kwan, Tsui, & Gagnon, 2011). In analyzing these reports, Cady (2014) noted the difficulty in assessing the larger picture of food insecurity on college campuses due to a lack of consistency in research methods, measurements, and definitions of the concept.

From these studies, it appears that university populations may be at a significantly higher risk for food insecurity than the national average (almost half of college students, as opposed to 14% of the general population). In response to these changing demographics, the Michigan State Student Food Bank and the Oregon State University Food Pantry created a professional organization of campus-based programs that alleviate food insecurity. As of June 2016, the national organization CUFBA provides support and resources to 320 campus food banks (CUFBA, n.d.).

It has been observed that the college student population is increasingly diverse and non-traditional (Williams, 2014). More students are older, first generation college attendees, representative of increasing racial and ethnic diversity, or are in need of greater financial assistance. For instance, many students have family or job-related responsibilities that make paying for education more challenging, as evidenced by the high percentage of NKU students (64.39%) in need of financial assistance (Northern Kentucky University, 2017). As shown by Patton-López (2014), as well as research conducted by Robb, Moody, and Abdel-Ghany (2011), budget demands associated with access to higher education then compete with the ability to afford necessities such as food. A 2014 College Board assessment of trends for undergraduate education indicated that tuition, fees, and room and board at a public four-year institution cost $18,943, and a private nonprofit four-year university costs $42,419 (Baum & Ma, 2014). In 2014–2015, the average published tuition and fee prices for in-state students at public four-year institutions ranged from $4,646 to $14,712, with Kentucky students paying an average of $9,139 (Baum & Ma, 2014).

These costs have only increased 1% since 2013, and the “inflation-adjusted rate of increase” is currently lower than in the 1980s and 1990s (Baum & Ma, 2014, p. 16). Nonetheless, students in the 21st Century are continually faced with other obstacles:

College price increases are not accelerating. But they are accumulating…. With the price of college rising faster than the prices of most other goods and services, despite the high financial payoff to college, people perceive themselves as giving up increasing amounts of other things to pay for college. Even more important is the reality that real incomes have not increased for more than a decade, except at the top of the income scale (Baum & Ma, 2014, p. 7).

For in-state students living on campus at a public college or university, tuition and fees constitute 39% of their budget (Baum & Ma, 2014). When universities announce a tuition or fees increase, such as the 32% hike to the fee structure at UCLA that was approved in 2009, student budget challenges are only exacerbated (Lewin & Cathcart, 2009). Food security is an undeniable part of a students’ financial schema.

Furthermore, changes in the Pell Grant Program in 2012 impacted students by reducing the scope and total amount of awards. As Cody Davidson (2014) noted, those most affected are non-traditional students, African-American students, transfer students, and working-adults who have dropped out and are now returning to college. Other studies suggest that Pell Grants most
greatly benefit “low” ($0–$28,285) and “lower-middle” ($28,290–$50,000) income students, as well as their success. According to Alon (2011), an extra $100 in need-based grant money helps with persistence in the first year.

The realities of food hunger on college campuses are most often hidden, until it is brought to the attention of a faculty or staff member, according to an article on the topic in Atlantic Monthly (see https://www.theatlantic.com/health/archive/2010/05/among-dorms-and-dining-halls-hidden-hunger/39766/). In response, higher education institutions are responding with the establishment of food programs and conducting surveys to understand the specific challenges of college student food insecurity. Student feedback has revealed, for instance, that “students knew about resources like community food banks and church soup kitchens” but lacked transportation or access. Thus, with food present but no purchasing power, students are left on campus for long stretches with little to eat. Thus, perhaps unlike some of the greater U.S. population, college students are more isolated from resources. The consequences directly impact academic performance, including absenteeism and ability to concentrate.

Furthermore, as one advisor at UCLA has revealed, it is difficult for students to admit to food insecurity. The embarrassment and stigma related to hunger also make it difficult to track, especially on a campus that reveals no telltale signs of social challenges with which the student population is faced. As Kristin Moretto, the director of the Michigan State University Student Food Bank noted, in an article in the New York Times, “The old ‘I didn’t go to college because my parents couldn’t afford it’ is gone…. More people are funding themselves to go to college and are trying to figure it out” (retrieved from http://www.nytimes.com/2009/11/20/education/20tuition.html?_r=0) Some students, including those with food insecurity, may need some extra guidance.

This issue is present on many college campuses, and the following case study describes food insecurity and efforts to alleviate the challenge at one particular university, NKU. The objectives of this paper are to:

1. Present a clear picture of the need for food pantries on college campuses, with particular focus on NKU.

2. Describe the development of FUEL NKU, the campus food pantry for NKU students. This will include components such as the student organization and flash mob, as well as the research aspect.

3. Present a model for similar developments on other college campuses, as an initial starting point to address food insecurity among our students.

Case Study
Overview

NKU is a metropolitan campus located just outside of Cincinnati, Ohio. The university offers a wide array of undergraduate programs, graduate degrees in several disciplines, a law school, and an EdD program, with a total student population just under 16,000. The social work program typically includes 25–30 majors.

This project originated with one student enrolled in a social welfare policy course. The student experienced food insecurity while in the course, and I began to store snack foods in my office as a resource for the student. Over the course of the fall 2013 semester, one dedicated shelf in one office expanded to several shelving units in an office suite. In the spring of 2014, I taught two sections of an undergraduate community organization class. The food pantry project quickly became a central focus of the class, with students heavily invested in the outcomes and process on our university campus. In particular, the students showed keen interest in finding innovative ways to address hunger among their peers. Students initiated the student organization, and advocated across campus for the continuation and expansion of the pantry. The students named the food pantry initiative FUEL NKU, which stands for Feeding the University and Enriching Lives.

This project involved rather intensive service learning, as the students learned about communities and organizations in the classroom and then directly applied that learning to the development of FUEL NKU. The project enabled us to connect course components to the campus community, as well as the larger issues of food insecurity and macro social work. The direct link between course objectives and the real-life situation at hand provided a unique service-learning experience (Simons & Cleary, 2006).

An additional component that was unique to this course is that the hallmark of service learning, benefits to both students and the communities, was met in a particularly circular manner. The students worked on the FUEL NKU project, learning from their experiences, and the project benefited the larger campus community of students. That is to say, FUEL NKU is an initiative by NKU students, for NKU students.
**FUEL NKU Project**

The FUEL NKU project was deliberately named after our newly released university strategic plan, Fuel the Flame. Students suggested the name as a way to tie our efforts to the larger campus community and incorporate our university goals of student success and retention into the efforts of FUEL NKU. This project has involved many moving parts, all coordinated as FUEL NKU.

**Food Pantry**

One of our first challenges was space: One shelf in one office simply did not meet the need on our campus. Students worked with faculty members to secure additional shelving units, which were installed in a common area in the social work office suite. Over the course of spring 2014, the shelving units in the office suite quickly overtook the common space. Our campus generously offered a dedicated office space for FUEL NKU, and we moved to our current location in the summer of 2014.

The pantry is open on Monday and Thursday of each week, from 10 a.m. to 2 p.m. The pantry, which I supervised, is staffed by practicum students. Currently, the pantry welcomes two–three practicum students each semester. This includes one MSW practicum student, and one–two BSW or human services practicum students. In addition, we arrange to meet with any student who cannot visit during those hours. Our email address is widely advertised, and members of our campus community frequently contact us to connect us to students in need during irregular hours. When this happens, we always arrange a time to meet the student. We also coordinated to place ready-made bags of foods and toiletries in the offices of several on-campus partners, including Student Support Services and the Veterans Resource Station.

To access the food pantry, students must show their university student identification card and sign a waiver form that we created in collaboration with the university legal team. Students may visit once every two weeks, and may email us to request an exception to that guideline if needed. When students visit, they are given two plastic grocery bags to fill with items that they select from our shelves, and they are invited to place the grocery bags into reusable totes that we provide before they leave the food pantry. The reusable totes make it less obvious that the student has visited FUEL NKU, as the grocery bags are not readily visible inside the totes.

I oversee two practicum students in the food pantry each semester. A BSW practicum student may be involved with serving clients in the student union once per week, managing inventory, volunteer management, distributing flyers across campus, and coordinating donation drives on campus. An MSW practicum student may be involved with serving clients, connecting to local community agencies, coordinating with our on-campus partners, soliciting donations from local businesses, collaborating on small grant proposals, and creating the FUEL NKU newsletter. In addition, we actively recruit volunteers from our student body. Volunteers complete a short training session, and then assist the practicum students in the food pantry.

**Flash Mob**

In the spring of 2014, the community organization students decided to host a flash mob on campus. The purpose of this flash mob was threefold: We wanted to raise awareness about hunger and food insecurity, we hoped to tell more people about FUEL NKU, and we wanted to develop a survey that could be distributed to students during the flash mob. Students created a playlist and organized dancing for the flash mob, while I secured the necessary permissions on campus.

The flash mob ultimately attracted more than 100 people, dancing together and holding posters in a central area on campus. Participants handed out orange ribbons, for hunger awareness, wore bright orange t-shirts, and told anyone who would listen about FUEL NKU. The local news covered the event, largely due to the publicity efforts of the students, and a story aired that evening in Cincinnati.

**Hunger Survey**

We administered a survey about hunger as part of the flash mob activities. This served both research and teaching purposes as related to FUEL NKU activities. First, the survey was conducted to establish need on campus for hunger-related initiatives and to validate a psychometric instrument measuring perceptions of food accessibility. In terms of teaching, the survey portion of the flash mob was to provide students with a real-world opportunity to participate in a research project from inception to facilitation. Students participated in survey development and helped the research aspects of the flash mob receive institutional review board approval (five of the students completed the ethics training to conduct research) in addition to handing out surveys.
We used a 74-item survey divided into six sections (see Appendix A). The first section (7 items) was a demographic section with questions. The next section (H) consisted of single-item indicators used to provide quick assessment regarding food accessibility and to help with psychometric testing. Following this section were 22 questions about what types of food items needed to be stocked in the food pantry. Potential items ranged from prepared meals such as canned soup to cutlery to foods prepared in accordance with dietary restrictions (e.g., Halal food, Kosher food). A 12-item section on barriers to using an on-campus food bank came after the section about what food items were needed. The penultimate section was a four-item inventory of food experiences (section K). The final section was a proposed 25-item measure of perceived food accessibility. For the purposes of this study, we only examined the frequencies regarding need and items that should be stocked. Future studies will make use of the data by validating the food accessibility instrument, and once validation is completed, examining factors that impact accessibility.

During the flash mob, participating students engaged other students at the student union. As per the IRB approved protocol, students followed a script to recruit potential participants. Informed consent was obtained via a cover page preamble on the survey detailing the activities taking place. The flash mob and subsequent surveying was conducted during lunchtime to maximize the number of possible participants in both activities. In total, 126 completed surveys with sufficiently complete data were collected during the flash mob activities.

Research Findings

In Tables 2 through 5, we present the preliminary findings from data collected through our flash mob activities. The preliminary findings indicate student demographic information, the perceptions of the students as to the need for a hunger initiative, types of food to be offered, and barriers to use.

Participant Demographics

Table 2 presents demographic information on those who completed the survey. The majority of the participants were female (64.3%) and all were undergraduates. Most resided in the outlying suburbs (62.7%), which makes sense given the regional nature of UNK. A fair amount of the participants (57.1%) indicated they were interested in joining a registered student organization (RSO).

Perceived Need

The majority of participants indicated that a food bank would be helpful, with 57.1% of participants indicating that a food bank would be “helpful” or “very helpful” on campus. A small portion of students agreed or strongly agreed that thinking about their next meal impacted how they felt (25.4%). Further, over a quarter of students went hungry at least one day in the past week. These numbers indicate that there is a sizable portion of the students on campus in need of hunger-related services. Further, given that the sampling was done during lunchtime at the student union (where the cafeteria is located), the numbers may be drastically underestimated. Table 3 shows these results.

Types of Food

Table 4 presents the perceptions of what types of food participants felt should be offered at an on-campus food bank. Each item was on a five-point Likert-type scale asking for agreement. Bottled water was the most agreed-upon item that needed to be stocked. This was followed by food in general and fruit. Soda, followed by candy, were perceived to be the least needed item to be stocked. Overall, fresh food products such as fruits, vegetables, and non-perishables were generally perceived to be needed more than food supplies such as plastic cups, plates, and can openers.

Barriers

Table 5 presents the barriers to accessing services. In particular, students felt that cost, the items in stock, time, need for services, and knowledge would affect whether they were able and willing to access the food bank. Several of these concerns are best addressed through advertisement and advocacy efforts. For instance, the issues of cost and items in stock can be explained to students at orientation, through on-campus flyers, and class visits, and during discussions at the Student Union. Each of these efforts was viewed as helping to normalize the experience for our students, and make FUEL NKU more accessible.

FUEL NKU

This initiative was largely organized by students, and it was formalized as an official university student organization in the late spring of 2014. The organization was founded by students in response to a perceived need to present a united and dedicated strategic plan to university officials and the broader community. In the process of
founding the student organization, social work students held initial planning meetings and then followed the university process for official recognition. The student organization, FUEL, is led by elected student officers. FUEL is responsible for volunteer recruitment, management of social media accounts, and campus fundraising. This is a group of dedicated and enthusiastic students, and they typically raise about $150 per semester through their campus fundraising efforts. In my name as faculty advisor, the student organization established a bank account.

Advisory Board

An advisory board comprised of faculty and staff members meets once per semester to discuss FUEL NKU operations. Members of the advisory board are primarily those who reached out to request involvement with FUEL NKU, and include faculty and staff from across campus. In response to campus-wide interest, I organized the advisory board by requesting that actively involved faculty and staff members willing to dedicate time and effort volunteer to join. The response was tremendous; the advisory board has yet to lack for volunteers, and each member contributes in a meaningful way such as commitment to college initiatives and publicity efforts. The current advisory board includes a staff member in university printing, three social work faculty members, a staff member from student support services, a business faculty member, and the director of the Scripps Center for Civic Engagement at NKU.

Table 2. Demographic Characteristics of Participants

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (n=125)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>44</td>
<td>34.9</td>
</tr>
<tr>
<td>Female</td>
<td>81</td>
<td>64.3</td>
</tr>
<tr>
<td>Year in School (n=124)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td>45</td>
<td>35.7</td>
</tr>
<tr>
<td>Sophomore</td>
<td>30</td>
<td>23.8</td>
</tr>
<tr>
<td>Junior</td>
<td>35</td>
<td>27.8</td>
</tr>
<tr>
<td>Senior</td>
<td>14</td>
<td>11.1</td>
</tr>
<tr>
<td>Location (n=123)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>19</td>
<td>15.1</td>
</tr>
<tr>
<td>Suburban</td>
<td>79</td>
<td>62.7</td>
</tr>
<tr>
<td>Rural</td>
<td>25</td>
<td>19.8</td>
</tr>
</tbody>
</table>

Interest in Joining an RSO (n=117)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>72</td>
<td>57.1</td>
</tr>
</tbody>
</table>

Table 3. Feelings About a Food Bank (N=126)

<table>
<thead>
<tr>
<th>How helpful would a food bank be on campus to you (n=120)?</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>3</td>
<td>2.4</td>
</tr>
<tr>
<td>Not really helpful</td>
<td>6</td>
<td>4.8</td>
</tr>
<tr>
<td>Might be helpful</td>
<td>39</td>
<td>31.0</td>
</tr>
<tr>
<td>Helpful</td>
<td>40</td>
<td>31.7</td>
</tr>
<tr>
<td>Very Helpful</td>
<td>32</td>
<td>25.4</td>
</tr>
</tbody>
</table>

Thinking about my next meal affects how I feel (n=126)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>3</td>
<td>37.0</td>
</tr>
<tr>
<td>Disagree</td>
<td>7</td>
<td>33.3</td>
</tr>
<tr>
<td>Neutral</td>
<td>7</td>
<td>33.3</td>
</tr>
<tr>
<td>Agree</td>
<td>14</td>
<td>63.6</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>5</td>
<td>23.8</td>
</tr>
</tbody>
</table>

Table 4. What Should Be Stocked? (N=126)

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>4.52</td>
<td>.701</td>
</tr>
<tr>
<td>Kosher Food</td>
<td>3.89</td>
<td>.965</td>
</tr>
<tr>
<td>Halal Food</td>
<td>3.79</td>
<td>.966</td>
</tr>
<tr>
<td>Baby Food</td>
<td>3.54</td>
<td>1.184</td>
</tr>
<tr>
<td>Fresh Food</td>
<td>4.40</td>
<td>.850</td>
</tr>
<tr>
<td>Vegetables</td>
<td>4.44</td>
<td>.863</td>
</tr>
<tr>
<td>Fruit</td>
<td>4.47</td>
<td>.912</td>
</tr>
<tr>
<td>Non-presishable Food Products</td>
<td>4.36</td>
<td>.899</td>
</tr>
<tr>
<td>Candy</td>
<td>2.51</td>
<td>1.313</td>
</tr>
<tr>
<td>Soda</td>
<td>2.48</td>
<td>1.331</td>
</tr>
<tr>
<td>Milk</td>
<td>4.18</td>
<td>1.011</td>
</tr>
<tr>
<td>Bottled Water</td>
<td>4.54</td>
<td>.927</td>
</tr>
<tr>
<td>Prepared Meals (e.g., Chef Boyardee, Dinty Moore, Campbell's Soups)</td>
<td>4.06</td>
<td>.936</td>
</tr>
<tr>
<td>Food That Must Be Prepared at Home</td>
<td>3.39</td>
<td>1.051</td>
</tr>
<tr>
<td>Uncooked Pasta</td>
<td>3.56</td>
<td>1.054</td>
</tr>
<tr>
<td>Eggs</td>
<td>3.65</td>
<td>1.083</td>
</tr>
<tr>
<td>Toilet Paper</td>
<td>4.17</td>
<td>.939</td>
</tr>
<tr>
<td>Paper Plates</td>
<td>3.97</td>
<td>1.035</td>
</tr>
<tr>
<td>Plastic Cups</td>
<td>3.95</td>
<td>1.061</td>
</tr>
<tr>
<td>Can Openers</td>
<td>3.81</td>
<td>.961</td>
</tr>
<tr>
<td>Plastic Forks</td>
<td>3.96</td>
<td>1.054</td>
</tr>
<tr>
<td>Plastic Spoons</td>
<td>3.89</td>
<td>1.104</td>
</tr>
</tbody>
</table>

Table 5. Barriers (N=125)

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location on campus</td>
<td>2.75</td>
<td>1.097</td>
</tr>
<tr>
<td>Need for service</td>
<td>2.95</td>
<td>1.142</td>
</tr>
<tr>
<td>Embarrassment</td>
<td>2.71</td>
<td>1.142</td>
</tr>
<tr>
<td>Cost</td>
<td>3.03</td>
<td>1.099</td>
</tr>
<tr>
<td>What is stocked in the food bank</td>
<td>3.11</td>
<td>1.123</td>
</tr>
<tr>
<td>Knowledge</td>
<td>2.90</td>
<td>1.208</td>
</tr>
<tr>
<td>Shame</td>
<td>2.54</td>
<td>1.111</td>
</tr>
<tr>
<td>The food bank wouldn’t help me</td>
<td>2.87</td>
<td>1.180</td>
</tr>
<tr>
<td>Whether I can take food for my children or family</td>
<td>2.85</td>
<td>1.090</td>
</tr>
<tr>
<td>Time</td>
<td>2.94</td>
<td>1.124</td>
</tr>
<tr>
<td>Other students</td>
<td>2.72</td>
<td>1.119</td>
</tr>
<tr>
<td>Privacy</td>
<td>2.77</td>
<td>1.151</td>
</tr>
</tbody>
</table>
The advisory board recently established a foundation account for FUEL NKU and has received several donations. The foundation account will allow FUEL NKU to receive donations from campus employees in the form of automatic paycheck deductions. In addition, the foundation account will allow solicitation of larger donations, as the donations are now under the non-profit organization, NKU Foundation.

**Discussion and Implications**

**Implications for Practice and Policy**

The FUEL NKU project is a case study of engaged scholarship, in that academic faculty paired with students and staff to identify a challenge and then work together to solve that challenge (Paynter, 2014). Students gained experience in community organizing, macro practice, policy and advocacy, and micro practice with individual clients at the food pantry. Faculty and staff were able to advocate and organize efforts in a successful initiative to establish the food pantry on campus. In addition, faculty have presented about FUEL NKU at several national and international conferences. Finally, faculty, staff, and students have been involved with community meetings and an initiative to establish a campus food pantry at a nearby university.

In addition, this project afforded research opportunities for all parties involved. Beyond just handing out surveys, students received an intimate look as to how community agencies determine, design, and ultimately decode best uses of research and findings. Future on-campus initiatives must be prepared to offer similar opportunities beyond handing out surveys. Much of the didactic application of the research from this project came from allowing students to develop the survey questions and to decide what to do with the findings. Further, as the students graduate and enter the workforce in other community agencies, they will be prepared to meaningfully control the research process and dissemination of research findings.

It is important to remember that regional universities can and often do serve as a microcosm of the community at large. The general factors facing the community must be reflected in the programs and policies developed to govern student life. Campus activities must not be separated from the events taking place outside of campus. While the student body may offer an opportunity to take a somewhat representative sample of the larger community population, it also offers opportunities to expand the impact of programs by utilizing the natural affiliation to the university many students have upon graduation. Thus, efforts such as this ensure that the university is truly a strong member of the community.

Taken as a whole, this multifaceted initiative has influenced our university and has enabled NKU to more clearly establish its reputation as a civic-minded campus. The model utilized in this initiative explicitly involved features of a civic-minded campus, as shown in Table 6.

**Implications for Research**

This project gave opportunities for students to participate and learn about the research process. Beyond developing items to survey, it gave students an opportunity to assess what information would be most pertinent and helpful at their stage of organizing. Often, students may be intimidated or unsure of best use regarding research findings or how to use data collected given the rather esoteric and heuristic nature of class research studies. Given real-world opportunities that would actually impact their own organization gave insight to students on how best to use data to develop a potential model for describing research.

Further study is needed to validate the food accessibility scale for future studies. Much of our understanding about hunger comes from study of community-level data, rather than on individuals or on the process to access food. Measures that examine food accessibility can be very valuable in understanding, from a micro perspective, the unique and nuanced needs regarding food. Our understanding, as in at our institution, is made from self-report and we make an elision of sorts by extrapolating to the larger population. To some extent, our own experiences and observations inform our perceptions of both our university and the wider community. Given the regional niche our institution fills, we are confident that what is impacting our students is also impacting the community, but validating an empirical measure would give us more confidence regarding hunger and our community from a micro perspective.

Finally, this study used a relatively novel methodology for data collection: the flash mob. This was a way to garner attention for the study and probably spurred participation. However, more study is needed to examine the impact of events such as this and impact on self-report scores. It is highly plausible, and probable, that some of the scores were influenced by the event. We found that this process to gather data was relatively successful in reaching college students,
but more is needed to understand how novel data collection methods influence scores and whether these methods are valid.

Conclusions

The FUEL NKU project addresses hunger on a regional university campus, through student-led community engagement. This study adds to the current literature and provides a practice model for similar efforts on other campuses. While the case study approach necessarily limits generalizability due to a smaller data set and a regional population, FUEL NKU is a multi-pronged initiative that addresses a need in our community. Through FUEL NKU, our campus has embraced tangible change in efforts to support our students.

The next steps for our campus food pantry, and indeed our larger communities, might include the following initiatives:

1. Continued national collaboration among existing and new campus food pantries, including best practices according to particular university needs.
2. Development of a mainstreamed advocacy effort, with participation by nationwide university food pantries, to both increase awareness and address food insecurity as a challenge for students.
3. Establishment of a foundational body of literature, summarizing existing research related to food insecurity among students. This would be an ideal macro-level survey, to include a review of current research.
4. Establishment of a foundational body of literature, summarizing existing campus food pantries and the multiple initiatives involved in each project. For instance, this would ideally include all of the additional components of a campus food insecurity project, including the integration into classroom teaching, student organizations, advisory boards, and publicity and ongoing efforts.

Overall, our position is that FUEL NKU is a multifaceted effort, but one that could be replicated to include many similar initiatives. As first author, I collaborated with three area universities seeking to undertake similar efforts, and this is by far the best possible route. The foundational efforts involved in community organizing and university engagement will of course differ according to the particular university community, but trans-university collaboration remains a major resource for those wishing to undertake similar efforts. Our recommendation is that newly founded, or to-be-founded, campus food pantries connect with existing pantries and CUFBA in order to support their projects.

**Table 6.** Features of a Civic-Minded Campus and Related FUEL NKU Components
(adapted from the National Task Force on Civic Learning and Democratic Engagement, 2012)

<table>
<thead>
<tr>
<th>Civic Element</th>
<th>Features of Civic Element</th>
<th>Components of FUEL NKU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Civic Ethos</td>
<td>1a. Defining character of the institution and those in it that emphasizes open-mindedness, civility, the worth of each person, ethical behaviors, and concern for the well-being of others.</td>
<td>Development of the food pantry as a way to address the well-being of all students and celebrate the worth of each person.</td>
</tr>
<tr>
<td>2. Civic Literacy</td>
<td>2a. The ability to think critically about complex issues and to seek and evaluate information about issues that have public consequences.</td>
<td>Navigation of the campus system and decision to establish food pantry as the most effective way to address food insecurity among students.</td>
</tr>
<tr>
<td>3. Civic Inquiry</td>
<td>3a. The deliberate consideration of differing points of views.</td>
<td>Establishment of the student organization, food pantry, and board of directors as a direct result of thoughtful and repeated discussions among students.</td>
</tr>
<tr>
<td>4. Civic Action</td>
<td>4a. The capacity and commitment, both to participate constructively with diverse others and to work collectively to address common problems. 4b. The moral and political courage to take risks to achieve a greater public good.</td>
<td>Commitment of time and resources by student volunteers and student organization members, to work collectively to better our campus. Commitment by students to engage with multiple stakeholders, organize and attend planning meetings, and demonstrate both initiative and courage to establish the food pantry and student organization.</td>
</tr>
</tbody>
</table>
References


Lerer, S. (2013). Altering the landscape of food insecurity: Creating a campus food pantry. Presented at the NASPA Western Regional Conference, Salt Lake City, UT.


About the Authors
Jessica Averitt Taylor is an assistant professor in the Department of Counseling, Social Work, and Leadership in the College of Education and Human Services, and coordinator of FUEL NKU at Northern Kentucky University. James P. Canfield is an assistant professor in the School of Social Work at the University of Cincinnati. Kajsa C. Larson is an assistant professor in the Department of World Languages and Literatures in the College of Arts and Sciences at Northern Kentucky University.
Appendix A. Food Survey Questionnaire

A. With which gender do you identify?
   - Male___ Female___ Transgender___

B. What is your age? ___

C. What is your year in school?
   - Freshman___ Sophomore___ Junior___
   - Senior___ Graduate Student___

D. Which area would categorize where you live?
   - Urban___ Suburban___ Rural___

E. How helpful would a food bank be on campus?
   - Not at all___ Not really helpful___
   - Might be helpful___ Helpful___ Very Helpful___

F. In an average week, how many days do you go hungry and cannot provide yourself with food?
   - Days___

G. Would you be interested in joining a student organization to fight hunger on campus?
   - Yes___ No___

H. How much do you agree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am geographically close to places were I can get food.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. I can afford to get the food I need.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. I know about ways to get food.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. There are rules and regulations that prevent me from accessing food.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Thinking about how I will get my next meal affects how I feel.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

I. Should the following be stocked in an on-campus food bank?

<table>
<thead>
<tr>
<th>Item</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Food</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Kosher food</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Halal food</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Baby food</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Fresh food</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Vegetables</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Fruit</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. Non-perishable food products</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. Candy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. Soda</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. Milk</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. Bottled water</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. Prepared meals (e.g., Chef Boyardee, Dinty Moore, Campbell Soups)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. Food that must be prepared at home</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15. Uncooked pasta</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16. Eggs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17. Toilet paper</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18. Paper plates</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19. Plastic cups</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20. Can openers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>21. Plastic forks</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>22. Plastic spoons</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
### J. Would the following prevent you from using an on-campus food bank?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Location on campus</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Need for service</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Embarrassment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Cost</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. What is stocked in the food bank</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Knowledge that a food bank is on campus</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Shame</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. The food bank wouldn’t help me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. Whether I can take food for my children or family</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. Time</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. Other students</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. Privacy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

### K. In the past 12 months...

<table>
<thead>
<tr>
<th>Statement</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>All the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often did you worry that you would not have enough money for food?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. How often did you cut or skip a meal because you didn’t have enough money to buy food?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. How often were you unable to eat balanced or nutritious meals because of a lack of money?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. How often did you go hungry because of a lack of money?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

### L. Next, we are going to ask you about food accessibility. How much do you agree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There is a grocery store near where I live.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. I can get to a grocery store easily.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. There are healthy food options near where I live.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. There is a grocery store in my neighborhood.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. I can afford to buy groceries.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. I can afford to buy the food I need.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. I can afford to buy food my family needs.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. I can afford to go to the grocery store.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. I skip meals because I can’t afford to buy food.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>---</td>
<td>------------------</td>
<td>----------</td>
<td>---------</td>
<td>-------</td>
<td>----------------</td>
</tr>
<tr>
<td>L. (Continued)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. I know about what foods I should eat to be healthy.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. I know what foods to buy to be healthy.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. I know how to grocery shop.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. I know where the grocery store is.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>M. How much do you agree with the following statements?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I know about programs to help me get food.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. I know the resources in my community that will help me get food.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. I feel there are rules and regulations that prevent me from getting food.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. The grocery stores are open at times for me to buy food.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. The services available fit my food needs.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. The services available to help me get food are accessible for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. I worry a lot about getting food.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. I worry about where I will get my next meal.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. I worry about when I will get my next meal.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. I am embarrassed about going hungry.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. I stress out a lot about getting my next meal.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. I feel a stigma about needing food services.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Effective Community Engagement Strategies: 
The Voices of Injection Drug Users

Elizabeth D. Gilbert, Devin Laedtke, Teresa A. Sharp, Stephanie Wood, and Lisa Raville

Abstract
Academic and community interactions are often conducted with good intentions. However, there is exploitation risk for populations engaging in illegal activities. Collaborations with injection drug users (IDUs) can highlight their expertise and support progressive research. The objective of our research was to use community-based participatory research principles to give voice to IDUs, define community, and recommend authentic engagement strategies. In Phase 1, 10 focus groups (n=33, ages 25–64) helped define community and collaborative partnerships. In Phase 2, community forums with 13 additional IDUs provided feedback on focus group themes. Results: (1) primary themes defining community—geography and social networks; (2) community qualities—respectful, accepting, outcasts, and welcoming; (3) engagement recommendations—incentives, recognizing potential for contributions, treating IDUs respectfully, using research results for positive benefit. Conclusions: Providing voice to marginalized communities allows for self-definition, description of needs, and authentic engagement recommendations. This information is crucial for developing effective programs and creating sustainable collaborations between IDUs and academics.

Although many researchers set out to understand the experiences of vulnerable populations, authentically engaging with these communities is a frequently overlooked strategy. Authentic engagement increases the level of community involvement and collaboration and thus positively impacts the level of trust (National Institutes of Health, 2011). The concept of community is a critical component in how individuals experience their daily lives; however, “there is a lack of consensus on a clear definition or set of criteria that define community across diverse situations” (Paveglio, Boyd, & Carrol, 2016, p. 1). It is crucial that researchers and service providers enter marginalized communities with a priority of understanding as much as possible about these groups.

Research among vulnerable populations often fails to accurately represent the population of interest (Wilson & Neville, 2009). Researchers are often outsiders who create the agenda and use their own lenses for observation and interpretation, which fails to engage vulnerable populations. This research approach increases the chance for exploitation of vulnerable populations. In order to gather an accurate reflection, it is necessary to improve the inclusiveness and efficacy of research within these communities. In order to reach this goal, community partners must be involved in every aspect of the research project including design, implementation, evaluation, and dissemination.

If population members are not included in the initial stages of the research process, there is a strong likelihood that the research can worsen vulnerability within these populations (Wilson & Neville, 2009). In an effort to reduce vulnerability, engaging community members provides an opportunity to self-describe the qualities that make them who they are. Community-based participatory research (CBPR) is a methodology that enhances engagement efforts to reduce the misrepresentation and exploitation of researched populations and improves health and well-being through social change and meaningful community engagement (Bell & Salmon, 2011; Hayashi, Fairbairn, Suwannawong, Kaplan, Wood, & Kerr, 2012). CBPR requires equitable, collaborative partnerships between community members, community-based organizations, and researchers in all interactions. Partners contribute their expertise and knowledge and share in the decision-making and ownership of projects (Viswanthan, Ammerman, Eng, Gartlehner, Lohr, Griffith, Rhodes, Samuel-Hodge, Maty, Lux, Webb, Sutton, Swinson, Jackman, & Whitener, 2004).

It is important to note that communities are more than a grouping of individuals. Social networks often generate unique subcultures with unique collective needs that appear incongruent to what researchers typically identify as community priorities (Murphy-Berman, Schnoes, &
Chambers, 2000). As a result, core identifying dimensions of community and their psychosocial contexts are necessary before successful collaborations can develop (Chilenski, Greenberg, & Feinberg, 2007; McMilliam & Chavis, 1986). CBPR has been a powerful method for addressing health and psychosocial issues in a variety of communities (Mooney-Sommers & Maher, 2009; Rhodes, Hergenrather, Wilkin, & Jolly, 2008; Sullivan, Hassal, & Rowlands, 2008).

CBPR and Injection Drug Use

As a result of successful use of CBPR with other diverse groups, inclusion of CBPR research methods and principles is essential for successful research within the IDU community. The use of CBPR approaches is recent with IDU, a population that is impacted by substance abuse, extenuating mental health issues, poverty, stigmatization, and psychosocial marginalization. As a result, effective implementation of CBPR within these communities is unclear. However, CBPR allows researchers and service providers to work collaboratively with community members and provide authentic engagement that includes the IDU community in shared control of the research process. As a result, the IDU community develops an investment in identifying and advocating for their own service needs (Shaw, Lazarus, Pantalone, LeBlanc, Lin, Stanley, Chepesiuk, Patel, Tyndall, & the PROUD Community Advisory Committee, 2015).

One case study conducted with IDUs in Thailand demonstrated the positive impact of the CBPR methodology when working with this marginalized, and often invisible, population. The collaboration fostered a better understanding of an IDU community and connected the IDUs to important services (Hayashi et al., 2012). Investigators reported that few studies had successfully captured the dynamics of IDU community participation in health research, and prior studies primarily focused on health promotion and education among IDUs. The results of this study suggest further investigation is necessary to optimize CBPR engagement strategies when working with IDU communities (Hayashi et al., 2012). Additional research should continue to include IDUs' perception of researcher/participant social exchange, shared decision-making, and data ownership.

While exemplifying this type of collaborative community project, the current study uses CBPR methodology and gathers perceptions and input from clients of the Harm Reduction Action Center (HRAC), regarding strategies researchers and service providers can use to more effectively enter and work within IDU communities. Understanding how the community defines itself and wants to actively engage (or not) with researchers allows for more successful research, interventions, and service programs.

The HRAC in Denver, Colorado seeks to “educate, empower and advocate for the health and dignity of Metro-Denver's injection drug users and affected partners in accordance with harm reduction principles” (see http://www.harmreductionactioncenter.org/index.html). Harm reduction principles aim to reduce the negative consequences of drug use affecting the individual, families, and the larger community. This approach recognizes the prevalence of illicit drug use in our communities and accepts unsafe use of these drugs is an inevitable occurrence within our society (Reid, 2002). HRAC promotes public health by ensuring that people who inject drugs are educated and equipped with tools needed to reduce the spread of communicable diseases, such as HIV and Hepatitis C, and eliminate the proliferation of fatal overdoses.

Thorough evaluation of community dimensions is crucial for successful community engagement. Researchers’ and community providers' assumptions about the IDU community can undermine the ability to effectively engage IDUs in research/community partnerships and effectively evaluate the contribution of these collaborations. The focus of the current project was to gain insight from IDUs into both desirable and ineffective characteristics of researchers and their institutions. Ultimately, this study aimed to strengthen the connection between community and academia. The specific aims of the current study are:

1. Give voice to an historically marginalized community
2. Define what “community” means to IDUs
3. Recommend effective engagement strategies for researchers and providers partnering with IDU communities

Methods

Community Partnerships

The partners in this project were the Colorado School of Public Health at the University of Northern Colorado (CSPH@UNC), HRAC, and the Colorado Department of Public Health and the Environment (CDPHE). The initial partnership between HRAC and CSPH@UNC began when an
HRAC staff member was a graduate student in the CSPH@UNC master of public health program. Upon graduation, she began a job at CDPHE and approached both CSPH@UNC and HRAC about a collaborative community-engaged project that would allow members of the Denver injection drug using community to tell their stories. Another CSPH@UNC graduate student and co-author was involved in the analysis and interpretation of the stories provided by the Denver IDU community. The University of Northern Colorado Institutional Review Board and HRAC administration approved this project. The Colorado Department of Public Health and Environment provided funding support.

Since 2002, HRAC has been Colorado’s primary provider of services and HIV/HCV prevention to IDUs in the Denver community. To date, HRAC has more than 4,100 unique clients, making it the largest syringe access program in Colorado. The most accessed client-based services provided by HRAC include vein care education, HIV and Hepatitis C testing, and Naloxone administration and training. Academically, HRAC has served as a frequent site for educational volunteer opportunities for both undergraduate and graduate students at the University of Northern Colorado, as well as providing guest lectures about harm reduction since 2009. In addition, HRAC is a community organization that is continuously engaging with lawmakers, healthcare providers, law enforcement, and the general Denver Metro community in an effort to work toward a healthier Colorado.

HRAC, as the community stakeholder for this project, was involved in all phases of this work, including study design, recruitment of participants, implementation of focus groups and community forums, evaluation, data analysis, and dissemination. A faculty member of CSPH@UNC and a staff member of HRAC and CDPHE designed the project, and once created, implementation of the focus groups and the community forums occurred at HRAC. CSPH@UNC faculty, students, and a CDPHE staff member analyzed focus group data and feedback provided at the community forums.

Phase One

The initial phase of this project concentrated on defining community and fostering meaningful participation in health research through focus group discussions. Academic and community partners developed focus group questions to identify participants’ perceptions of how researchers and service providers have engaged the community, how members define their community, and what collaborative partnerships should entail. Questions developed by the CSPH@UNC faculty and the HRAC staff kept the appropriate literacy levels of the community participants in mind.

Participants included 26 males and 7 females ranging in age from 25 to 64. Recruitment efforts used flyers posted at the HRAC, as the organization focuses on the needs of IDUs in the Metro Denver area. Participants initially completed a brief survey to collect demographic information, residential status, and drug injecting history.

While most (n=21) participants had injected within the past 30 days, it was mandatory that participants abstain from drug use at the time of the focus groups. Ten focus groups were comprised of two to seven participants who each received a gift card as compensation for their time. Focus groups facilitators included the co-investigators and an IRB-approved participant who was a client and volunteer at the HRAC.

Following transcription of audio recordings, co-investigators analyzed focus group data by identifying categories of information based on the themes that emerged. An embedded analysis searched for patterns in the transcripts from focus group responses related to community definition and strategies for meaningful engagement (Wolcott, 1994). Embedded analysis is a method used when there is more than one sub-unit to analyze (Creswell, 2007). This analysis enabled investigators to identify relevant themes that emerged from respondents in these sub-units and from select questions asked during both the focus groups and the community forums. Focus group questions included:

1. When you think of the word community, what does the word community mean to you?
2. Can you tell us about a particular time when you felt part of a community?
3. Why is it important for a person to belong to a community?
4. Would you tell us about the main community that you most identify with—what does that community look like?
5. What important qualities do members have in your community?
6. What have relationships between your community and researchers been in the past?
7. What needs to be in place for researchers and your community to be able to work together?
8. Imagine if a researcher came to your community and said, “We want to do a study on something that would help your community.” What would your community suggest?

Phase Two

During phase two, community and academic partners held two community forums with IDUs who were not focus group participants. CSPH@UNC investigators and the HRAC staff co-facilitated the forums, and CSPH@UNC investigators and the HRAC staff developed four questions or statements from information garnered in the focus groups. Forum questions and statements were as follows:

1. Researchers find out what the important issues are in our community by…
2. Ways that researchers could come into my community’s world would be…
3. How could researchers explain to you why they want to study your community?
4. How can researchers find out what issues matter to your community?

Posters mounted on the walls of the HRAC displayed each community forum question or statement. Groups of three to four participants rotated throughout the stations where they provided written feedback to each question or statement until they had provided input at all stations. After completion of the rotations, participants discussed the interpretation and ownership of study findings, while encouraging community exploration of what collaborative partnership in health research could entail. Interpretation responses for each question were recorded on flip charts and later reviewed by the investigators.

The community forums provided an opportunity to explain, confirm, and/or challenge definitions of community from initial focus group data. Participants of the community forums also approved or challenged the focus group recommendations to engage IDUs in meaningful collaborative research, which follows the CBPR model of disseminating research findings to the community and encouraging their response. The comments received from IDU partners were helpful in confirming what we learned in focus groups, related to how the IDUs defined their community, and provided recommendations for how outsiders should respectfully enter their community.

Identification of Emerging Themes

Investigators began with raising generative questions to assist in guiding the research. These questions guided the semi-structured conversations that took place in each of the focus groups. Throughout data collection, the investigators identified themes as they emerged. These themes broadly described the responses provided by participants. Qualitative data analysis focused on identifying reoccurring themes voiced by IDUs using grounded theory. Grounded theory is an approach for developing themes grounded in data gathered and analyzed in a deliberate process (Corbin & Strauss, 1990). Resulting focus group themes were presented to community forum participants for a comparative analysis of the initial themes.

Results

There were 46 IDUs (33 focus group participants, 13 community forum participants) who participated in the project. The demographics of study participants are representative of the HRAC’s current client population and the Denver Metro Area’s IDU population. The two-phase format of the research project allowed for an historically marginalized community to express themselves, voice their concerns, and develop a collaborative relationship with the HRAC staff and CSPH@UNC investigators.

Qualitative Results

The following themes emerged from the voices of focus group and community forum participants.

1. Defining community

A primary objective of this project was to identify how IDUs defined community. Focus group participants addressed what the word “community” meant to them. Three predominant community definition themes emerged: Geography, Social Networks, and Community Characteristics. It is important to note that the IDU community typically has their identity defined for them by society. This was a time the IDU community could use their voices to define their community for themselves.

Geography

The geographical context in which the participants framed their communities is a primary theme that emerged when defining themselves. This illustrates awareness of the diversity of locations in which members of the community
reside, socialize, support each other, and engage in activities necessary to support their addictions. One participant said community groups split into “downtown on the mall, you’ve got the mall rats, or the park crew. There’s different cliques all throughout town. There’s the west end, the south end, north end and east end. It’s all different little cliques.”

Social Networks

We often heard community described as the “feeling [of being] a part of something”. As a community that is often marginalized, “feeling a part of something” was a new experience for many who participated in this project. The experience of marginalization is what makes the HRAC a place that many of the participants accessed and referred to as a place where “they belonged.” For example, one participant said, “…we all have our community here.” Another said, “…in that group that kind of made me feel like I belonged. I got a sense of identity out of it.” This sense of belonging for the IDU community is one of the intentions of the HRAC.

Community Characteristics

These indicators did not refer to a definition, but rather to the characteristics of the community important in identifying Denver Metro IDUs and how varying roles contribute to their defined community. Many participants, particularly those who were homeless and/or living in camps throughout the city, talked about taking responsibility for each other by sharing resources and responsibilities. Participants discussed working in “teams” each day and dividing up the responsibilities necessary to help each other get food, obtain what was necessary to get high, and do tasks such as laundry. A method they described that is often used to obtain needed resources was to “fly a sign to get money.” This is illustrated by the following comment, “I had four friends that I camped with, and we all had responsibilities for the day…We all had something to do. …if someone failed their mission for the day, something would go haywire.”

Participants also reported conflicts between the necessity of being dependent upon others in the community, and at the same time, being concerned about the need to be reliant on others. Regardless of the characteristics used to define community, many of the participants found community to be something that lacks dependability. An absence of dependability could lead to some or all of the critical tasks going uncompleted. One participant described the purpose of each task as a means to make sure that every team member received what was necessary to meet the needs of their addictions and get high, but ultimately they need to consider their own needs first. As one participant described it:

The heroin community is a crooked community. I was going to say that you can talk to and that you got somebody, you know, but you really don’t. Unless you got a shot in the rig, nobody wanna hear your crap. I’m just as treacherous as they are. We’re all backstabbers.

2. Qualities of “my” community

Four qualities emerged from focus group discussions that were important descriptors of how IDU community members described themselves and other members of their communities: accepting, welcoming, respectful, and outcasts. While the first three descriptors indicated ways in which IDU communities and the HRAC responded to those who entered their community, the last was the common quality many of the participants used to describe themselves and others in their community. “When I moved to Denver I felt more accepted here than anywhere I’ve ever lived, even more than my family. …I came here [HRAC] and I met people who didn’t care [that I was an IDU].” However, other responses showed some IDUs did not see themselves as a part of community. “I’ve been on and off the streets. You’re not part of community. If anything, I guess you are a part of a community but you’re the outcast. People just think you’re a parasite.”

3. Why it’s important to belong to a community

Although some respondents indicated they were “outcasts” in society, it became increasingly clear during the focus groups that individuals found a sense of family, stability, safety, and belonging through their own community connections. While the quotes that follow are explanations of participants’ beliefs of the importance of community belonging, the issue of addiction made finding that sense of belonging complicated. In addition, the participants explained that they did not belong to just one community. Something they welcomed was finding a group that could provide them stability and belonging, along with an opportunity to contribute. “I come from a lot of different communities. …um,
to be a part of a community gives me a sense of family, stability. Not just being out there and, you know, being alone. In a community, I have friends, acquaintances.” Another participant expressed, “I need to know that someone wants me around. I like to feel like I’m contributing something. I need to know that I’m needed, and that I’m wanted, and that I’m welcome.”

4. How would you suggest researchers/service providers build relationships with and identify the needs of your community?

A goal of this project was to give IDUs an opportunity to recommend strategies to researchers and service providers for ways that they can more effectively engage with IDU communities. When asked, “How would you suggest researchers and service providers build relationships with and identify the needs of your community?” it was clear that many participants were hesitant to answer. When asked about this hesitation, participants provided general agreement that no one had ever asked for their opinions before research was conducted. They also indicated if one of the investigators had not been a long-time partner with the community, it was unlikely that participant responses would have been as forthcoming. This insight is valuable to future researchers wanting to engage with IDUs and other communities in which they are not members.

Since trusted individuals were a part of the research team, the answers and insights provided by the participants serve as a “how-to” list for outsiders seeking successful engagement in an IDU community. Participant suggestions included providing incentives, treating IDUs respectfully, understanding them to be more than just drug users, and using the information collected to make something good happen. In regard to providing incentives, one participant talked about his interaction with a photographer wanting to do a photojournalism piece about the IDU community. His response came from the responsibilities he had to his “team” that required him to contribute resources needed each day. His comments came from the perspective of “time is money”:

He’s doing like this photograph and interview with addicts. And I talked to him yesterday. I said, “hey man, I’ve been thinking about this (photo project). Is there any sort of compensation?” He’s like “no.” I was like, really? If I’m spending time with you for free when I could be out hustling for money so I can stay well, it’s hard, it’s really hard.

Other participants felt that researchers and practitioners should have considerations of the difficulties experienced by individuals with addiction and those facing homelessness. They felt the only way to begin to understand what their life is like on a daily basis is to spend time with them:

It seems like people see a lot of homeless people and think, “that person wants to be homeless.” They don’t wanna be homeless. They’d know (if they spent time getting to know us). They’d understand better what it’s like to be a drug addict.

We often heard participants express a desire to see researchers and practitioners use the information they gather to make something “good happen.” Participants’ experiences to date had only been with those who seemed interested in getting information that never resulted in any positive changes for IDU communities. Knowing that something positive could help their community made participants more interested in contributing. However, the “good” did not necessarily have to provide changes in their local communities. Contributions could also provide changes for society as a whole. “Why did we give our time to this [the study]?” one participant said. “Because we want to know what benefit it has to somebody else. That’s what research is supposed to be, is a benefit to somebody else, right?”

Another said:

I’d like to see the actual studies being done, the long run, …how it’s gonna help us, the people that are being studied? I mean sometimes there is so much studies and all this studying going on, like what’s the point of all of this? …it’s like the same ____ …[H]ow is this study gonna benefit heroin users in the end?

5. Why is it important to treat members of the IDU community ethically and with respect?

Distinct themes emerged from participant responses related to ethical and respectful treatment of the IDU community. The participants in this study provided insightful information from their previous interactions with those “researching” their community. Their responses reiterated the need for outsiders entering their communities to
accept that classroom material does not usually transfer to the streets, and the only way to gain the insights necessary is to spend time getting to know the community. “Just open-mindedness from both sides. To understand that researchers are coming in to do a job. And researchers need to understand whatever they learned in school isn’t necessarily the truth on the streets,” said one participant.

One way that participants suggested researchers learn more about them is through field-based experiences to develop relationships with the community. Participants indicated this would provide insight regarding what day-to-day life is like for their community members. As one said, “I think that …to, like, gain experience, like, to spend a week in the camp before they come to interrogate… and then they’d have a better understanding of what those people living in the camp are going through.”

In addition to providing insights and information to the researchers, participants were also interested in learning about the outcomes of the work that the partnership provided. This reinforces their belief in the importance of bi-directional learning.

…[B]ut the end result was to help us, but it doesn’t seem like that ever happens. It’s just the next thing after, and the next thing after, so maybe to see the results of the study… It makes you feel like, ‘alright, I did something’ but if you sit around and just get asked the same questions over and over by people who don’t even know…. (a participant).

It is important for researchers and service providers to understand that the way a community was treated in the past impacts current collaborations. If respect was previously lacking in interactions, participants could be left feeling exploited, which influences current opportunities for engagement. “It’s Tuesday and their boss says, ‘You have to go talk to heroin addicts today,’ and they’d say ‘S---!’ Sometimes they make us feel like that. I’ve felt like that. Like I’m a guinea pig.”

Discussion

This study illustrated IDUs are a community and not just individual addicts. Respondents described the strength and benefits of creating their community, supporting their needs through resources and responsibilities, and advocating for their future. Participants’ responses mirrored how Paveglio et al.(2016) previously summarized Tonnies’ (1957) structure of society, which is to “gain access to resources, bear collective burdens, and form networks of support or interaction” (Paveglio, et al., 2016, p.5).

A focus on individual participant ethics has allowed what is often referred to as “helicopter research methodology” where academic careers advance by collecting data without a sense of responsibility to give back to the community (Flicker, Travers, Guta, McDonald & Meagher, 2007). As a result, some methodologies researchers choose to use can unintentionally contribute to the stigmatization experienced by vulnerable communities. In addition, researchers may base their project conclusions on academic benefit while ignoring project results that benefit the community. Because of psychosocial marginalization and disenfranchisement, IDUs are particularly vulnerable to such research methods, and easily feel over-researched and exploited. Thus, it is crucial to discuss the ethical treatment of IDUs by outsiders.

Through participants’ reports of prior research experiences, respondents for this project provided invaluable descriptions of desirable and ineffective characteristics of researchers, along with the importance of social connections between community and academia. These descriptions provide context to community visions and motivators (or the lack thereof) to participate in joint research (Pinto, 2009). Such information enhances the current state of knowledge for researchers and practitioners, provides opportunities for these outsiders to repair traditionally mistrustful relationships, and strengthens motivators that facilitate collaboration.

A primary goal of the current study is to better inform researchers and service providers regarding ways that IDUs define their community and how outsiders should effectively and responsibly enter and engage the IDU community. The participating members provided voice for this study and helped identify key concepts for their community. These key concepts include: (a) a better understanding of the meaning, experience and importance of “community” in the everyday lives of Denver’s IDU population; (b) an understanding of how IDUs perceive “community participation,” and in what circumstances they are willing to take an active role in collaborative research; and (c) a foundational analysis that both informs the feasibility of implementing CBPR processes with IDUs while generating ideas for future collaborative projects.
In order to improve the relationship between community members and researchers, researchers need to create a space for dialogue between themselves and vulnerable populations (Wilson & Neville, 2009), which allows researchers to gain respect and a better understanding of the identity of the community of interest. This dialogue may increase individual and community capacity, which includes an “…increased understanding of how to affect change among individuals and within communities, and the development of community mobilization, problem-solving…” (Rhodes, Malow, & Jolly, 2010, p. 178).

The messages from this study are also relevant to service providers for the IDU community. It can be difficult for agencies working on limited budgets to spend their time and resources developing relationships in communities instead of providing immediate action. Service recipients should have input into the identification of needs, the development of programs, the implementation of services provided, and input as to whether these services are effective at meeting identified needs. If recipients are involved in the development process, program services will have more meaning, and thus be more sustainable.

Many underrepresented communities of interest to researchers and service providers are marginalized in mainstream society and have a history of exploitation and traumatic interactions with outsiders. By providing explanations and strategies for successful engagement, among IDUs and all vulnerable populations, there is greater potential to avoid exploitation and misrepresentation involving these communities. While the voices heard in this study come from self-identified IDUs in the Denver Metro area, the message offered is transferable for other marginalized communities. That message is: “Respect.”

Respect encompasses: (a) listening, observing, and taking time to get to know members of the community, and not relying on just reading literature about them; (b) being honest with community members and acknowledging that they should be compensated in some way for the expertise they bring to projects; (c) avoiding assumptions of what they need; few issues are “black and white”; (d) returning to the community to verify the accuracy, completeness, and usefulness of data collected.

Lessons Learned

There are obvious challenges to CBPR-based projects. Relationship and partnership development and maintenance, establishment of trust, identification of key stakeholders, and understanding the community that researchers and service providers are entering often compound the difficulties associated with limited resources and short deadlines (Rhodes, et al., 2010). While scarce resources can be a deterrent to engaging in community partnerships, another challenge is that this type of work forces those who have traditionally had control to relinquish much of it. Finding the best partners for a project can be difficult, especially when service providers or researchers are outsiders to the community, and the community has had historically exploitive relationships with those outsiders. For these reasons, knowing how the partners define community is essential to engagement. This is not a “quick fix” process. It takes time and continual engagement with partners to learn how to best meet each other’s needs. Additionally, through the respect and reciprocity that describes authentic engagement, trust can be established, and more sustainable partnerships created (National Institutes of Health, 2011).

Implications

Results of this project provide clinicians, public health practitioners, service providers, policymakers, health educators, and researchers with information for working with IDUs, as an example of an extremely marginalized community. Understanding the challenges and barriers experienced by these individuals assists with development and implementation of initiatives, policies, and programs that can ultimately influence positive changes in health status. Identifying services that are lacking or inaccessible to the community is an important first step toward building awareness for service providers, policymakers, and researchers. Providing information to outsiders of the IDU, or other marginalized communities, about effective strategies to enter and engage those communities is an essential step for developing partnerships. Finally, listening to the voices of communities typically silenced creates a process that is respectful and reciprocal. This will lead to active community involvement in developing partnerships that identify community needs resulting in the initiation of sustainable public health efforts.

Limitations

Results are not representative of all drug users. Not all drug users are IDUs or homeless, nor do all…
IDUs utilize the services of local agencies. Although attendees at our community forums confirmed the information we received from the focus groups, it would still be of benefit to acquire additional community input for successful engagement with this community.

**Summary**

Marginalized communities provide important educational opportunities for academics and service providers. Talking directly with members of these communities provides valuable information about how they define and describe themselves, their needs, resources, barriers to accessing those resources, and perceptions about those providing services. This information is crucial for successful and sustainable interactions with marginalized groups to improve their health and wellbeing.

**References**


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**Human Participant Protection**

This protocol was approved by the University of Northern Colorado Institutional Review Board and the administration of the Harm Reduction Action Center.

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Youth ADAPT NC: A Participatory Action Research Project With Hispanic Youth Aimed at Enhancing Career Opportunities

Johanna Claire Schuch

Abstract

Participatory action research (PAR) involves community members as co-researchers throughout the research process and takes collective action on the knowledge produced. This article covers an application of PAR in a study about job access for Hispanic immigrant youth in Charlotte, North Carolina, an emerging immigrant gateway. I offer practical and detailed advice on structuring PAR projects and working with youth groups and community partners, with the hope of helping others implement similar projects in research, educational, and practice settings. Both process and outcomes can be beneficial for participants and researchers, and advance scientific knowledge and social change.

Introduction

Participatory action research (PAR) is an epistemology rather than a set of predetermined methods (Kindon, Pain, & Kesby, 2007). A reaction to traditional ways of doing research, action approaches are non-linear, with cycles of action and reflection built into the research process (Lewin, 1946). Participatory approaches emphasize conducting research with rather than about marginalized communities (Hall, 2005) by breaking down the traditional roles of the researcher as the all-knowing expert and research subjects as passive recipients (Pain, 2004). PAR sees youth as capable of making valuable contributions to scientific knowledge and their communities (e.g. Holloway & Valentine, 2004; Cahill, 2010). The broader goal is positive social change and equity.

PAR literature is heavily focused on the research process because of its critical and reflective nature and the importance of the process in achieving PAR objectives such as knowledge co-production (Smith, Bratini, Chambers, Jensen, & Romero, 2010; Levin, 2012; Brydon-Miller, Greenwood, & Maguire, 2003). Still, there is room for providing nuanced details about our successes and challenges, e.g., about logistics, communication, budgets, and confidentiality, to assist with replicability. Moreover, it is important to acknowledge the tangible and intangible outcomes of PAR. In this paper, I present the process and outcomes of a PAR project titled Youth ADAPT NC, offering practical details and recommendations. In terms of the process, I reflect upon the steps: designing the study; identifying a community partner; acquiring resources and providing compensation; planning the sessions; executing the project; assessing outcomes and conducting evaluation; and disseminating findings. In addition to discussing the website and seminar that were produced as part of this study, I reflect on the outcomes the PAR project had for youth participants and myself in terms of collective and individual learning. Field notes, reflection notes after every PAR meeting, video recordings of the PAR meetings, observation notes taken by a research assistant, and a focus group and survey with PAR participants provided data for this article. Materials are framed to be applicable to working with other groups in research, educational, and practice settings.

This project responds to the question “How do Hispanic youth propose to improve job access for themselves and their peers?” A PAR approach lends itself well here because only the youth themselves can answer this question. The study was informed by previous work I have done with Hispanic youth and a series of questionnaires and semi-structured interviews with 36 Hispanic youth 16–21 years of age in 2014. All 36 interview participants were invited to a gathering in December 2014 to discuss preliminary interview results and receive more information about the project. They also received a phone call in early
January 2015 inviting them to participate in the project. Fifteen participants (nine female) signed up for the PAR project, 13 of whom completed the full project. Participants initially signed up because they wanted to learn more about research, were interested in the topic, and/or wanted to help and promote the Hispanic community. All but one were still in school (various high schools, two- and four-year colleges) and they lived in different neighborhoods. We met 11 times for two hours on Wednesday evenings 5:30–7:30 p.m., from mid-January to mid-April, 2015 (see Table 1). All meetings took place at the Latin American Coalition, a Latin American advocacy and social services organization in Charlotte whose mission is “full and equal participation of all people in the civic, economic and cultural life of North Carolina through education, celebration and advocacy” (see http://www.latinamericancoalition.org/Who-We-Are/our-mission).

Outcomes: Youth ADAPT NC Website and Seminar

PAR outcomes can be in written, visual, and/or oral form. For example, Hansen, Horii, & Un (2014) developed the Youth Friendly Health Services project in which Vancouver youth engaged in community mapping to help make

Table 1. Overview of PAR Meetings and Project Phases

<table>
<thead>
<tr>
<th>Phase</th>
<th>Meeting Number</th>
<th>Tasks/Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Preparations</td>
<td>N/A</td>
<td>Literature review. Read work by other PAR scholars. Broadly define research topic/questions. Obtain IRB approval. Establish partnership and memorandum of understanding with local partner. Put together a flexible timeline and schedule. Participants (and parents, for minors) sign consent forms.</td>
</tr>
<tr>
<td>b. Developing trust, communication and logistics</td>
<td>1</td>
<td>Ice breaker activities. What is PAR? Background and examples. Goals of this project, plus clarify role of participants and what data will be collected and how data will be used. How will we communicate between meetings?</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Review material from first meeting. Team building activities (related to project). Brainstorming research question/issue of focus (in small groups).</td>
</tr>
<tr>
<td>c. Design the project</td>
<td>3</td>
<td>Topic: Discuss project ideas (in small groups); project planning.</td>
</tr>
<tr>
<td>d. Executing the project</td>
<td>5</td>
<td>Discuss progress and upcoming tasks. Leadership training.</td>
</tr>
<tr>
<td></td>
<td>6–9</td>
<td>Discuss progress and upcoming tasks. Time to work on project (in pairs, groups).</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Participants practice how to talk about their involvements in this project in interviews (e.g., for college, jobs). Visit from local media.</td>
</tr>
<tr>
<td></td>
<td>9–10</td>
<td>Prepare for seminar and website launch.</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>Youth seminar and website launch.</td>
</tr>
</tbody>
</table>

2These phases are similar to the “five-cycle process (listen, plan, do, study, and act)” (Buccieri & Molleson, 2015, p. 244) but add “evaluation.”
health clinics and services more youth friendly. The youth researchers decided to use the mapping results to create a health service evaluation survey. They found that this “survey tool simply did not represent the emotional and lived dimensions of those experiences” (p. 367), so the team decided to also create a zine, a self-published small booklet, with a photo-essay of photos and quotes expressing their impressions of the health clinics, and a set of health clinic ratings. Another example is Makes Me Mad: Stereotypes of Young Urban Women of Color, a PAR study facilitated by Cahill (2007a). Cahill partnered with six women aged 16–22 living in the Lower East Side in New York City (who called themselves the “Fed Up Honeys”). The participants decided they wanted to focus the research on the misrepresentations of young people of color. Research products that were developed included a website, a sticker campaign, and a report. The idea of technology created by “[r]eal youth, speaking to real youth” is similar to a PAR project in which homeless youth developed and launched a cell phone app (Bucciari & Molleson, 2015, p. 249).

After a series of activities and discussions about the interview data and research topics, the 15 participants of my study identified the lack of job-related information as one of the key common challenges they face to successfully transitioning from school to work. This included creating a résumé, preparing for an interview, navigating higher education, and identifying mentors along the way. Participants chose to develop a website and a seminar for immigrant youth with job-related information.

Participants conducted short surveys with their peers at school to identify what immigrant youth wish to learn about. Participants worked in pairs to create part of the content for the website, researching secondary sources and interviewing professionals. Youth also took responsibility for recruiting guest speakers and reaching out to local businesses for food sponsorships for the professional development seminar. I offered help and support by reminding youth of tasks they signed up for, writing a sponsorship letter, communicating with local media, scheduling meeting spaces, providing feedback on their website content, purchasing supplies, and providing additional information and resources when needed.

For the group/project name, participants brainstormed options together and individually. They decided on “Youth ADAPT NC.” The acronym ADAPT stands for “always developing by acting, preparing, and transforming” and was chosen because it reflects the professional development focus of the project as well as the ambition and assertiveness of the youth. The word “adapt” itself was deemed appropriate because it expresses the adaptability immigrant youth have in the labor market and in society in general, living with their native culture and language within the mainstream culture and English of the U.S. South. “Youth” and “NC” were added to specify our participant and target group and geographic location. Once the project name was chosen, the domain name for our website followed accordingly (see www.youthadaptnc.com), and we created a logo (Figure 1).

The professional development seminar took place at a local public library. About 40 people attended. Each youth brought food to share and a local restaurant donated chips, salsa, and empanadas. The schedule included introductions of youth participants and a brief overview of the project, a panel discussion, the website launch and networking. Panelists were a MeckEd3 career pathways advisor of a local high school, the general manager of Norsan Media, the largest Hispanic media conglomerate in the U.S. Southeast, and an education outreach coordinator from Charlotte Works.4 The guest speakers (a Latina, a Latino, and

![Figure 1. “YouthAdaptNC” Logo](image)

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3 “MeckEd is an independent, nonprofit organization whose mission is to ensure that all children in Mecklenburg County have access to an excellent public education that results in the knowledge, skills, and experiences necessary to lead productive, successful lives” (http://www.mecked.org/).

4Charlotte Works is a local organization that connects available workforce talent with employers relocating and expanding in the Charlotte area (http://www.charlotteworks.com/).
a Caucasian female) were invited through contacts the youth and I had in the community. The first part of the discussion consisted of predetermined questions for the panel, followed by questions from the audience. Two PAR participants moderated the event and I kept track of time. In preparation, we devised a list of questions to ask our panelist, including:

- What was your first job and what did you learn from it?
- What do you wish you had known when you were in high school or college about preparing yourself for the labor market?
- When you are hiring someone, what kinds of skills are you looking for that set a candidate apart from the rest?
- What are other employers looking for?

Questions from the audience were related to higher education, résumé writing, and dealing with challenges and conflict in the workplace. PAR participants wore their Youth ADAPT NC T-shirts we had designed and proudly showed the website to the crowd. Attendees commented on how professional the website looked and how well it was presented. Prizes were raffled off at the end and all attendees received a folder with additional job preparedness information from Charlotte Works. The event was featured in a Hispanic newspaper (online and in paper form) the following week.

Preparations

In preparation for the PAR project, I read work by other PAR scholars (e.g. Kindon et al., 2007; McIntyre, 2003; Sutherland & Cheng, 2009; Cahill, 2004, 2007b, 2007c; Cahill, Sultana, & Pain, 2007; DeLyser & Sui, 2013; Mason, 2015; Wang, 1999), who recommend involving the group in deciding on the form of the project; acknowledging my positionality; not making any unrealistic promises; practicing honesty, integrity, compassion, and respect; and being flexible to changes or unexpected turns. In addition, I engaged in a week-long Critical Participatory Action Research Summer Institute at the City University of New York (CUNY), which further taught me PAR theory and practice. Applying this learning meant that the preparations I could do were limited because of the central role of the participants. In other words, the information and training taught me what to expect but it cannot be fully operationalized until you are working on a specific project. As such, these recommendations became guiding principles that I used to develop the agenda and curriculum each week, with each meeting building on the content and participant feedback from the previous one.

Securing a trusted and conveniently located meeting space, preparing Institutional Review Board (IRB) materials, and applying for funding must be done in advance. In my case, a memorandum of understanding with a long-standing community partner outlined the use of their youth room for the duration of the project. For the IRB, I put together a tentative outline of the project, initial handouts for the participants, a rough agenda for the first couple of meetings, a participant observation guide, consent forms, an evaluation survey, and an evaluation focus group guide. I also set tentative meeting dates and prepared a short workshop about PAR and examples of other PAR projects. Though this initial plan constantly evolved throughout the project, it helped guide the project and provide structure for participants to understand what to expect.

This PAR project was part of a larger dissertation study funded by a National Science Foundation (NSF) Geography and Spatial Sciences Program Doctoral Dissertation Research Improvement (GSS-DDRI) Award ($10,316), a Society of Women Geographers Pruitt Dissertation Fellowship ($12,000), and two UNC Charlotte Chancellor’s Diversity Challenge Fund mini-grants ($1,000 each). Though it is challenging to create a budget for an undefined project, I recommend budgeting for equipment (audio/video recorders, transcription and qualitative analysis software), research assistants, travel (conferences, training, mileage), participant compensation, and project materials (more in the Resources and Compensation section).

Operationalization

Trust and Transparency

The first meeting is arguably the most important because it sets the stage for the entire project. Developing trust within the group and with the researcher is pivotal (Amsden & VanWynsberge, 2005). This involves getting-to-know you activities, emphasizing confidentiality, and modeling respect, active listening, and collaboration. When creating safe spaces, the layout of the meeting space and the associations youth have with that space matter (Nygreen, Kwon, & Sanchez, 2006). In this project, we were fortunate

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5 All materials were submitted to and approved by the university’s IRB and are available upon request.
to meet in an existing youth space at the Latin American Coalition facility, filled with colorful activist posters, art, and supplies. Tables were pushed together in the middle, with chairs lined around it, creating a communal environment.

It is important to be clear about the overall goals and purpose of the research and remind participants throughout the project. Though participants set their own goals for their project, there are also the overarching goals of the research, and participants should understand the PAR philosophy and how their efforts are part of the research. For many, this will be the first time they are part of a participatory process and/or a research study; therefore, doing a short workshop about ‘What is research? What is PAR?’ is an appropriate starting point, acknowledging that the ideas behind PAR might challenge what youth think research is and who researchers or ‘experts’ are (Amsden & VanWynsberge, 2005). This advice is echoed by Cahill (2007a), who asserts that taking the time to develop research proficiency among all participants gives participants confidence “helps to equalize the power relationship between the facilitator and participants (and between participants with varying levels of experience) in the PAR process” (p. 301).

In addition to framing the project, which provides a structure for participants to apply their creativity, it is essential to explain what will happen with the information collected or the project outcomes. Participants themselves decided they wanted to have a workshop launching their website, be featured by local radio and newspaper, and have stickers with our logo and website, but I also informed them how I would be using the video recordings of our meetings and how I would use the de-identified data gathered for presentations, my dissertation paper, and manuscripts.

Offering transparency and clarity should continue throughout the project. One way to do that is to prepare an agenda for each meeting and go over it with the participants so they know what to expect. At the end, have them reflect on what was accomplished, what went well, and what needs to be done for next meeting. Beyond the basic structure and continuous support, researchers should provide plenty of leeway for participants to design and execute their own ideas. This can be challenging because committees, funders, and IRBs may want more specifics. Explaining the concept of PAR and demonstrating preparedness to facilitate the research process will typically reassure others (in academia) that the project is valuable, theoretically driven, and rigorous.

**Communication**

An important topic to discuss at the first meeting is best ways to stay in touch. In this project, I set up a private Facebook group, and the youth chose to also use individual and group text messages, and GroupMe, a phone app. Though I typically avoid providing personal contact information such as a cell phone number, let alone becoming Facebook friends with research participants, I do not know if it would have been possible to keep people engaged and share information any other way. Because of our tight timeline, it was essential that participants were reminded of, and assisted with, their tasks to ensure that we were making progress. Personal disclosure, if used appropriately, can break down boundaries between the researcher and participants. Using multiple forms of communication that youth use daily was their preferred communication strategy. Occasionally, I used email to send documents and communicate longer, non-pressing messages. Three participants did not use Facebook so I called and texted them instead. Communicating with all participants individually, rather than using only group messages, can help people see their individual engagement is valued. Though communicating on various platforms takes some time, I believe it was essential to the success of this short, intensive project.

Overall, GroupMe and a private Facebook group or group Facebook messages were effective means of communication. However, there were times when I would ask a question and not receive many or any responses. Making group decisions and getting feedback is best done in person. If a response is only needed from a few people, sending them individual text messages or phone calls is the best way to get an answer outside meetings. Additionally, though many youth nowadays will have their own smart phone with Internet and

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6 Participants were asked to develop a project that addresses the following question: How do you propose to improve the process of moving into the labor market for yourself and your peers? Guiding questions were: (a) Topic—What is the main career-related challenge faced by Hispanic immigrant youth that we want to address? Or maybe it is a strength you share that we want to highlight or raise awareness about. (b) Audience—Who are we trying to convince, educate, or reach out to? (c) Method—In what ways do we want to get the information across? E.g., written text (report, handbook, essays, poetry), oral presentations, video, photography. Will the information be delivered in person, on the website, via social media? (d) Execution—How can we get this done within the allotted timeframe and available resources?
unlimited text and calls, researchers should be mindful that not all youth are allowed or able to afford this and measures should be taken to also keep those participants informed (e.g. via email, mail, phone calls to home, or whatever is suitable and preferred by the participant). On several occasions, lack of transportation was a problem but we were typically able to resolve that through carpooling.

Roles and Responsibilities

One of the activities I recommend doing at the first meeting is putting together a group agreement, a series of guidelines on how participants feel they should interact for this to be a good experience for everyone involved. First, everyone wrote down a few things they wanted to add and then we opened it up to the group to see what everyone came up with. One participant volunteered to be the scribe and write down the guidelines upon which everyone agreed. This included being honest, being respectful of others’ opinions, listening to each other/not talking at the same time, using appropriate language/being aware of language use, being timely, helping each other, and coming with a positive attitude. At the end of the activity, everyone signed the document and received an electronic copy. We revisited this agreement halfway through the project and at the end to evaluate ourselves and offer improvements.

Scheduling difficulties are not uncommon in PAR (Alvarez & Gutierrez, 2001). Think about what to do if participants are late to or miss meetings—because this is inevitable—and involve participants in the process of setting attendance guidelines and practices. The group decided at the beginning of the project that participants could not miss more than two gatherings. If someone missed a meeting, I encouraged another participant to fill them in. Even when participants understand the importance of being at all meetings, realistically other (more important) events come up, people fall ill, or transportation falls through. Other things may happen that are outside the researcher’s control; for instance, we had to reschedule one meeting due to snow making it unsafe for people to be out on the roads. The next week it snowed again. To avoid getting further behind on the schedule, I set up a conference call. Though it was not the same as an in-person meeting, we were still able to discuss ideas and not fall behind schedule further. Moreover, it maintained the continuity of communicating regularly, which is important in keeping participants engaged.

The meetings were a mix of small group, individual, paired, and large group activities and discussions. These different forms of interaction give those who are less likely to speak up in a larger group setting the opportunity to have their voice heard and be fully engaged. Power dynamics also became apparent within the group during the PAR project, as in all group work. In this case, the older participants were often more likely to contribute than the younger participants. I managed this by providing opportunities for youth to work in pairs and smaller groups and asking for their input in large-group sessions. Having youth of different ages also provided an opportunity for older youth to be leaders and younger youth to learn from their college-aged peers. I found it helpful to read about how groups transition through the following development stages: forming, storming, norming, and performing (Tuckman, 1965; Jacobs, Maon, Harvill, & Schimmel, 2011). This taught me what to expect from the group over time and plan activities intentionally. For instance, in the beginning, when the group is ‘forming,’ participants are shy and soft-spoken. Disagreement can be anticipated once participants get more comfortable with one another (“storming”). Once team members establish how they will collaborate (norming), they can form productive relationships (performing).

As the researcher, I facilitated all meetings and answered any questions participants had. In longer, less structured PAR projects, there may be opportunities for participants to take on various additional roles, such as facilitating meetings, taking notes, providing snacks, and sending reminder messages to the group. However, due to limited time, I focused on providing other roles to participants, including designing the project logo, designing the website, and writing specific sections for the website. Though topics are predetermined, there was flexibility for participants to choose the project and decide on the details. As Cahill (2007a) states: “[W]hile the project was undefined, it was not unstructured. However, precisely because it was collaborative I could not plan and structure the process ahead of schedule and the research evolved in a slightly messy, organic way” (p. 101). My PAR project developed in a similar fashion.

To me, this also underlines the value of reading outside your discipline; the stages are from psychology and counseling and I am a geographer. Likewise, working with community groups has shaped my university teaching (and vice versa) because I am more aware of group dynamics and comfortable employing more interactive and engaging instructional methods (see Brydon-Miller, et al., 2003; Henning, Stone, & Kelly, 2009).
Over the course of the study, I used grant funding to employ three Hispanic Research Assistants (RAs); the first was a UNC Charlotte undergraduate (senior) Latina, immigrant activist, and teacher-in-training; the second was a UNC Charlotte sophomore Latino social worker in-training; and the third was a former participant of the PAR project. They assisted with transcriptions, observation notes, project planning, data analysis (I spent ample time discussing the different themes that emerged from the data with them), and posterboard design for community dissemination of results. The RAs, in turn, learned more about the topic (Hispanic immigrant youth labor market access and experiences) and conducting PAR. Not only has mentoring undergraduate students been a rewarding experience for my RAs and me, the conversations with my RAs and their other contributions enriched my study by providing an extra layer of input and Hispanic youth participation. Creating this additional Hispanic youth participation and training is in line with the PAR model.

Leadership Development

It quickly became apparent how important it was to offer participants opportunities to develop themselves as well as develop the project they designed. During the third meeting, participants filled out a valuing diversity personality quiz that had them reflect on who they are and how they interact with others. Answers are categorized according to four main personality types or leadership styles. The activity prefaced a reflection about personal and group strengths, and leveraging diverse styles within the group. It also helps frame conversations if tensions or conflicts emerge. In our group, the lack of conflict could also be explained using the personality styles: most of the participants were listeners and thinkers, who are less likely to be very vocal and disagree with one another. For me, this information was also helpful because it encouraged me to ask more directly what participants wanted to do, rather than assuming they would voice it themselves. These types of activities can bring groups of people closer together, foster new understandings and appreciation for differences, and make individuals more comfortable with their own personality and leadership style.

During one of the meetings, an established entrepreneur facilitated a leadership workshop with the group in which youth took an assessment identifying their strengths, weaknesses, passions, and values for their life and career. Using stories and examples, she also provided examples of difficulties she faced as a professional in corporate America, being a first-generation university graduate, a woman, and Hispanic. As a pioneer in the business world and someone who is a very involved in the Charlotte business and non-profit community, in addition to having a family, she exemplified the idea that we have multiple identities. This inspired the participants. Sharing her experiences as a woman, as Hispanic, coming from a working class, immigrant family from Puerto Rico, helped participants envision a form of leadership that was attainable to them. This experience reflected the importance of mentorship and for youth to see examples from people “like them,” as emerged from the interviews. The assessment the youth took, building on the Valuing Diversity activity, enhanced their self-awareness and confidence.

Networking and Other Exposures

Another memorable moment was when we attended an event at a local Latin American art gallery together. We were invited by the above-mentioned guest speaker because her company was organizing it. The event was themed “Women in Publishing” featuring four accomplished female publishers in the Charlotte metro area. More broadly, it was an opportunity to hear about the publishers’ careers and professional development, learning how to succeed in today’s demanding marketplace no matter the industry, and work-life balance. The youth benefited from hearing honest reflections about non-linear career paths, persevering even when things get difficult, and balancing career goals with other aspects of life. Furthermore, being surrounded by female and Hispanic professionals (in addition to male, white, and black professionals), art pieces by various Hispanic artists, and a young Latino singer entertaining the crowd with his songs sent a clear message to the youth that Hispanics can be successful in many fields. Interview results from this study showed how important this is as young Latinos come of age, shape their dreams, and enter the labor market. In addition, the group was asked to stand, be introduced, and receive applause at the event. The recognition as young leaders made them feel valued and that their efforts mattered. This experience brought the group closer together and

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re-energized the project. For many, it was their first professional event, including a reception with hors doeuvres, and a coffee and dessert networking session. In that sense, it was a turning point. It was unexpected because it was not in the original PAR plan, but the opportunity emerged through our outside contact who saw the work that we were doing and wanted to highlight it. We debriefed the event a week later. Some youth mentioned they felt a bit uncomfortable because it was a new setting with unfamiliar (and older) people; however, getting this experience outside their comfort zone made them grow. They were pleasantly surprised with how their presence was valued and felt special that they were mentioned in front of all the attendees. As for the panelists, one participant commented how great it was to see three successful leaders with all very different personalities and backgrounds. It reminded him of the discussion we had about valuing different leadership styles. Another participant added to that, explaining that it was refreshing to hear that successful career women can still make time for family and other activities.

In addition, participants had the opportunity to speak about the project and their involvements to a journalist from a Spanish newspaper and on the local Spanish radio station. Such exposures and recognition built participants’ confidence and gave them new energy to continue and complete the project.

Resources and Compensation

I highly recommend pursuing funding, either through national or external awards or local and university-based avenues. In my case, I used project funds for participant gift cards ($100 each), T-shirts and stickers with the Youth ADAPT NC logo, office supplies (flip charts, notebooks, pens, etc.), and two leadership events that participants attended. That said, it is possible to complete a successful PAR project without funding. If this is the case, the following questions should be considered: (a) Is there free space to meet that participants can access and trust? (b) What kind of non-monetary compensation can be offered to participants that will make it worth their time, e.g., build certain skills, educational or volunteer credits, expand professional networks? (c) Is there access to office supplies and resources to send, copy, and/or print materials? (d) If needed, are audio and/or video recorders available (your own device or borrowed)? (e) Are participants willing to share responsibilities for refreshments at meetings or can these be obtained via sponsorships from local businesses (grocery stores, restaurants, bakeries)? Providing food at the youth meetings has multiple purposes: (1) Sharing food brings people closer together and reduces stress and group conflict. (2) Given people’s busy schedules, we had to meet during the late afternoon/early evening, around dinner time so food was necessary to keep people focused. (3) Participants may come from households where financial resources are limited and there is not always enough money for food. As such, providing food with participants helps their parents/caretakers. (4) People are more likely to participate in events where food is served. My national funding could not be used for food but a smaller university grant allowed me to purchase food for each meeting and get reimbursed.

In terms of planning the budget, there are often restrictions on what can be purchased using grant money and which vendors can be used based on funder and university guidelines. Going through the university system and approved vendors means it can take weeks to obtain the requested product (e.g., gift cards). As such, plan the budget and request purchases early on.

Closure

Evaluating the Process and Outcomes

After the seminar, we met one final time to evaluate the PAR project (process and outcomes), and celebrate the group and their accomplishments. All participants were present. The evaluation process was two-fold: First, all participants filled out a short anonymous survey (Table 2). Second, we had a semi-structured focus group allowing participants to elaborate on why they chose certain responses (Table 3).

Ongoing critical reflexivity about the research process—in addition to the outcomes—is central to participatory studies. This cyclical reflexive process engages participants as well as the researcher(s) and should therefore be built into the research timeline throughout the duration of the project. Throughout the PAR project, I made an effort to receive feedback from participants about the process and their experience. This was scheduled during meetings, often at the start or at the end, with the whole group, but also took place informally on the side, during breaks, and before and after meetings, often one-on-one. The final evaluation session helped formalize the feedback process and sparked reflections from the perspective of looking back at the process.
Another essential component of closure is celebrating accomplishments. This is particularly important for projects that revolve around large social issues that are not suddenly “fixed” and where the impacts are not felt directly. Working on issues of equality means celebrating the small wins and building moments of joy into the long-term fight to re-energize each other and keep the movement going. In this case, it meant recognizing each participant with a gift and a certificate of completion, and inviting the group to provide positive feedback to one another.

Disseminating Findings

In addition to presentations (e.g., at the Association of American Geographers and Race, Ethnicity and Place conferences) and this article, the PAR project was used to inform the chapter “Participatory Research with Latinos in a New Immigrant Gateway” (Smith, Schuch, & Urquieta de Hernandez, 2016) in the book Race, Ethnicity, and Place in a Changing America.

Non-academic or community dissemination is a core part of the participatory process. As Van Blerk and Ansell (2007) point out, feedback is an obligation to participants and dissemination is a potential agent of social change. On April 20, 2016, youth co-researchers and I presented findings at the Latin American Coalition. Findings were summarized by me and designed into seven posters by one of the research participants, who was hired as a part-time assistant through a UNC Charlotte Chancellor’s Diversity Grant. Another participant and I also presented the posters at the Levine Museum of the New South on April 26, 2016. The posters were also turned into a report that was distributed locally to participants and their families, community organizations, local media, UNC Charlotte, and other interested stakeholders via email.

Sustainability

One of the most significant challenges of engaged research is what happens to the project and the participants after the study (or funding) ends (Duran & Wallerstein, 2003). Youth ADAPT

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Table 2. Effects of Project on Participants (N=13)

<table>
<thead>
<tr>
<th>Through my participation in this project, I...</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learned more about research</td>
<td>1</td>
<td>7</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learned more about myself</td>
<td>1</td>
<td>7</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developed skills that will help me in the future</td>
<td>2</td>
<td>4</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved my ability to communicate my ideas and opinions</td>
<td>1</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gained confidence in myself</td>
<td>2</td>
<td>4</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Made new friends/connections</td>
<td>4</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feel more prepared for future jobs</td>
<td>1</td>
<td>4</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helped other youth improve their job-related skills</td>
<td>1</td>
<td>3</td>
<td>9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Overall, I...

| Enjoyed being part of project | 1 | 12 |
| Think we worked well as a team | 2 | 11 |
| Feel like my voice was heard and valued | 2 | 11 |
| Think the facilitator communicated well with us | 1 | 12 |
| Think the facilitator was helpful | 1 | 12 |

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9Also available on the Youth ADAPT NC website and Facebook page.

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| Question 1. How do you feel, if at all, about what this project has taught you about research? |
| Response Examples. “It’s about working with organization and not spontaneity.” “It was cool to apply the things I was learning in my psychology classes and it helped me understand research more.” |
| Question 2. In what ways, if at all, did the project help you learn about yourself? |
| Response Examples. “It helped me learn about the different leadership styles and helped me understand what kind of leader I am and want to be.” “I realized that besides the fact that everyone has different leadership styles, a leader gets things done. I did not write about myself before and it helped me realize what I want for myself.” “It helped us see our perspectives and to notice what you do and do not agree on.” “Having to write the journals was something I never put myself to do. I do feel more confident in myself.” |
| Question 3. Do you think this project helped you prepare for the job market? In what ways? |
| Response Examples. “I learned more about discipline in turning things that are necessary to advance the project. Overall, I really learned about doing research for all the website sections.” “I think that I looked over my résumé and had the opportunity to touch it up. Sometimes I don’t know how to present it. A lot of the things that we were talking about on the night of the seminar are really applied and I got experience when I was with my manager. It helped me realize this is what I am looking for and this is what I need. I got to understand how people are hired.” “It helped in learning how to make connections and make a follow up.” |
| Question 4. Do you think that this research project helped you improve communication skills? |
| Response Examples. “I think I improved my writing through the journals and website.” “I think that it improved me to open up my ideas in a positive way.” “I am not a person that really talks a lot and so I think that this has helped me to talk and explain myself better.” |
| Question 5. Do you think your ability to work with others has improved, working with other people you may or may not have worked with before? |
| Response Examples. “I usually don’t like to work with other people because I like to get things done quickly by myself. I like thinking in my own way. But I liked working with others on this project.” “I’ve worked with some groups before but every time I do it is really different. I really enjoyed it.” |
| Question 6. What kind of challenges did we encounter? |
| Response Examples. “A lot of time that we meet, life happens and you realize people are doing other things. You need that organization as a whole and you need everyone here on time. That gets really hard!” “I remember trying to decide what our product was actually going to be.” “I think our challenge was focus. Just like [name] said, we were trying to tackle every single issue and take into account everyone’s opinions.” “I think it was more like the time because when we started, it was only a small group of people and some people wouldn’t show up. I know I did not show up for like two weeks and when I did, I felt a little lost.” “We also have insecurities about the things that we talk about, such as networking. It’s easy to say to one person to go talk to another person but you realize that it’s about insecurities that we have ourselves.” |
| Question 7. How were we able to overcome these challenges? What made you stay engaged? |
| Response Examples. “...the day that we were doing those assessments we worked great with each other.” “It’s kind of like till you realize how much we can actually do after. After the second seminar we were getting to know each other. We need to ask ourselves, are we actually going to be able to do it? Well, it happened and it was great. The seminar made us realize how legitimate the project was going to be. It definitely felt like a good accomplishment.” “I think communicating went well because, you know, we all had to start somewhere.” “It was nice to know that, yeah, it would have been easier to quit, but you realize how important it is to continue especially when you have already done. It was a long commitment.” “Saying that you are part of a group such as this one sounds really good. Even doing the website. It really felt really good.” “I remember when we were first coming here you gave us a really happy and thrilling reason to keep coming.” “It makes me think on how much research we need in our community.” “I don’t do anything at home. I just stay at home and it really feels really good to do something with a lot of people. I am really glad I came to it.” |
| Question 8. What do you think about the group size? |
| Response Examples. “I think it was a good size. I think it is really hard to get work done with large groups and you don’t really get to make friends. It was a comfortable size.” |
| Question 9. What was your favorite part or moment of the project? |
| Response Examples. “I really liked it when I went to the radio station.” “Honestly, doing some of the radio work was a good experience that everyone should have. You get to build a connection there as well.” “I don’t know. I had a lot of moments. I enjoyed it.” “There were a lot of moments that I liked. The most was the event because you could see that people were interested. It was hard to network but I did it. I got to see how you do it.” “The Women in Publishing event was perfect because we got the project for free. I got a glance of what a project should look like.” “I have three. I like it when we were brainstorming the idea because of how productive we were. The leadership event and our event. When we did the coding, I enjoyed doing it though it wasn’t an assignment.” “Mine was the art gallery. It was the first time I set a goal. I could only see older people.” “I liked the Women in Publishing event because we got a model of how an event is supposed to be.” “...when the guest speaker came and she talked to me. And it was nice to experience that I did it [this project] with other people.” |
NC no longer meets, but I regularly share events and ongoing opportunities for community involvement with participants. Eighteen months after launching the website, it had received 5,230 visitors from all across the United States and several other countries. The website will remain active at least until April 2018. Even though the group is no longer active, youth participants still carry their skills and experiences gained from the project (as expressed in the evaluation focus group) into their lives. Participants can use this experience on their résumé, for job and college applications, and in future endeavors. I have also served as a reference for several participants because I can speak directly to their abilities, personality, and accomplishments. In a sense, it is akin to taking a course and knowing that the course will end but also that it is an investment into becoming more confident and capable at reaching larger goals as a result of that temporally limited involvement. It would be interesting to follow up with participants five years post-PAR to see what stuck with them and the potential lasting impact of their partaking.

Given the common struggle to make participatory research outcomes sustainable, we should think critically about why this is the case and what can be changed. Working with community partners who are able to continue the work may be one way to attain this. Within academia, recognizing participatory research and its outcomes more can incentivize faculty to take on longer-term projects, knowing it will count toward their tenure.

Reflections

Confidentiality

The PAR project raised questions about navigating confidentiality and protecting participants’ identity. After a few meetings, I added a disclosure statement (approved by the university’s IRB), because I felt uncomfortable between what the original consent form stated about confidentiality and the level of disclosure participants were prepared to give. PAR projects are often very public in their nature and participants may choose to disclose themselves (name, images of themselves) in the product (e.g., website, video) and its promotion (in local media, online, etc.). Consequently, it was important to clarify and document—for my own ease, the integrity of the research, and the protection and understanding of participants—that the video and audio recordings of the meetings, the journal entries, and mental maps were part of the research and were kept confidential and secure. Participants were not obliged to disclose their identity in any of the products or promotional materials related to this project. This was all part of the outreach process (not the research) and was therefore optional. Any involvement participants chose to have after the last PAR meeting (e.g., managing the website, assisting with community presentations) was also optional. This should be clarified in a disclosure statement, especially when working with minors and when the PAR project may publicly share personal information.

Positionality

Power relationships cannot and arguably in some cases should not be completely broken down in the research process. There was an inherent unequal power structure between the youth and me because I was older, white, and a graduate student. However, this power dynamic was diminished because I was not that much older than they (I was 26 and turned 27 during the data collection phase). I was still a student, and I am also not a U.S. citizen (I was on an F-1 international student visa for nine years and, though the process has been smooth for the most part, I can relate to a sense of not belonging, not being able to apply for certain jobs and scholarships, and the uncertainty about being able to stay in the U.S.). This positionality is important to recognize. For instance, Nygreen et al. (2006) highlight that, in one project, one of the authors, Kwon, may have been more easily accepted by her youth participants because of a shared ethnicity; however, “in many youth projects . . . the adult allies do not share the youth’s racial, class, or gender backgrounds” (p. 114) and “[w]e must take into account both our formal, institutionalized relationship with youth, as well as the perceptions that youth have of the adult on the basis of this relationship” (p. 115).

Furthermore, the positionalities of the researcher and research subjects are not static; our subjects impact how we view the world and construct knowledge and vice versa. “Researchers, like ‘other’ participants, negotiate their roles and participation over the course of the project” (Yoshihama & Carr, 2002, p. 100). We are all actors and agents in the construction of situated knowledge and simultaneously learners and teachers (Dowling, 2010; Haraway, 1988; Rose, 1997; Sould & Edmonson, 2001). In meetings, I clarified I was speaking from my perspective and experiences, not as an all-knowing authority. I presented my relationship with the participants as a two-way learning process. As we developed more of a relationship (the youth and I, and the youth among
one another), we were able to work more closely together. I therefore believe that, by openly listening and valuing participants’ inputs, the initial power structures and discomforts are likely to fade quickly.

**Working With (Millennial) Youth**

Executing this project also taught me about working with youth, specifically working with Millennial youth. For example, Millennials are “racially diverse, economically stressed, and politically liberal,” “confident, connected, open to change,” “digital natives” who are “upbeat about the nation’s future” (Pew Research Center, 2015).

Their lives have been “shaped by technology” and they “value community, family and creativity in their work” (White House Council of Economic Advisors, 2014). They are meaning seekers, eager to have a positive impact on society. These are traits the group demonstrated that are characteristic of their generation and the age in which they grew up. Thus, at the same time as my group’s personalities and lives are shaped by being an immigrant and being Hispanic in the U.S. South, they are also products of a new generation of Americans coming of age in the 21st Century. I believe this is important to take into consideration when working with young people. As learners, they need to be engaged, not simply “talked at” or given a task. Wilson and Gerber (2008, p. 29) recommend four pedagogical adaptations to the Millennial personality: “enhanced clarity of both course structure and assignments; student participation in course design; pre-planned measures to reduce stress; and rigorous attention to the ethics of learning.” This translates into participatory research settings, too. Even if the topic is serious, finding ways to incorporate fun can help keep people engaged. If participants feel connected to the group and find social value in meetings (in addition to being involved with a broader positive movement), they are more likely to continue the project.

At times, during PAR meetings, there seemed to be a lack of excitement from participants, demonstrated by their body language. Participants may not have been aware of this but it could be observed on the video recordings. From my previous work with high school and college students, I have learned that a disengaged appearance does not always indicate that the individual is not paying attention. Moreover, a lack of energy may not always be triggered by the meeting but rather by the time of day (early evening) and participants being tired from school, work, and other activities they are involved with (mental maps and journals indicated most youth participants were busy and dealt with stress). This also ties back to working with youth and particularly Millennials because, growing up in the digital age, they are used to multi-tasking and receiving many stimuli. They learn best by being engaged, using their creativity, and understanding the purpose and meaning of their work. This encouraged me to spend less time talking, switch gears often, and schedule more time on activities that directly engage participants, such as working in pairs on the website content.

**Collective and Individual Learning**

This PAR project offered multiple opportunities for learning and growth for the researcher, the participants, and others involved (research assistants and the community partner). In the interviews, participants were asked to reflect on the assets they, and other Hispanic immigrant youth, bring to the workforce. Throughout the PAR process, participants demonstrated and developed the assets they bring to the labor market and their potential as future leaders. Staying true to the PAR approach, youth participants were involved in all steps of the project and, through their participation, developed skills and gained experiences that will help them in the future. For instance, they networked, spoke with media representatives, designed a logo and website, and practiced writing, oral presentation, and teamwork. Halfway through the program, when asked what they had learned so far, participants expressed that they learned more about themselves and what kind of leader they are, that the world is constantly changing and they have to continue to adapt, and that there are different leadership styles. Others reflected on specific skills they wanted to develop, such as oral self-expression, collaborating with others, and web design. In our evaluation meeting, youth reflected on their journey of becoming more comfortable with each other, gaining confidence in themselves, and learning new knowledge about research and this subject matter along the way. They were challenged to work together as a team and come to consensus, as well as take responsibility for their individual tasks. They were exposed to new environments and recognized by local leaders. Incorporating exercises that ask participants to share, for instance, recent accomplishments, or something they learned so far, can bring the group closer together and help everyone learn more about each other’s lives and interests. At one of our sessions, we did a paired
role-play in which participants practiced how they would describe their involvement with this project to future employers. Participants shared what they came up with, as well as what parts had been difficult to articulate. Participants found it helpful to practice this and hear each other’s input. Based on this activity, I typed up a two-page document summarizing the study and points youth mentioned so they have this for future reference for résumés, interviews, and scholarship applications. Though empowerment is a process and one that requires sustained efforts, I believe this project mirrors the “key dimensions of critical youth empowerment” as defined by Jennings and colleagues (2006, p. 32): “(1) a welcoming, safe environment, (2) meaningful participation and engagement, (3) equitable power-sharing between youth and adults, (4) engagement in critical reflection on interpersonal and sociopolitical processes, (5) participation in sociopolitical processes to affect change, and (6) integrated individual- and community-level empowerment.”

I also learned the value of balancing process and outcomes, and enjoying the process. At times, I was tempted to encourage participants to stay focused on the tasks and remind them that the project needed to be finished. However, they (indirectly) reminded me that process is as important as the final outcome—in fact, that what is learned through the process is an outcome of the project. We included conversations and activities that promoted engagement, interpersonal connections, and “soft skills.” Looking back, these were an essential part of the success of our project. Balancing process and outcomes involves seeing participants as full people with full lives, often balancing many responsibilities, and therefore being understanding and encouraging at all times. This includes recognizing that not everyone will be able to make it to every meeting or complete tasks at home. I used short activities to check in with participants. One of the activities involved going around the room at the end of the meeting and having each person summarize how they felt in one or two words. Another activity we often started the meetings with goes as follows: On a flipchart paper, draw a horizontal line across the middle. This is the “average” line. Ask every participant to draw a face (their face) on the paper, with their mood in relation to the “average” line. For example, if someone is feeling happy, they might draw a smiley face far above the line, closer to the top of the paper. If on the other hand someone is feeling stressed or sad, they may draw a stressed or sad face under the line. Ask participants to elaborate on why they are feeling that way, if they wish to share. This exercise, and similar ones, helped us see each other as three-dimensional people. This lesson is shared by Nygreen and colleagues (2006) who expressed “the importance of prioritizing relationship-building throughout these projects” (p. 119).

**Conclusions**

This article described and analyzed a PAR project part of a study about Hispanic immigrant youth labor market access. The purpose of youth involvement was to give them a platform to collect and construct knowledge through reflections and discussions, culminating in a tangible group outcome. The PAR group developed and executed a project (Youth ADAPT NC website and seminar) to improve their and their peers’ job opportunities. The process and outcomes discussed in this paper shine light on new ways to approach the issue of economic opportunities of immigrant youth. We need to start seeing people as part of the solution rather than the problem. In this case, it means giving immigrant youth a voice in decisions that may affect their future.

The quality and reliability of the research outcomes were enhanced through the participation of Hispanic youth. The project demonstrated the high need for job-related information for immigrant youth. Youth propose such information to be disseminated via online sources, social media, and local workshops/seminars. Connecting Hispanic youth to career-related information and resources is particularly needed in emerging immigrant gateway areas where the infrastructure for immigrants and multiple generations of Hispanics are not as strongly established.

For those new to PAR, it is worth recognizing that, while participants do a lot of the work, the process does not simply happen; it is a carefully and intentionally designed project that requires continuous re-assessing, planning, and behind-the-scenes work on the researcher’s end. Exposing youth participants to professional development opportunities; receiving attention from community and business leaders and the media; and building in time for activities that are fun or bring immediate gratification for participants are components that contributed to the positive outcomes of this PAR project. Though the rewards—for the research, the researcher, and the participants—outweigh the challenges, researchers must inform and prepare themselves prior to diving into participatory and action research. Challenges and unforeseen...
circumstances will always emerge but their impacts can be reduced by appropriate planning, communication, and continuous reflections.

References


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Community Engagement, Trust, and Genetic Testing for Inherited Diseases Among Adopted Persons

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Abstract
We identify concerns pertinent to establishing trust necessary to support adoptees’ confidence in and uptake of genetic testing that might allow them to benefit from early screening and medical intervention. Using principles of community-based participatory research, our study sought to build a foundation of trust to document such perspectives. Three focus groups were held with 12 adult adoptees. Transcripts were analyzed using thematic content analysis. Comments highlighted aspects related to genomics and health history in the context of adoption, specifically: (1) trust in the intention of the research study; (2) trust that the adoption community will benefit from the results of research; and (3) trust in the protection from misuse and abuse of genomic data. Results reinforce the call for proper security of data and oversight of the ways it is used and point to the value of including researchers who are a part of the community under study.

Introduction
Historical and contemporary research about how to provide diverse populations with the greatest amount of benefit and fewest risks in health research has demonstrated the important role of trust in that context (Boulware, Cooper, Ratner, LaVeist, & Powe, 2016; Calnan, Rowe, & Gilson, 2006; Cunningham-Burley, 2006; King, 2003; McDonald, Townsend, Cox, Paterson, & Lafrenière, 2008; K. Whetten, Leserman, R. Whetten, Ostermann, Thielman, Swartz, & Stangl, 2006). Those working in public health are very familiar with the important role trust plays in a variety of public health initiatives, including both childhood and seasonal flu vaccination, validity of screening tests such as sexually transmitted infection testing and mammography, food safety compliance, and the use of quarantine to protect healthy populations from those with highly contagious illnesses.

The forms of trust that may be relevant in genetic research include trust in the accuracy of genetic testing tools, the intentions of the research and scientific community, safety of private genetic information from abuse or misuse, and the confidentiality of genetic information in a variety of contexts, including insurance (Badzek, Henaghan, Turner, & Monsen, 2013; Choudhury, Fishman, McGowan, & Juengst, 2014; Faulks & Feldman, 2016; Green, Berg, Grody, Kalia, Korf, Martin, McGuire, Nussbaum, O’Daniel, Ormond, Rehm, Watson, Williams, & Biesecker, 2013; Henderson, Wolf, Kuczynski, Joffe, Sharp, Parsons, Knoppers, Yu, & Appelbaum, 2014; Wolf, Annas, & Elias, 2013). Each community has different lived experiences, identities, cultural values, and norms, and therefore it is important to understand each
community’s perspectives about what forms of trust are most relevant to address in the context of genetics research. Among the initial communities that should be engaged in this dialogue is the adoptee community. This community has been overrepresented in early uptake of genomic services (Baptista, Christensen, Carerer, Broadley, Roberts, Green, & PGen Study Group, 2016), has been characterized as suffering recognizable health disparities that might be addressed through genomic testing and has a variety of relevant psychosocial issues arising from their separation from biological families that will influence trust (May, Evans, Strong, Zusevics, Derse, Jeruzal, Kirschner, Farrell, & Grotevant, 2016).

As we have described in detail in two recent articles published in the American Journal of Bioethics, adoptees experience a systematic and unjust disadvantage from lack of access to family health history that should be recognized as a health disparity on grounds consistent with criteria most commonly used to define this phenomena for purposes of health policy (May et al., 2016). In short, due to the nature of many adoptees’ separation from biological relatives, adoptees often lack access to the potentially life-saving information most commonly used to identify increased risk for certain inherited diseases. As May, Strong, Khoury, and Evans, 2015, have put forth strongly, this disparity is potentially avoidable through the application of targeted genetic testing.

In order to address this disparity and allow the adoption community to experience the benefits of early identification of disease available to those who do have access to family health history, we must first address issues of trust that the public health literature identifies as influencing uptake of potentially beneficial screening intervention of the type genetic testing represents. Absent trust, rational argument is unlikely to dramatically influence uptake of preventive health interventions (May, 2017). It is toward this goal that we conducted a qualitative study with adult adoptees to identify both potential benefits and concerns about the use of genetic testing to fill gaps in family health history information for adoptees. In this paper we identify those concerns that are most pertinent in establishing the trust necessary to support adoptees’ confidence in and uptake of testing that might allow them to benefit from early screening and intervention to mitigate the threats posed by these inherited diseases. An essential process to build this foundation of trust is through the use of community engagement.

Community engagement and trust

“Helicopter” models of research in health and social science fields have been criticized for the disregard of participants’ lived experiences, cultural attributes, ability to participate in all aspects of research, and insights in science (Brandon, Isaac, & LaVeist, 2005; Cunningham-Burley, 2006; Gamble, 1993; B.L. Green, Maisiak, Wang, Britt, & Ebeling, 1997; Horowitz, Robinson, & Seifer, 2009; Israel, Schulz, Parker, & Becker, 1998; Israel, Schulz, Parker, Becker, & Community-Campus Partnerships for Health, 2001; Minkler & Wallerstein, 2011; Scharff, Mathews, Jackson, Hofssuemmer, Martin, & Edwards, 2010). As a result, public health scientists and, more recently, medical care researchers have begun to recognize the value of engaging research participants throughout the research process in order to make it more relevant, meaningful, and sustainable in diverse environments. Although the literature is rife with various terms to describe this approach to research, it is often termed broadly as “community engagement.”

Community engagement is not a method used in research, but rather a philosophy of how to conduct science in the context of a diverse global populace. This perspective recognizes that the participants of research have knowledge, experience, ideas, and expertise from their lived experiences in their communities that must be incorporated and valued before, during, and after conducting research studies. There are various forms of community engagement employed by researchers, each with a different set of guiding principles and core tenets. For example, community-based participatory research, which has recently been applied to a range of public health research projects globally, has 11 tenets that outline what is necessary to reach the ultimate goals of this approach to research—that of mutual sharing of responsibilities and benefits, empowerment of communities, and sustainability of outcomes. Most relevant for our purpose, this form of community engagement emphasizes embedding members of the community in the research group itself (Israel et al., 2001; Minkler & Wallerstein, 2011; Wallerstein & Duran, 2008).

Preliminary studies indicate that both researchers and research participants report higher engagement, trust, empowerment, and value gained from research studies that have been conducted using a community engagement approach (Christopher, Watts, McCormick, & Young, 2008; Jagosh, Bush, Salsberg, Macaulay, Greenhalgh, Wong, Cargo, Green, Herbert, & Pluye, 2015; Lantz, Viruell-Fuentes, Israel, Softley, &
participation in research was for the genetic
Arizona provides an illustrative example. Initial
controversy involving the Havasupai Tribe in
Wallerstein, 2011; Scharff et al., 2010). A recent
Horowitz et al., 2009; Israel et al., 2001; Minkler &
Green, Maisiak, Wang, Britt, & Ebeling, 1997;
Zusevics, 2013). Adopting this philosophy enables
Citrin, 2012; Tobias, Richmond, & Luginaah, 2013;
Rudofsky, Deignan, Martinez, Johnson-Moore, &
Rangi & Terry, 2014; Terry, Christensen, Metosky, 
Boyer, Mohatt, Pasker, Drew, & McGlone, 2007; 
Rangi & Terry, 2014; Terry, Christensen, Metosky, 
Rudofsky, Deignan, Martinez, Johnson-Moore, & 
Citrin, 2012; Tobias, Richmond, & Luginaah, 2013; 
Zusevics, 2013). Adopting this philosophy enables 
researchers and community members to establish 
trust and work together to answer inherently 
personal questions that are only answerable 
through the use of genetic testing.

When community members are not truly 
engaged in the research process, the results of 
research can be devastating to both community 
groups and the scientific community, which loses 
the trust, respect, and confidence of many 
communities (Brandon, et al., 2005; Gamble, 1993; 
Green, Maisiak, Wang, Britt, & Ebeling, 1997; 
Horowitz et al., 2009; Israel et al., 2001; Minkler & 
Wallerstein, 2011; Scharff et al., 2010). A recent 
controversy involving the Havasupai Tribe in 
Arizona provides an illustrative example. Initial 
participation in research was for the genetic 
components of diabetes, a problem of concern to 
tribal members. Subsequent research, however, 
was at odds with broader tribal values. Researchers 
did not intend to misuse research material, but by 
not engaging that community throughout the 
research and dissemination process, a severe 
loss of trust occurred (Cochran, Marshall, Garcì-
Downing, Kendall, Cook, McCubbin, & Gover, 
2008; Drabiak-Syed, 2010; Mello & Wolf, 2010). 
Therefore, it is important that those exploring 
sensitive questions at the cutting edge of science, 
such as genetics, adopt principles of community 
engagement in order to understand what that 
community is most concerned about, what their 
hopes, desires, values, and identity are, and what 
forms of trust are most pivotal to establish and 
ensure that the appropriate safeguards are in place. 
This assures that science produces benefits for both 
the science and the broader community within a 
framework of trust.

The perspectives of the adoptee community 
about genetics and the risks and benefits they may 
experience from these medical tools to answer family 
health-history-related questions may be unique to 
others and have not been well-documented or 
explored. In order to obtain data about how to 
reach this unique population and establish trust, 
there is a need to engage the adoptee community in 
this research. Therefore, we conducted a study 
using principles of community engagement to 
understand the adoptee community’s perspectives 
on genetic testing research and the role of trust in 
that context. While the broad results of this study 
are published elsewhere (Strong, May, McCauley, 
Kirschner, Jeruzal, Wilson, Zusevics, & Knight, 
2017), one important dimension of our findings 
concerns the significance of the types of community 
engagement we describe previously. A striking 
theme that emerged from the data was that of trust. 
This theme took many forms that were further 
analyzed for the purposes of this manuscript. Here, 
we will explore the important trust-related themes 
that emerged from our focus group analyses, 
themes that we believe highlight the necessity for 
sustained community engagement to establish 
trust in research focused on genetics and adoptees.

Methods
Description of Community-Engaged Approach 
to Study
This study’s origins and execution utilized 
several tenets of the community engagement 
approach to research. One of the unique and 
central elements of the research framework was the
composition of the research team. The idea for the study came from the principal investigator out of his personal experience and identification with the adoptee community (May, 2015), and the inclusion of adoptees in the design and implementation of the focus group discussion guides and analysis. Specifically, two members of the research team are adopted, one being a student at a local academic institution, another having an adopted sister, and another co-investigator is a clinical psychologist at an international adoption clinic who works closely with members of the adoption community. Therefore, stakeholders in the adoption community were engaged in the design, execution, and analysis of the research from several perspectives. Although not a condition for all forms of community engagement, some, such as CBPR, emphasize the importance of having research team members be members of the communities with which they are conducting research (Minkler & Wallerstein, 2011; Wallerstein & Duran, 2008).

We conducted focus groups with adult adoptees to answer the questions of interest. We held four focus group sessions in the Milwaukee metro area between the months of April and December 2013. The size of each focus group ranged from three to five individuals. Focus groups lasted about 90 minutes and were facilitated by at least two study team members. Detailed information about the focus group guide contents are described elsewhere (Strong et al., 2017). The focus groups were recorded, transcribed, and de-identified for analysis. The Institutional Review Board of the Medical College of Wisconsin approved this research study.

**Data Analysis**

Focus group transcripts were reviewed by the study team researchers multiple times in order to fully review and understand the data prior to analysis. Data analysis began with the categorization of all data as a collective group of research team members. Subsequently, individual team members reduced the data for further in-depth analysis. Standard memoing and coding methods were used for thematic and content analyses of the data (Boyatzis, 1998; Neuendorf, 2016; Onwuegbuzie & Teddlie, 2003). The qualitative methods we used identify participants’ perspectives about the use of genomic testing in general and specifically to fill gaps in family health history. All transcripts were analyzed using QSR NVivo 10 qualitative data analysis software.

**Participant Demographics**

A total of 12 adults who were either internationally or domestically adopted participated in one of the three focus groups representing five countries of origin (U.S., China, Korea, Chile, and Peru). There were two male and 10 female participants in the focus groups. No additional demographic data was collected from participants.

**Results**

The analysis for this sub-study explored the main component of trust as identified by the larger focus group analysis (Strong et al., 2017). Trust took on different forms among this community of adoptees: (1) trust in the research study, with particular attention to whether the research was guided by individuals with personal connections to adoption; (2) trust that the adoption community will benefit from the results of the research; and (3) trust in the protection from misuse and abuse of genomic data. Supporting quotes from the transcripts illustrate each form of trust are presented in tables followed by brief analyses.

Quotes in the first form of trust theme reflect participants’ trust in genetic research projects that are founded on the principles of genuine community engagement (Table 1). Our participants discussed that trust in the research process is essential, particularly in areas of personalized research such as genetics. Several participants shared the risks of potential engagement in genetic research, focusing on breaches of confidentiality, misuse of data, and loss of trusting relationships between researcher and researched. Knowing that individuals with direct connection to the adopted community have participated in this type of research and are part of the research process itself was discussed as a strategy that would help establish and safeguard trust in genetic research. In particular, respondents stated that knowing that some of the members of the research team (whether researchers or participants) are from the community of adoptees supports their trust in the overall research project on genetics.

Moreover, research participants were interested in being able to engage with other adoptees who have been part of genomic research in order to talk with them (other members of their community) about their experiences with this form of testing. According to our participants, being able to discuss with other adoptees who have gone through the process about their experience would help establish trust and answer questions from those who have similar lived experiences and
contexts for identity formation and decision-making. Again, this reflects the principles and benefits of community engagement in which research participants are able to engage not only with the research team, but with each other in order to inform their decision-making in the context of research (Israel et al., 2001; Minkler & Wallerstein, 2011; Wallerstein & Duran, 2008).

The second form of trust highlighted that among the issues identified by adoptees were concerns that not all results would be available to each individual, and/or that results that were returned would be based on some scientific or agenda other than the desires or needs of the individual tested (Table 2). These representative quotes also highlight some of the participants’ skepticism about how much weight to put into the results of genomic testing. Adoptees in this study identified concerns with the potential for genetic results eliciting psychological distress if results contradict already formed self-identities or reveal potentially damaging health risk factors/outcomes. Respondents relayed the importance of self-awareness and readiness when it comes to genetic testing among adoptees whose self-identity may be developing or fluctuate drastically based on what might be revealed through genetic testing. Participants value being able to trust that results are accurate so that negative influences on self-identity or reproductive decision-making are minimized.

In order for adoptee community members to participate in this research, it is important that they be provided with enough education about the current state of the science and the breadth, scope, and reliability of any test results they may receive. This has direct implications for informed consent procedures and documents that must include language/explanations about the limitations of the science, discuss issues related to follow-up about
new discoveries and whether or not re-contact takes place if new tests reveal that initial results were wrong or provided only partial answers, how and with whom results would be revealed, and how the results will be reviewed with participants upon release. These forms of trust are not unique to the community of adoptees, but have resounded from others who have engaged in genetic testing in the past (Bonham et al., 2009; Boyer, Mohatt, Pasker, Drew, & McGlone, 2007; Cochran et al., 2008; Drabiak-Syed, 2010; Mello & Wolf, 2010; Rangi & Terry, 2014; Terry et al., 2012; Tobias, Richmond, & Luginaah, 2013; Zusevics, 2013).

Finally, the quotes supporting the third form of trust that arose in this analysis demonstrate the importance of outlining to whom and how test results are protected in the genomic context. They were particularly wary of data going beyond themselves or their doctors to insurance companies that might use it for potentially harmful financial purposes. Respondents expressed the need for adequate informed consent procedures to be in place to support this form of trust in genetic research from the adopted community.

Table 3. Supporting Quotes for Form of Trust 3.

**FORM OF TRUST 3:** Trust in the protection from misuse and abuse of genomic data

"And so I don't know if something like that is possible with the DNA you take from us. But anything is possible nowadays, especially the way technology advances. So to know that information...that genetic material is secure and is only being used for your purpose, not anybody else's. And I know you have informed consent and things like that, nowadays. But, I mean, it's something that was also just recently in the headlines."

"That information would have to be really, really, really strictly confidential between you and your doctor. And as it is now, insurance companies know everything about you, because that's the only way the doctor can get paid."

"I think that as long as you make the informed consent as detailed as possible, so that people are pre-warned about the results that they're going to give...as long as you cover that basis, then I think that you're fine. Because as long as people have a forewarning about what they're getting into, then they should be able to handle what the results are."

**Discussion**

The results of this analysis highlight various forms of trust valued in the context of genomic testing for the purposes of filling in potential gaps in family health history by some members of the adoptee community. In some areas, adoptees are no different than other groups when it comes to trust in genetic research. In others, adoptees have different concerns or priorities.

A noteworthy finding that was unique to our study was the value our participants placed on the community-engaged approach we used to learn their perspectives on genetic testing. Specifically, our study points to the importance of having trust in researchers and the research approach in the context of genomics among adoptees. Our participants discussed that trust in the research process is essential, particularly in areas of personalized research such as genomics. This perspective has resounded in other community engagement in other areas of health research (Boulware, et al., 2016; Calnan et al., 2006; Christopher et al., 2008; Cunningham-Burley, 2006; Jagosh et al., 2015; King, 2003; Lantz et al., 2001; McDonald et al., 2008; Minkler & Wallerstein, 2011; Salimi et al., 2012; Viswanathan et al., 2004; Whetten et al., 2006). Adoptees in this study felt that they could trust the technology, safety of their data, and overall research protocol more knowing that members of the research team had direct membership in the adoptee community. Relate this to “hidden agendas” and ulterior motives, which is what we think the quotes are getting at. These concerns, in turn relate to the types of misguided research priorities that can overtake good judgment in cases like that of the Tuskegee Syphilis Study.

Furthermore, the results point to the potential value of including researchers who are a part of the community under study in the research process to establish trust in the research and the researchers. As expressed by our participants, knowing that a part of the research team is part of the adoptee community establishes a genuine connection to the topics and questions being asked and therefore begins to develop a level of trust that is difficult to obtain if research members are completely disconnected from the community of research participants. This demonstrates the value of using community engagement approaches in genomic science.

Similar to research with other populations, the findings from our study suggest a need to establish trust in the release of genomic/genetic test results. In particular, this study highlights the importance of outlining to whom and how test results are
shared. As expressed by previous research and the adoptees in this study, individuals have the understanding that genetic findings can shape and alter an individual’s self-identity as well as that of their broader community (Bonham et al., 2009; Boyer et al., 2007; Chestney, 2001; Hoopes, 1990; Rangi & Terry, 2014; Sorosky, Baran, & Pannor, 1975; Terry et al., 2012; Tobias et al., 2013; Winter & Cohen, 2005; Zusevics, 2013). Past research—such as that done with the Havasupai tribe—that overlooks the significant impact genetic test results have on community identity, risks losing trust from research participants (Cochran et al., 2008; Drabik-Syed, 2010; Mello & Wolf, 2010). Providing education about what genetic information may reveal about an individual, their family, and their community, as well as having safeguards in the informed consent process and the release of test results are approaches that can help build and sustain trust from community members engaging in genomic science.

Our study also reinforces the call for the proper security of genomic data, protections from psychological/emotional consequences, and the oversight of the ways genomic data is being used/shared outside of the research context. Reflecting previous research from different populations about concerns about the misuse of data by employers and insurance companies (Baldi, Baroneio, De Cristofaro, Gasti & Tsudik, 2011; Ellis, 2003; Erlich & Narayanan, 2014; Gymrek et al., 2013; Kevles, 1985; Shakespeare, 1998), the adoptees in this study expressed considerable anxiety about needing to trust that their genomic/genetic data would not be shared with anyone besides them and the research team. As expressed by our participants and those of other studies, many were not aware of the protections from discrimination provided by the Genetic Information Nondiscrimination Act (Allain, Friedman, & Senter, 2012; Feldman, 2012; Parkman, Poland, Anderson, Duquette, Sobotka, Lynn, Nottingham, Dotson, Kolor, & Cox, 2015) and what it does and does not protect. As the data indicate, the participants in this study would want to be able to trust that their genetic tests would not be used against them by employers or insurance companies and that their information would be safely stored. This form of trust calls for informed consent procedures to provide clear identification of the limitations of the Genetic Information Nondiscrimination Act (GINA) of 2008 and a discussion of the possibility of identifiability despite efforts to maintain privacy and confidentiality, which have been identified in research with other communities about genomics (Kevles, 1985; Slaughter, 2008). Examples of breaches of confidentiality in genomic information support some anxiety among various communities (Baldi et al., 2011; Ellis, 2003; Erlich & Narayanan, 2014; Gymrek et al., 2013; Kevles, 1985; Shakespeare, 1998) and therefore should be openly acknowledged and addressed prior to enrolling communities in these studies. In addition, information about GINA should be included in research consent procedures so that participants gain awareness about this legal protection and also understand its shortcomings.

Trusting that appropriate safety measures are in place for the possible negative mental health consequences of genetic testing was also a finding of this research. Adoptees in this study identified concerns with the potential for genetic results eliciting psychological distress if results contradict already formed self-identities or reveal potentially damaging health implications. Although some research has documented increased anxiety/stress from receiving some genetic results for certain populations, these impacts have typically only lasted for the short-term with limited long-term consequences (Broadstock, Michie, & Marteau, 2000; Heshka, Palleschi, Howley, Wilson, & Wells, 2008; Michie, Bobrow, & Marteau, 2001). And yet, the adoptees of our study valued trusting that appropriate services and supports would be available in the case that any negative psychological outcome is experienced after genomic testing. This safety net may be of particular interest to the community of adoptees who may experience identity-related questions due to their unique lived experience separate from their biological family (Chestney, 2001; Hoopes, 1990; Sorosky et al., 1975; Winter & Cohen, 2005).

**Conclusion**

In our research engaging the adoptee community, the importance of the type of engagement in research described above became striking. Our study has demonstrated the ways in which the importance of both engagement and trust emerged as essential in the context of genetic research with this community. These findings highlight the importance of adopting principles of community engagement in genetic research with diverse communities in order to understand their unique needs of trust in that context and to establish a genuine foundation of trust between researchers and communities.

Previous research has shown how research
team membership in a community in which they are conducting research supports relationship-building, buy-in, participation, sustainability of outcomes, among other positive results (Israel et al., 2001; Minkler & Wallerstein, 2011; Wallerstein & Duran, 2008), many of which were identified by the participants of this study. Although it may take additional time to build relationships and develop research processes that are mutually defined and beneficial, this approach can help build that trust that is so necessary for long-term investment in science from potentially vulnerable communities.

Toward this end, the senior author of this paper, Thomas May, has led a group assembling a collection of stories representing first-hand accounts—written by adoptees—concerning their experiences interacting with the U.S. healthcare system while lacking family health history, to appear as a themed “symposium” in a forthcoming issue of Narrative Inquiry in Bioethics. In addition, project personnel have engaged the adoption psychology literature (Strong et al., 2017) as well as attending the University of Massachusetts Amherst Rudd Adoption Research Project’s annual New Worlds in Adoption conference as invited speakers. Finally, dissemination of information about our own Genomic Family History for Adoptees project to adoptees in the general population has occurred through articles featuring these issues in newspapers and in radio and media interviews. (Campbell, 2017; Criscione, 2017; Hinds, Shah, & May, 2017, WLRH Hunstville 89.3 FM).

All of these methods reflect attempts to make transparent the goals and progress of the project overall; to continue to refine our understanding of the specific nature of adoptees’ lived experience and how genomic technologies might be properly targeted and utilized to optimally benefit this community; to identify concerns that would inhibit some adoptees’ willingness to uptake interventions that could, if properly framed, offer substantial benefit; and to engage the adoptee community in a direct and participatory fashion in articulating their own stories and needs. In this, we believe our project reflects the stated values of transparency, engagement, empowerment, and partnership articulated by the White House Precision Medicine Initiative’s November, 2015 “Statement of Privacy and Trust Principles” (The Precision Medicine Initiative, 2015).

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We would like to dedicate this manuscript to one of its authors, Kimberly Strong, who passed away in 2017. She was instrumental to the design of this research project, as well as data collection, analysis, and writing of this manuscript. Dr. Strong also greatly contributed to the fields of genetic counseling, ethics, and genomics through research and practice. We thank her for her collaboration, mentorship, leadership, strength, and kindness.

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Dimensions of Community Change: How the Community of Sudbury Responded to Industrial Exposures and Cleaned up its Environment

Desre M. Kramer, Emily Haynes, Keith McMillan, Nancy Lightfoot, and D. Linn Holness

Abstract
A city in northern Ontario, which has suffered more than a century of pollution from mining, went from being internationally notorious for its pollution to winning awards for its environmental restoration. The inquiry was into the levers of change that led from an awareness of environmental destruction to taking action. Semi-structured interviews were conducted with 60 people from the community, politicians, industry, miners, and academics. The theory-based analysis led to a community-change model that has helped identify the multiple layers of change required for the re-greening of the environment. With reference to the collective impact literature, this city-level case study found that the city has embraced change based upon agreement on an emerging vision, taking advantage of a confluence of timing and events, adopting evidence-based knowledge, building a sense of pride and place, and having a diffuse yet linked leadership. The Sudbury story is helpful for other industrial communities looking to achieve change.

Introduction
The City of Sudbury has a present population of 160,000 and is located 400km (249 miles) due north of Toronto, Ontario. Since the beginning of the 20th Century, Sudbury has been a highly industrialized mining town. For nearly a century, it was also known as one of the most damaged and devastated landscapes in the world. This is the story of how the community in Sudbury came together to fulfill their vision of a remediated, recovered, reclaimed, and restored environment. How the community of Sudbury achieved this transformation can be a model for other highly industrially devastated communities who want to rebuild, and re-green.

Sudbury's rocks and the source of its immense mining wealth are the result of a meteor that fell 1.87 billion years ago, creating the second largest impact structure on the planet, and one of the world's largest deposits of nickel, copper, and precious metals. Sudbury has historic production and future reserves and resources of nickel exceeding 18 million tons of metal valued in today's prices at over $180 billion (Lightfoot, 2016).

However, this wealth has come with a significant environmental price tag. By 1960, the region was the largest point source of industrial pollution on earth, equivalent to nearly the total emissions from the United Kingdom (Potvin & Negusanti, 1995). Some scientists coined an international unit of pollution, called “The Sudbury,” to emphasize how large the Sudbury source was compared to that of many whole countries. (Gunn, 2014). The pollution was a result of the processes used in the mining and smelting of the mineral ore that has released more than 100 million tons of sulfur dioxide (SO2) and several tens of thousands of kilotons (one kiloton = 1,000 tons) of nickel, copper, and iron into the atmosphere (Gunn, 2014). There were no trees, the area's pink-grey granite rocks were coated in a thick layer of black soot, 7,000 fresh-water lakes were sterile from the falling acid rain, and the air was thick and yellow with the smell of sulfur. It was a dangerous place to live and work.

As the environmental movement grew, so did the community’s awareness of the occupational, economic, societal, and health impacts of their city's industrial pollution. In the early 1970s, environmental legislation was passed in the USA and then in Canada, which targeted SO2 emissions from large polluters such as the Sudbury smelters. Ironically, regardless of this increasing awareness of environmental pollution, in 1972, following the principle that the solution to pollution is diffusion, Inco Limited, Sudbury's largest mining company and for most of the 20th Century the world's leading producer of nickel, built a 1,250 ft. smokestack at their smelting plant. The smokestack dispersed the industrial pollutants, including SO2, arsenic, copper, and nickel, out even further to a radius of 240 km. (149 miles) affecting 100,000
hectares (386 square miles). At the time this was the tallest smokestack in the world.

With this exception, the Sudbury mining industry began to respond to the regulations. In the 1970s, and again in the 1980s, the industry started introducing new ore sorting and processing procedure technology and introduced better gas capture methods with the side benefits of reclaiming metals and gases with a recycle value. In the past 40 years, the total emissions of both sulfur dioxide and metal particulates have been reduced by almost 95% (Sudbury Community Foundation, 2012).

Moreover, building upon the growing awareness of the impact of pollution on people’s health and the environment, workers and their unions, politicians, university academics, industry, and community representatives came together with the goal of restoring Sudbury’s environment. Aligned with a vision of a clean, re-greened environment, leaders mobilized their different groups, organizations joined the cause, advocacy groups formed, and groups acquired the skills and resources needed to lobby the government and harness the media to their cause.

For the next 35 years, applying the knowledge that the academics at Laurentian University in Sudbury had acquired about land and water restoration, many of Sudbury’s black rocks and large areas of barren soil were revegetated, and its lakes, benefiting from the cleaner rain and runoff water from remediated land, began to recover (City of Greater Sudbury, 2015). Driven by a vision of green forests, living lakes, and clean air, with the help of 367,530 volunteers, including unemployed miners, high school and university summer students, local businesses, the mining companies, volunteer groups, First Nation and Metis groups, and community groups like the YMCA, the land began to recover. The community acquired a sense of pride and place.

This was not an overnight initiative; it took a lot of perseverance. By 2015, the city celebrated the planting of 9.5 million trees and 282,000 shrubs—others say 13 to 15 million trees have been planted since 1978 (Tollinsky, 2015)—and the full reclamation (liming, seeding, grassing, and tree planting) of over 3,460 hectares (8,550 acres) of land. Over $30 million has been spent on the re-greening program, the money mostly coming from solicited federal and provincial government funds, the mining companies, and private sources, with only 15% spent directly by the city (City of Greater Sudbury, 2015).

Crossing the Divide from Awareness to Action: What Do We Know?

How the community in Sudbury acted upon their awareness of the social, political, environmental, and health impact of their industrial pollution is the focus on this study. The question of how, and why, any community, organization, or individual decides to take action based on awareness is one that has been posed by many. We know that awareness of a problem is an essential and necessary first step to achieve change, yet it is not sufficient for change (Watzlawick, Weakland, & Fisch, 2011). Moreover, the change itself, whether at the individual, organizational, or community level is often so complex that it can become an elusive goal embedded in conflicting social forces (Berger & Luckmann, 1966). However, once engaged, change initiatives can develop social resilience, which Dr. Judith Kulig, from Alberta’s Lethbridge University, has found to be very good for one’s health (Kulig, Edge, Townshend, Lightfoot, & Reimer, 2013).

How the awareness-to-action gap can be closed has been of consistent interest to multiple fields including: the field of organizational change (Mintzberg & Westley, 1992; Senge, 1990); public health (Green & Kreuter, 2005); occupational health and safety (Bjorkdahl, Wester-Herber, & Hansson, 2008; Stokols, McMahan, Clitheroe, & Wells, 2001; Tompa, Kalcevich, Foley, McLeod, Hogg-Johnson, Cullen, MacEachen, & Mahood 2016); environmental action (Klein, 2014); education (Huberman & Miles, 1984); community-based participatory research (Minkler, Vásquez, Tajik, & Petersen, 2008); knowledge transfer and exchange/implementation science (Graham, Logan, Harrison, Straus, Tetroe, Caswell, & Robinson, 2006; Lau, Stephenson, Ong, Dziedzic, Treweek, Eldridge, Everitt, Kennedy, Qureshi, Rogers, Peacock, & Murray, 2016; Lomas, 1997; Rogers, 2003) and very relevant for this study, the newly emerging collective impact literature embedded in community engagement (Barnes & Schmitz, 2016; Cabaj & Weaver, 2016; Kania & Kramer, 2011).

In general, the different fields examining the awareness-to-action gap have determined that for change to take place there needs to be a need or a sense of urgency for change; a vision of the change that aligns all those involved; preparation and planning for change; a strategy on how to implement the change; and ongoing communication to sustain the change. To different degrees they add that the change needs to be clearly communicated; packaged so it is attractive; regularly evaluated against metrics that track the change; and have an
obvious advantage over what already exists. Moreover, those engaged in the process need to want the final change; there need to be champions with credibility to advocate for the change; and linkages and networks need to be built between people and organizations to support the change. Some also advocate for a charismatic (vs. a transactional) leader to lead the change. Many of these variables emerged in the Sudbury case study as will be shown in the Results section.

Of the fields mentioned, the conditions for community change highlighted by the collective impact literature are deemed the most relevant to the Sudbury case study (see Table 1 for a comparison between the collective impact literature and Sudbury). Kania and Kramer (2011) wrote the seminal paper on collective impact referenced by all subsequent papers over the subsequent six years. They identified five conditions that communities need to fulfill in order to achieve collective impact: a common agenda; a shared measurement system; mutually reinforcing activities; continuous communication; and having a separate organization and staff with a very specific set of skills to serve as the backbone for the entire initiative. Their particular contribution, and what makes collective impact different from the much larger community change literature, is their emphasis on shared metrics to track the change (although the organizational change management literature has advocated scorecards since the 1980s), and having a “backbone structure” to mobilize and support the collective effort.

In 2016, Cabaj and Weaver wrote that they have deepened, broadened, adapted and upgraded the Kania and Kramer model. Their model asks for a transformation in thinking from the players involved in the process. They say there needs to be a paradigm shift from managing the change process to building a movement for change. They advocate a shift in focus to community aspiration; strategic learning; high leverage activities; reinforcing community engagement; and developing containers for change. They say the change process needs to be authentic and participatory, and directed by a true, shared vision. They advocate for strategic learning that includes shared measurement, but is more than just metrics; a focus on high-leverage and loose/tight working relationships; and having a “container for change” that assists the participants with personal change and growth. Additionally, they write that for community impact to be effective, individuals need to open up their hearts and minds to new possibilities, and shift boundaries from what is socially acceptable and politically accepted. The Cabaj & Weaver model is worth noting since Sudbury was an extensive community change process, but the variables they identify as needed did not emerge strongly in this study.

Two Communities Cross the Divide from Awareness to Action

The previous section summarizes some of the overarching themes that have emerged when the social sciences have attempted to determine what is needed for organizational and community change. However, the particular question of what are the levers of change that a city needs in order to change itself in response to the awareness of industrial exposure and environmental pollution is explored in this case study.

To try and answer this particular question, the research team initially undertook an investigation in the City of Sarnia (a city in western Ontario with a population of about 70,000 that is dominated by over 60 petrochemical companies). In that case, the city acted upon an increasing awareness of a large number of workers in their “chemical valley” who were dying from lung cancer and mesothelioma caused by their exposure to asbestos. The awareness campaign was led by the unions and one charismatic leader. The unions formed a widows group, the Victims of Chemical Valley, which raised community awareness and lobbied government. As a result of this advocacy, in the late 1990s, at least 30 major articles in the Sarnia and national newspapers were written about asbestos and cancer in Sarnia. As a result of this pressure, an occupational health clinic was established to help process the more than 100 workers compensation claims. A hospice was built. The Ontario government lowered some of the occupational exposure limits. A policy was put in place that expedited the claims of the workers in Sarnia so they could take advantage of a presumption of work-relatedness for a diagnosis of mesothelioma. This made it much easier for the widows of these workers to receive compensation. This study has been written up in more detail (Kramer, McMillan, Gross, Pefoyo, Bradley, & Holness, 2015).

A second investigation was initiated, this time in the City of Sudbury, to examine if similar levers of change would emerge. The focus for the study was on occupational exposures in Sudbury. It examined how the mining sector and the miners and their unions took action in response to their awareness of injuries, fatalities, and occupational exposures in the mines. This study has been written
Summary of Conditions for Selective Impact

1. Common agenda. "Collective impact requires all participants to have a shared vision for change, one that includes a common understanding of the problem and a joint feature to solving it through agreed upon actions" (Kania & Kramer, 2011, p. 39).

• Creating a shared vision for change is the defining feature (supported by Cabaj & Weaver, 2016).

• Look at data surrounding problem, get all stakeholders on same page, identify actions to address problem (Cabaj & Weaver, 2016; Gardner, 2011).

• Take "theory of change" approach (Gardner, 2011).

• Focus on innovative approaches that reform or transform (Cabaj & Weaver, 2016; Gardner, 2011).

• A crisis, new funding opportunity, or innovation can create urgency for change (Hanleybrown, Kania, & Kramer, 2012).

2. Shared measurement system. Need "agreement on the ways success will be measured and reported. Collecting data and measuring results consistently on a short list of indicators at the community level and across all participating organizations not only ensures that all efforts remain aligned, it also enables the participants to hold each other accountable and learn from each other's successes and failures" (Kania & Kramer, 2011, p. 40).

• The literature places emphasis on continuous feedback, evaluation, learning, and adaptation (Barnes & Schmitz, 2016; Cabaj & Weaver, 2016; Gardner, 2011).

• Mutually reinforcing activities. "Collective impact initiatives depend on a diverse group of stakeholders working together, not by requiring that all participants do the same thing, but by encouraging each participant to undertake the specific set of activities at which they excel in a way that supports and is coordinated with the actions of others" (Kania & Kramer, 2011, p. 40).

• Success will come from the combination of many interventions (Kania et al., 2014; Gardner, 2011) by many working groups (Hanleybrown et al., 2012).

• Consider decisions in context of others (Kania et al., 2014).

• Activities might necessarily compete (Cabaj & Weaver, 2016).

• Quick wins secure future funding and support (Barnes & Schmitz, 2016).

• Focus on activities that create biggest impact, not on those that simply make collaboration easier (Cabaj & Weaver, 2016).

3. Mutually reinforcing activities. "Collective impact initiatives depend on a diverse group of stakeholders working together, not by requiring that all participants do the same thing, but by encouraging each participant to undertake the specific set of activities at which they excel in a way that supports and is coordinated with the actions of others" (Kania & Kramer, 2011, p. 40). Functions include: supporting inner setting for change among stakeholders (Concoran, 2010, cited in Cabaj & Weaver, 2016); balancing conflicts, managing communications, building relationships (Gardner, 2011); backbone staff "guide the vision and strategy of an initiative, support aligned activities, establish shared measurement practices, build public will, advance policy, and mobilize resources" (Kania, Turner, Justilien & Philips, 2016).

• Managing stakeholders through the change process (Barnes & Schmitz, 2016).

• Providing financial resources and an influential champion (Hanleybrown et al., 2012).

Matched with Findings From the Sudbury Study

The crisis of the big labor strike in 1978–1979 created an urgency for change. Changes in the social, economic, and political environments such as the environmental movement, mechanization and automation in the mining industry, labor strikes, mining layoffs, foreign buy-outs of the mining companies, and the political will to develop Canada’s north also contributed to this urgency for change. Leaders came together, knowing that change was needed. They needed to reform or transform the systems in which they lived. Together, they agreed upon a common agenda by conceptualizing “Sudbury 2001.”

The community leaders did not come together to formally decide upon a shared measurement system. The scientists provided a scientific measurement system to track the re-greening progress. The Sudbury Soils Study involved community members as panel members, and findings were reported during community meetings. The community member panelists gave feedback on methodology and results, and were thus involved in continuous feedback, learning, and adaptation. The community harnessed empirical data to advocate for the reduction in emissions that affected the community. The City of Greater Sudbury monitors certain progress indicators related to the environment.

One of the strongest themes that emerged from the Sudbury interviews was that there was diffuse, yet linked leadership. Different groups worked on different, yet mutually reinforcing, projects. An unintended outcome of these mutually reinforcing activities was that a sense of pride and place was built among the community members.

The Sudbury community was at the center of this change and the right cross-sectoral stakeholders were at the table. These groups (the unions, companies, academics, politicians, and community members) developed trusting relationships. Notably, Inco and the Steelworkers were in the middle of a rough labor strike, but understood the importance of putting those issues to the side when at the community change table.

The community change process has taken almost four decades (an indicator of “patient urgency,” and there is still work to be done on pollution reclamation and social changes. The First Nations and Métis that reside in the Sudbury Basin have not been noticeably engaged in the economic diversification or restoration process. This was a notable theme at the 2016 Sudbury Protocol conference, and the urgent need to ensure they are included as partners going forward was noted.

This is the only Collective Impact condition that did not align with the findings from the Sudbury case study. Leadership was diffuse and linked (which allowed for mutually reinforcing activities); however, there was no single organization or entity leading the change process. The Sudbury community regreening efforts have resulted in the creation of EarthCare Sudbury, a partnership between the City of Greater Sudbury and over 150 community groups and individuals. However, they act more as a secretariat than providing significant leadership.
up in more detail (Kramer, Holness, Haynes, McMillan, Berriault, Kalenge, & Lightfoot, 2017).
What emerged from that focused study was that in 1974, a long and acrimonious strike was initiated by a single miner who raised awareness of the rising death rate of miners in the uranium and nickel mines in northern Ontario (Sudbury and its environs). The strike led to a provincial inquiry, the Ham Royal Commission, which provided the foundation for the province's occupational health and safety legislation. This strike was the first of a number of significant labor disputes, which industry took advantage of by mechanizing and automating. This led to a considerable improvement for the lives of those who worked underground. However, it also led to a precipitous reduction in the number of miners (from about 20,000 to less than 3,000 workers). This resulted in a decline of the power of the unions and a rise in the number of non-unionized contract workers who are more vulnerable to occupational exposures.

The investigation into the Sudbury mining sector opened up a third investigation that looked beyond the exposures in the mines to examine community change. The pollution that was released by the Inco smokestack affected the whole population, and hence a wider analysis was thought necessary to understand Sudbury's community-level change and the levers for change that were important for this community-wide engagement. A new research question emerged that examined what was needed for this community to come together to take action in response to their rising awareness of the health and environmental impact of industrial pollution. This is the investigation that is reported here.

Methods

Conceptual Frameworks

For the initial study based in Sarnia that looked at the impact of asbestos on petrochemical workers, we adapted a conceptual framework that comes from the community based participatory research (CBPR) literature (Minkler, Vásquez, Tajik, & Petersen, 2008). This framework was created to examine how communities come together on environmental-justice issues. Using the framework for this study highlighted the importance of internal dimensions of community change such as awareness and understanding of the community’s history; leadership; social and organizational networks; skills and resources; individual and community power; shared values, beliefs and opinions; and perseverance. The external climate, such as political, economic, and social forces, did not emerge as strongly in this change process, although the mechanization and automation of the petrochemical industry had a significant impact on the number of workers required in the plants. The positive of having fewer workers exposed to toxins was totally undermined by the social problems of having a precipitous rise in unemployment.

For the second study based in Sudbury that looked at the impact of occupational exposure on miners, we built on the conceptual framework, adapting it to capture the major variables that emerged from that analysis. In that study, we noted that the external climate had a very strong influence on the change in the mining sector, including changes in occupational and environmental law; the price of nickel that created boom and bust cycles; the buyout of the mines by multinationals; and the mechanization and automation that cleaned up the mines but led to unemployment. The benefits to the remaining underground miners were more of a collateral benefit from these levers of change than the awareness of the health impact of occupational exposures on the miners.

For this third community-change study that examines the impact of the industrial exposures on the community and environment in Sudbury, we find that the dimensions of community change model is still appropriate for this study's new research question: “What are the necessary criteria for communities to act upon awareness of environmental and occupational exposures?” The model aligns with our view that levers of change are complex and influenced by multiple layers of pressures and opportunities. Both of the previous two models were used to frame our semi-structured interviews and our analysis. We have adapted the model to reflect our findings from the analysis.

The results from this study have demonstrated that the levers of community change in Sudbury sometimes aligned with the literature and sometimes did not (see Table 1 for a comparison). The conceptual model for this study include as levers of community change: (1) awareness of the impact of the pollution that led to a shared vision; (2) taking advantage of events and timing; (3) creating a shared measurement system to monitor the change; (4) having a diffuse yet linked leadership; (5) building a sense of pride and place; and (6) perseverance (see Figure 1). The model and the findings also highlight the importance of the external climate as a lever of change. Important external climate levers included globalization,
automation, the social climate, the economic climate, the political climate, and environmental, legislative, and regulatory changes, (see Figure 1).

Participants

In order to try to understand the complex confluence of events that led to the changes in Sudbury, multiple sources of data were collected. There were one-on-one interviews with 60 people. The interviewees fell into five groups: community (18), policy/government (7), academics and public health officials (10), industry (9), and workers and their union representatives (16). Interviews lasted from 30 minutes to an hour. There were also four focus groups during 2014–2016.

The community group was a broad range of activists who sit on committees and groups that have focused on Sudbury’s re-greening efforts or mining reform, leaders of associations involved in occupational health and safety with companies in Sudbury, and two First Nations community members involved in healthcare in Sudbury. The seven politicians were both present and retired representatives at the municipal, provincial, and federal levels. The academics and public health officials were experts in the field of health, occupational health and the environment, and the economy, and came from Laurentian University in Sudbury and the Sudbury District Health Unit. The industry representatives included mining company researchers and occupational health and safety experts from the two major mining companies based in Sudbury (Vale, previously known as Inco, and Xstrata, previously known as Falconbridge). The workers included Sudbury miners, retired miners, and representatives from the two mining unions: United Steelworkers of America and Unifor (previously known as the Mine Mill and Smelter Workers).

The study received ethics approval from the Waterloo-based Community Research Ethics Board. Interviewees were approached with a letter of information and a brochure describing the study. Each interviewee signed a letter of informed consent approving being recorded, and acknowledging confidentiality.

A one-day conference organized by Laurentian University on Sudbury’s re-greening efforts, called the Sudbury Protocol, explored how the lessons learned in Sudbury could be of help to other communities (Sudbury Protocol, 2016). Presentations from the conference and a workshop on community engagement were included in this study. Document analysis included: local newspaper clippings from the 1970s and 1980s about labor and occupational disease issues in Sudbury; the gray literature on the Ontario mining sector; an analysis of data on productivity and employment in the region; histories of Sudbury; and local historical health data obtained from the regional health authority. Data collection ceased when no new names were mentioned as part of the snowball recruitment, and the concepts were deemed adequately explored since no new ideas were emerging.

Interview Schedule

For consistency, one researcher (the lead author) conducted all the interviews and groups with one exception. These were conducted wherever convenient for the interviewees: in homes, workplaces, union halls, or restaurants. The questions asked during the semi-structured interviews were based upon the conceptual framework. The interview schedule’s questions evolved during the study as our understanding of the Sudbury context deepened, but focused on the increase in awareness of occupational exposures and environmental emissions and chronic disease.
There were questions on the pivots of change at the community level: the awareness of the impact on health and the environment from the pollution; leadership from individuals and community groups; how momentum was built through a common agenda and collaboration, but also through shaming and embarrassment; how the needed resources were obtained to advocate and pay for the re-greening and the limitations in resources; and how the community linked and communicated with each other. Questions were also asked about the external environmental forces that could have had an impact. These included changes in the occupational and environmental legislation; the rise and fall of the price of nickel, strikes and layoffs in the sector; and globalization and mechanization of the mining industry.

Analysis

All the interviews were listened to multiple times by the research team members. The interviews and focus groups were transcribed and entered into NVivo software. The analysis of the data was conducted from a social constructionist theoretical perspective (Berger & Luckmann, 1966), with the idea that individuals and groups approach a problem from multiple perspectives and assumptions, and the final story of what occurred is created from a shared understanding of these many viewpoints. The analysis occurred in two phases. The interviews were divided into the five target groups (industry, worker, politicians, academics, and community) and were analyzed within groups, and then across groups. The initial coding, axial coding, and grounded coding was conducted by one person in the research team (Haynes) as advocated by best practices in qualitative research (Kendall, 1999; Strauss & Corbin, 1990). Through constant comparisons, a meta-matrix of themes and sub-themes was created from the deconstructed data from the participants’ accounts, focusing first on the individual groups, and then across the five groups. These often fell into the variables that were identified by the initial conceptual framework. Through this inductive process, there also was a change in importance or priority of variables—some variables were dropped and new themes emerged. The second layer of analysis was conducted by two research team members (Holness & Kramer), who had been involved in conceptualizing and creating the study. The emergent conceptual framework was discussed at multiple research team meetings, the transcripts of the interviews were re-read, and representative quotes were selected. Through this process, we identified important factors in the “causal net” of what led to the re-greening of Sudbury (Sparks & Farsides, 2012).

Results

The major themes that were highlighted by the analysis of how Sudbury’s community engaged to achieve its re-greening included that the city: (1) embraced change based upon an emerging awareness and common vision; (2) took advantage of a confluence of timing and events; (3) adopted evidence-based applied research; (4) built a sense of pride and place; (5) created a diffuse yet linked leadership; and (6) perseverance. The levers of change identified by this study resonate with the conditions identified by Kania and Kramer (2011), however less so with those more recently identified by Cabaj and Weaver (2016).

1. Embrace change based on an emerging awareness and vision

Over the decades that it took to achieve the re-greening of Sudbury, the community of Sudbury’s vision of their city has fundamentally changed three times. It took a while for the city to achieve what Kania and Kramer (2011) call a “shared vision for change.” At the beginning, Sudbury was a company town, with the associated mentality and unquestioning dependency on the mining companies. People still talk of the past when “Mother Inco” built the town, gave them jobs, housed its miners, and gave their children schooling. The first transformation occurred during Sudbury’s worst strike in 1978–1979 because of a planned, strategic initiative that led to the eventual diversification of the Sudbury economy. Members from business, government, academia, media, miners, and other interest groups came together to diversify the economy and move away from the total dependence on the mining sector. They strategized how to move Sudbury from a one-industry town, to a more diverse, knowledge-rich economy. The group included some leaders of the unions who were not supported by their unions who saw this initiative as a push to reduce the importance of mining to the city’s economy. However, the miners that joined this initiative, and who later suffered for this decision, did so since they felt it was the right thing to do (Sparks & Farsides, 2012). This highlights the importance of a shared vision. The group created a vision statement, called “Sudbury 2001” that saw Sudbury
as no longer a mining town, but instead would be a sustaining metropolitan center of health, education, and industry:

There was a group of like-minded, smart individuals that bridged the gap between labour and capital. … There was a sense of urgency. We were able to get this interesting multi-partite group to sit around the table and do something that was very unique and everyone left their politics at the door (from the community group).

Over the decades, this vision has been realized. Sudbury is now the economic hub of Ontario’s north with a large education and medical sector and a significant federal tax center. People began talking about the end of mining. They even thought of closing the school of mining at Laurentian University, convinced it had outstayed its need or welcome.

However, by the 1990s, and entering the new millennium, the second transformation of Sudbury from barren moonscape to a lush green environment, attracted the highly qualified personnel needed to also develop a high-tech mining sector. Laurentian University’s engineering department now looks forward to meeting a 2020-predicted employment need of between 60,000 and 130,000 new workers in this new mining sector. A summary from their report follows:

People were almost all saying that mining can’t possibly be the focus of the economy here. We don’t want it to be. We’ve got to diversify away from mining. This is not a mining town! Mining is dead! It’s a sunset industry! People were not aware that building around the mining core was a bunch of other businesses that were only there because the mining sector was there. So you got a re-understanding of what the city was, that followed the economic transformation (Laurentian University engineering department).

And with this development, an understanding grew of the legacy, and an appreciation for the past, as shown in the following:

The roots of this community will always be associated with mining. You can’t get away from it. Yes, they diversified and they’ve had to diversify, but [mining has a] very strong, strong hold. It’s here. It’s always going to be part of our roots (from the community group).

The community felt that this transformation of the economy could not have been achieved or sustained if it were not for a simultaneous decision the community made to also reclaim, restore, and re-green Sudbury. That decision was made organically. Unfortunately, there was no similar, high-level summit meeting where that decision or common vision was recorded, but it was made nonetheless. The community interviewees stated repeatedly that Sudbury could not have attracted or kept the highly qualified personnel it needed to diversify the economy or develop the mining support, supply, and high-tech mining sectors if the vision of a re-greened Sudbury had not been made or acted upon.

2. Take advantage of a confluence of timing and events

The 1970s and 1980s were a time of change. There was a combination of events, circumstances and political will that offered opportunities for those who could see them. There was a sense of urgency that now, in retrospect can be seen as a “perfect storm” that the community of Sudbury took advantage of. That is what made Sudbury special; the ability to take advantage of the confluence of circumstances. “Carpe Diem” could easily be the city’s motto. This category emerged very strongly out of the interviews. It has not been identified by either Kania and Kramer (2011) or Cabaj and Weaver (2016) although the emerging collective impact movement could be seen as an indicator, in and of itself, to people taking advantage of beneficial political, economic, and social climate during the years of the Obama presidency.

In the 1970s and 1980s there were significant changes in the social, economic, and political climates, as well as changes in globalization, automation, and legislation. The environmental movement was raising everyone’s awareness that local disasters like Sudbury’s pollution had global effects. Acid rain from a point-source could kill lakes miles away. Environmental legislation started to be passed in the United States in 1970, and Ontario’s Ministry of Environment was created in 1972. Dr. John Gunn at Laurentian University gives one of the first ministers of this portfolio, Jim Bradley of the Ontario Ministry of Environment, significant credit for initiating the clean-air...
legislation and how it was communicated to the Sudbury mining sector (in small enough steps and with shared responsibility among competing companies).

The mining sector was going through epic changes that have continued. The mechanization and automation of the sector has led to improvements in the industrial processes that have facilitated less environmental contamination. Simultaneously, the price of nickel has risen and dropped precipitously, which has instigated further productivity efficiencies, layoffs, and cuts in salaries and pensions to miners. That was the reason for the 1978–1979 strike. In the 1970s, 25,000 miners were employed in Sudbury. There are now about 3,000 to 5,300 miners. More recently, the two major mining companies in Sudbury, Inco and Falconbridge, have been bought out by foreign multi-nationals that have much less social or economic investment in the city or its miners. This has led to further social and labor disruptions.

There was a federal political initiative to develop Canada's north instigated to ensure Canada's national security. The “Sudbury 2001” group took advantage of this to lobby the different levels of government to develop Sudbury as the hub of Ontario's north. The federal and provincial government responded to this unified voice and gave Sudbury the resources it needed to become northern Ontario's center of healthcare, education, and research. It also became the site of one of Canada's seven federal taxation centers and the site for the provincial Ministry of Northern Development and Mines. As one official put it:

3. Adopt evidence-based knowledge

The community has had strong leadership from the academics at Laurentian University, who have supplied the city with a shared measurement system of their success. This is one of the five conditions of change identified by Kania and Kramer (2011). A quick search on Sudbury's environment in Google Scholar offers over 51,000 citations, most of which cover details on Sudbury's soil, air, and water. Amazon.com lists about a dozen professional and technical books covering the geography and environment of Sudbury. The academic environmentalists have determined the re-greening formula—the quantities of limestone, fertilizer, and grass-seed that must be planted the year before planting the trees, bushes, and undergrowth. Using empirical data, the unions, the occupational health and safety academics, and public health officials have advocated for the reduction in emissions that affect the community. Thirdly, the City of Greater Sudbury, on an ongoing basis, monitors progress indicators of air quality, energy, green buildings, land use planning, the variety of aquatic species, and the natural environment. The latter includes indicators of the number and variety of trees and vegetation planted, the area limed, schoolyards re-greened, and trends in soil quality, as indicated by the following:

I think what really helped in Sudbury was the university. When we [moved here], Laurentian was full of young professors. They came from all over the world. All young, energetic, [with] ideas, the biologists and the geologists..... I think they just brought a breath of fresh air and ideas from all over the world (community member).

The general health impact of the pollution on the community has received some attention. The Sudbury District Health (2016) area, in comparison to the rest of Ontario, had consistently over the years reported high rates of asthma, silicosis, cancer (lung, nasal, and gastrointestinal), chronic obstructive lung disease, and other chronic diseases. The environmental epidemiologists and air pollution experts at Laurentian University agree that it is probably the metal-rich particulates (especially the very fine-range particles such as oxides and sulphides) in the emissions that can be causally linked to the health issues.

In 2002, using industry and public money, the Sudbury Soil Study was initiated to experimentally study the health impact of the environmental pollution. It was significant in terms of its scope (based on 8,500 soil samples), the money spent on it (over $10 million for external consultants), and the time dedicated to it (seven years). It examined the potential human health risks related to exposure to arsenic and metals from the soil, water, food, and air. Contradictorily, the soil study did not find any issues of significance to the community's
health (see http://www.sudburysoilsstudy.com/EN/indexE.htm). These results were not universally well accepted by the community, the major criticism being the lack of epidemiological studies looking at long-term health effects. Some even said the soil samples had not gone deep enough. Some members responded strongly:

[The Sudbury Soils Study] was a joke. They claimed there's nothing in the soil. I was born and raised here. I recall being at home and all of a sudden when they would start pouring the slag you couldn't breathe because of the sulfur in the air. Tell me that that didn't go into the soil. Please tell me that!

On the other hand, the health impact of the mining chemicals on the miners themselves—given their higher, and more intensive exposures—has received more interest and attention (Lightfoot, Berriault, & Semenciw, 2010; Lightfoot, Berriault, Seilkop, & Conard, 2017), and investigations into miners’ health has found significant elevations in lung cancer incidence and mortality, colorectal cancer incidence, cardiovascular mortality, and silicosis.

4. Building a sense of pride and place

In the 1970s and 1980s, the City of Sudbury had a reputation, worldwide, as a devastated moonscape, as the unemployment capital of Canada, and as a place everyone wanted to leave and no one wanted to come back to. It was notable that at the workshop on community engagement at the 2016 Sudbury Protocol conference, most of the people over the age of 35, were either natives who had left Sudbury and then come back, or were from elsewhere and had moved to Sudbury only in the past couple of decades. There was also a group of 20-somethings who had never left Sudbury and had no wish to do so. The older generation spoke of how embarrassed they had been in the past to say they came from Sudbury, but that they now say it with pride. For example:

What happened with the re-greening process gave us hope. It gave us a sense of an attitude that we can take on huge challenges and develop them and overcome them, and it has led to other [positive] outcomes (community member).

Since then, there is much to be proud of. The miners who were laid off started an important and substantial mining-service, education, and research sector, now worth almost $4 billion of Sudbury’s $5.5 billion GDP (Keown, 2015). The research hub now includes Science North, the Centre for Excellence in Mining Innovation (CEMI), the Living with Lakes Centre, and the Sudbury Neutrino Observatory (SNOLAB), a 2 km-deep (1.24 miles) neutrino observatory. In 2016, a SNOLAB scientist (Arthur B. McDonald, director of the Sudbury Neutrino Observatory) was co-winner of the Nobel Prize. The city has attracted highly qualified people with national and international reputations to contribute their expertise and leadership to SNOLAB, Laurentian University, Health Sciences North, the Mining Innovation Rehabilitation and Applied Research Corporation, Mineral Exploration Research Ontario, and many more. In 2015, the city was declared by Statistics Canada to have the happiest people in Canada. The city has won numerous international, national, and provincial awards because of its reclamation achievements, and has hosted visitors from around the world who are curious to learn about the program.

Although the goal set out by the re-greening initiative and the economic diversification was not necessarily community pride, it has been the result. As the people of Sudbury saw their city become green, they re-engaged. The hundreds who have been involved in the tree planting now have an invested interest in the City’s restoration, and have taken on more projects such as cleaning up their schools, planting trees in empty parking lots, and established walking trails. These changes can be seen as one of the five Kania and Kramer (2011) conditions for social change, mutually reinforcing activities. As one community member said:

From the hard work that this community has done and from how we have engaged, we have not only recovered from the damaged physical environment, we have also recovered from the damage to our psychological identity.

5. Create a diffuse yet linked leadership

In the previous study in Sarnia, there was a charismatic leader in the community and another among the unionized workers that led the change that recognized the health effects of asbestos on workers’ health. Leadership has not been identified by either Kania and Kramer (2011) or Cabaj and Weaver (2016) as a pre-condition for change, although their case studies identify problems with
leadership, the need for community leadership, and the need to change the leadership paradigm from managerial to transformative (builders of movements).

In Sudbury, certain names emerged out of the interviews as leaders. The miners all spoke about the work of Homer Seguin and more recently Leo Gerard. The industry representatives still remembered the improvements made when Mark Cutifani was chief operating officer of Inco Limited. The academics mention the foundational ecology of Dr. David Pearson and Dr. Peter Beckett. The community leadership included Bill Lautenbach, Narasim Katary, and Michael Atkins, and leading politicians included Elie Martel and his daughter, Shelley Martel. This list could easily be three times as long. However, although the leadership across the five groups was linked, no one person or group dominates in the re-greening of Sudbury. Here are representative examples regarding Sudbury’s leadership:

It’s really difficult to isolate “buckets” of influencers—the union bucket, the community bucket. I have a feeling that this community, Sudbury, is all intertwined. We’re all one big group kind of moving together (industry member).

Everybody’s aware of the history but they don’t seem to realize how oddly cohesive the community’s become over that time. Many of the divisions have disappeared, partly because over time people worked together on a whole bunch of projects (academic member).

Not only did we have people talking together for the first time and listening for the first time that never did before, but as we got used to that and we got doing other things, you could actually talk to people who had met one another and therefore felt there was credibility one side to the other. Then you could have a longer conversation. [You] could pick up the phone and say, “I want your help” (community member).

Achieving the interlocking and interdependent goals of diversifying the economy and reclaiming the industrial landscape took different leaders at different times to achieve different aspects of the enterprise. There was not one group that acted as the “backbone support organization” as identified by Kania and Kramer (2011). However, recently, the City of Sudbury has taken on the role of listing and linking all the environmental groups and their initiatives under their Re-greening Program.

Taking on the mutually reinforcing activities (Kania & Kramer, 2011) that were required to achieve these two significant goals did take time, or as Mark Kramer said in 2012, it required “an attitude of burning patience” (retrieved https://www.gcn.org/articles/the-promise-of-collective-impact). As early as 1973, the newly formed Regional Municipality of Sudbury created a Technical Tree Planting Committee. In 1978, it proposed a land reclamation program, and changed its name to the “Vegetation Enhancement Technical Advisory Committee” to reflect a broader mandate than just planting trees. This small beginning grew into EarthCare Sudbury, which is a unique partnership between the City of Sudbury and over 150 community agencies, organizations, and businesses, and hundreds of individuals who are creating a greener, more sustainable community. This collaboration ensures another of the Kania and Kramer (2011) criteria for change: continuous communication. One industry member put it like this:

Sometimes leadership comes from the unions. Sometimes leadership comes from a mother that just lost her son and says that’s not good enough and we need to look at ways of improving. It just depends.

Discussion

This analysis has tried to distill the essence of what one community did to remediate their environment from severe industrial pollution. The re-greening of Sudbury’s environment unfolded organically over the decades. There was not one leader or community group who led the movement; many individuals and organizations responded to the need. They took on different initiatives: The unions raised awareness of occupational disease; the public health practitioners collected and published information on the population’s health; the academics studied and published papers on the state of the land, water, and air, and advanced research on restoration; diverse community members came together to create the “Sudbury 2001” vision; industry embraced new technology to help clean emissions from the smokestacks; the media took up the banner of first shaming the city for its pollution, and then later, giving kudos for achievements; and the politicians worked on passing environmental and occupational
regulations and found ways to obtain funds that helped diversify Sudbury’s economy. Of course, the schools, universities, laid-off workers, and environmentalists who planted the trees, limed the soil, set up bike paths, and led walks through the newly emerging forests made it all happen.

The restoration of the environment was a mutually reinforcing process: The greening of the city gave pride to its residents and attracted back those who had left and enticed newcomers to make Sudbury their home. In turn, this initiated even more community engagement activities, perpetuating a positive cycle. However, this process was not easy. As one scientist said at the Sudbury Protocol conference in 2016, coming up with the recipe for how to restore the land (the quantity of lime, trees, bushes, grasses and understory growth) was relatively easy in comparison to understanding the needs at the political, economic, and most importantly, at the social level.

The groups that have noticeably not been engaged in the economic diversity or restoration process are the members of the First Nations and Métis that reside in the Sudbury Basin (about 10,000 people). Sudbury is located on the ancestral, traditional territory of Atikameksheng Anishnawbek (Whitefish Lake First Nation). The absence of their voice is an indictment of the inclusivity and equity of the process, and is a notable limitation of this study. Even taking into consideration the inherent legacy of colonialism and racial exclusion, there are structural barriers in Canada that have limited Aboriginal peoples from engaging at the community level. Aboriginal peoples fall under the federal government’s constitutional jurisdiction, whereas the community initiatives have mostly been municipal and provincial initiatives. However, this is an evolving situation. A notable theme at the 2016 Sudbury Protocol conference was the absence of the voice of First Nations and Métis and the need to ensure they are included as partners moving forward.

Although Sudbury is without doubt a good-news story and a model for other communities facing devastating industrial pollution, a number of the interviewees emphasized that the Sudbury project is not complete. Perseverance was a commonly mentioned need. The region still ranks second of 158 Canadian cities in emissions of nickel, cadmium, and arsenic, and remains one of the province’s largest contributors to SO2 air concentrations (Potvin, 2007). Although nearly 4,000 hectares (9,884 acres) of land have been restored, over 100,000 hectares (386 square miles) were damaged by the many decades of pollution. Moreover, the buyout of the two largest nickel mines by multinationals also puts in doubt the ongoing financial support from industry for future environmental improvements.

The social indicators also tell a story of unfinished work. As of the beginning of 2016, Sudbury’s population had seen a slight decline; it had the highest unemployment rate of any city in Ontario (8.7 percent); and in 2015, there were estimated to be 1,419 people who were homeless or at risk for homelessness (Kauppi, Pallard, & Faries, 2015). However, although there is still much work to be done, with their own past to use as a model for the future, the Sudbury citizens surely have a head-start over other communities.

We believe the changes Sudbury has initiated and implemented to transform its environment from black, bare rock, and acid lakes back to a green environment through reclamation, revitalization, and re-greening is worth exploring and assessing as a model of community engagement and collective impact. Its model could be used by other communities that are experiencing the impact of industrial pollution to help rebuild and revitalize their communities by offering an example of the interactions between the personal, social, political, and environmental contexts.

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Impact of Service Learning: High School Students as Health Coaches for Children

Laura Nabors, Kristen Welker, and S. Elisabeth Faller

Abstract

The current study examined high school students’ perceptions of healthy eating and exercise lessons in an obesity prevention curriculum being delivered to children in an urban area. Evaluators assessed high school student perceptions of their service learning. Forty-seven high school students participated and coached 65 children. The high school students recorded their perceptions of their experience by answering a series of questions in their journals after each teaching session. The high school students also recorded the children's daily eating and exercise goals, roadblocks to reaching goals, and ideas for overcoming roadblocks. Results indicated that the majority of high school students (n = 45) wanted to participate in service learning in the future and that they were learning about teaching, setting goals with children, and learning about themselves as leaders. Future research should examine the long-term impact of the service experience for the high school students.

Social transactions between teachers and adolescents providing services in their communities can foster civic engagement and learning (Zeldin, Christens, & Powers, 2013). Adolescents bring perspectives, experiences, and information into the partnership, which can greatly benefit the community they are serving. This relationship can empower adolescents and enhance their involvement in community projects. If adolescents participate in a leadership role when delivering services, the experience can promote their growth and enhance its meaning for them (Zeldin, et al., 2013; Zeldin, Larson, Camino, & O'Connor, 2005). In the current study, adolescents volunteered to teach young children about healthy eating and exercise, and they gained experience as teachers working with elementary school-age children. A unique partnership was built between the adolescents and the adults who taught them the curriculum, prior to their working with the children. Additionally, a partnership was built between adults, adolescents, and the children they served to address a critical community issue, which is at the heart of civic development in youth/adult partnerships.

Service-learning activities that connect adolescents with others in their community have the potential to enhance their development as leaders as well as contribute to their social and emotional learning (Colby, Ehrlich, Beaumont, & Stephens, 2003; Chung & McBride, 2015; Flanagan & Christens, 2011; Zeldin et al., 2013). When adolescents can learn about a program and then teach it to others, they have opportunities to share knowledge and are empowered as teachers as they promote positive change within communities (Camino, 2000; Wong, Zimmerman, & Parker, 2010; Zeldin et al., 2005). Through their involvement in service, adolescents may become inspired to be future community leaders and continue civic engagement to address key community problems (Colby et al., 2003). The current project extended the notion of service partnerships by teaching high school-age youth (our coaches or service providers), who became involved with elementary-age youth to teach them about improving healthy eating and exercise behaviors through an existing obesity prevention program.

Reflective Journaling

After working with the children, the high school students solidified their knowledge through reflective journaling and their reflections are the foundation of the current study (Giles & Eyler, 1994). Reflection on service-learning experiences can help students understand the meaning of their work, when they respond to questions that assist them in critically examining their experiences (Bringle & Hatcher, 1999). Within this framework, and consistent with Dewey's philosophy of experience as a “teacher,” reflection is a critical tool facilitating knowledge, insight, and a review of community experiences (Bringle & Hatcher, 1999; Eyler & Giles, 1999; Giles & Eyler, 1994). We also expected that students who were involved in the project would want to participate in further service in the future, such that participating in service would “…lead to a valuing of community” (Giles and Eyler, 1994, p. 83).
Training Model

A coach-the-coach model was used to train the high school students (Sanders, Reynolds, Bagatell, Treu, O'Connor, & Katz, 2015). A university instructor and the leader of the service project educated high school students about the obesity prevention program and reviewed the “lesson for the day” for the adolescent coaches before they worked with one to three elementary school-age children. This study sought to determine high school students’ perceptions of their service opportunity, and their views of an obesity prevention program that they delivered. As mentioned, a reflexive approach guided our work, emphasizing the importance of participants’ perceptions as they defined the meaning of their experience and whether it enhanced their knowledge (e.g., Giles & Eyler, 1994). This study also sought to determine what children learned from working to develop healthy eating and exercise goals with their high school-age coaches. This was a verification check to determine that one-on-one coaching by high school students was occurring. Thus, qualitative data analyzed for this study included written reflections from daily journals completed by the high school students. These analyses provided information about high school-age students’ perceptions of the meaning of their experiential learning process as they implemented an obesity prevention program for elementary school-age children. Daily goal sheets where high school students and the children they coached selected a daily healthy eating and exercise goal for the child were another source of data.

Overview of the Children’s Healthy Eating and Exercise (CHEE) Program

High school students were taught ideas for teaching young children about healthy eating and exercise using the Children’s Healthy Eating and Exercise Program, which is an evidence-based obesity prevention program (Dai, Nabors, King, Vidourek, Chen, Hoang, & Mastro, 2014; Nabors, Burbage, Woodson, & Swoboda, 2015; Nabors, Bartz, Strong, Hoffman, Steffer, & Pangallo, 2012; Nabors, Burbage, Pangallo, Benard, Gardocki, Strong, Shelton, & Jones, 2013). This curriculum focuses on teaching children about healthy eating using the Traffic Light Diet developed by Epstein and colleagues (Epstein, 2005; Epstein & Squires, 1988) as well as other ideas about healthy eating from MyPlate (see https://www.choosemyplate.gov/MyPlate). Children also learn about portion size; reducing sugar intake; increasing intake of fruits and vegetables; and reducing intake of high fat, high calorie foods such as cake and ice cream. In addition, children learned about the importance of stretching and 60 minutes of daily exercise, and they set healthy eating and exercise goals with group leaders. Group leaders use motivational interviewing techniques to positively encourage children to set healthy eating and exercise goals and to help them brainstorm about ideas to overcome barriers to attaining their goals (Resnicow, Davis, & Rollnick, 2006; Söderlund, Nordqvist, Angbratt, & Nilsen, 2009; Nabors et al., 2015). Children and group leaders also identify people and actions that will help children achieve their healthy eating and exercise goals. In previous evaluations children participating in the CHEE program showed improved knowledge about their health, exercised more, and reported consuming more fruits and vegetables and fewer desserts or treats (foods high in sugar and low in nutritious content) (Dai et al., 2014; Nabors et al., 2013, 2015).

Methods

Participants

High school-age youth. For week one 23 high school students (the first group), including six males and 17 females from four high schools in the United States participated. Thirteen were Caucasian, five were African American, one was Hispanic, three were biracial, and one student did not report an ethnic group. Three of the high school students were 14 years of age, 10 were 15 years of age, six were 16 years of age, and four were 17 years of age. These students were supervised by four teachers from their participating schools, a supervisor from the community-based program leading the service project, and the first author.

For week two, participants were 24 different students (the second group), 12 males and 11 females, from four different local high schools. One of the students did not provide any type of demographic information. Nineteen of the students were Caucasian and four were African American. Seven of the high school students were 15 years of age, 10 were 16 years of age, and six were 17 years of age. These students were supervised by four teachers from their participating schools, a supervisor from the community-based program leading the service project, and the first author.

For week two, participants were 24 different students (the second group), 12 males and 11 females, from four different local high schools. One of the students did not provide any type of demographic information. Nineteen of the students were Caucasian and four were African American. Seven of the high school students were 15 years of age, 10 were 16 years of age, and six were 17 years of age. Youth were supervised by four different teachers from their schools, the leader from the community-based program, and the first author.

Eight different high schools were involved over the course of the program. Students in the first iteration of the program were from four high schools and youth from four other high schools participated in week two. For each group of four
High schools (two of the high schools were in the suburbs, with students from middle- to upper-income families) and two were city schools where the majority of students were from low-income families (received subsidized or free school lunches). The mix of high schools was intentional, and high school students elected to participate in the program as part of a summer service-learning experience. A critical component of the summer experience was serving other low-income areas, such as a homeless shelter and other urban organizations serving low-income families. The high school students also had an evening where they shopped for a meal using food stamps. They participated in an educational session with the director of the program to learn about poverty and food insecurity.

**Elementary school-age children.** The elementary school-age children \(N = 65\), kindergarten through 6th grade, were attending a summer program at a local Boys and Girls Club serving children from a low-income urban area. There was one Caucasian child attending the Boys and Girls Club and the other children were either African American or biracial (African American/Caucasian).

The 2015 Generosity Report provides facts about all of the Boys and Girls Clubs in the Cincinnati region (Boys and Girls Clubs of Greater Cincinnati, 2016). This report indicated that, “...83% of the kids live at or below the poverty line and 84% of our club members qualify for free or reduced lunch” (p. 5). The Boys and Girls Club center, where this project was held, is in the center of housing projects located in an urban area.

**Procedures**

A university-based institutional review board approved this study. Parent and child permission was required. Ethical considerations before, during, and after the study were carefully considered by the research team and proper steps were taken to protect the confidentiality of the high school students and children; no identifying information was collected for this study. The program lasted for eight sessions over a two-week period, with 60- to 75-minute sessions on Mondays through Thursdays in the afternoons. Each group of high school students delivered the program for one week.

The routine for program delivery was the same each week. The high school students began the afternoon in a classroom with the first author, their teachers, and the leader from the community program and the team reviewed the lesson for the day from the CHEE program manual. After reviewing the lesson for the day, the high school students went to the gymnasium or a large group room at the Boys and Girls Club and met with children. The structure of the lessons was the same each day and involved beginning with an ice-breaker activity, followed by a healthy eating lesson, then goal setting, and finally an exercise session.

High school students worked with children to develop two daily health goals, typically one focused on healthy eating and one focused on engaging in exercise. The high school student helped his or her mentee or mentees identify roadblocks to reaching healthy goals and then they identified ideas for overcoming roadblocks to goals. Each child took his or her goals home on a Healthy Goal Sheet that listed the goals, roadblocks to reaching goals, and ideas for overcoming roadblocks. The child was instructed to work on reaching these daily goals, because he or she would report on his or her progress toward goals the next day. The child took one goal sheet home each day and the coach kept a goal sheet so that he or she could discuss how the child did the next day. The icebreaker activity (allowing for introductions and general discussion), the healthy eating lesson, and the goal setting lasted for approximately 40–45 minutes. After this high school students reviewed the importance of exercise and introduced ideas for exercise (e.g., tag, baseball, kickball, sharks and minnows, and many types of relay races involving walking, running, skipping, bear crawls, etc.). The high school students and the children selected a group activity and played together the remainder of the session (about 15–25 minutes). After working with the children the high school students returned to their classroom and completed journals.

**Healthy Eating Lessons during Weeks One and Two**

**Week 1.** Healthy eating lessons were designed to review the Traffic Light Diet (Epstein, 2005). In diet, high school students taught the children about red, yellow and green foods. Red foods are relatively less healthy and high in fat and calories, while yellow foods are “mid-level” foods that could be eaten in moderation, such as pasta and wheat bread. Finally, green or “go” foods are foods low in calories and high in nutrition, chiefly fruits and vegetables. Children also reviewed the ideas in MyPlate and colored a MyPlate handout. They reviewed magazine pictures to identify red, yellow, and green foods. Children worked with their coaches (the high school students) to identify healthy foods they had in their refrigerators.
This helped high school students understand what types of healthy foods were available at home so they could devise appropriate healthy eating goals with their mentees.

**Week 2.** At the first session, children reviewed what they had learned with their new leaders (the second group of high school students). The second lesson for week two involved discussing healthy and unhealthy snacks and emphasizing eating healthy snacks. The other healthy eating lessons reviewed the following ideas: (1) the importance of eating a healthy breakfast and how to order a healthy meal at a restaurant, (2) learning about different food groups (grains, protein, vegetables, fruits, fats), and (3) learning how to read about fats and calories on food labels.

**Data Collection**

When sessions with the children were completed, the high school students returned to a separate classroom and completed their reflection journals. Daily reflection journals took about 10 to 15 minutes to complete. As previously mentioned, the two groups of high school students completed four days of journal entries. The first page of the journal required them to provide demographic information. The questions for each of the four days can be found in Table 1.

**Data Coding**

High school students’ journals were transcribed verbatim in word documents. Data were analyzed by the three authors, using a constant comparative methodology to determine a dictionary of codes (Miles & Huberman, 1994). The dictionary of codes was entered as nodes into a coding scheme using the NVivo Program. Next, the word documents of the transcripts of journal entries for each high school student were loaded into NVivo. After this, each of the researchers reviewed all of the journals a second time. Then, they coded all the information in each journal using the nodes representing the dictionary of codes. New nodes were recorded if the researcher believed she had found a new category in the data. After all of the journals were coded in

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**Table 1. Journal Questions for Each of the Four Coaching Days**

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>What have you learned today as a coach?</td>
<td>What have you learned today as a coach?</td>
<td>What have you learned today as a coach?</td>
<td>What are the most important things you learned from participating in this program?</td>
</tr>
<tr>
<td>What have you learned today about teaching?</td>
<td>What is the meaning of this experience to you?</td>
<td>What types of improvements should be made to the lessons you taught today?</td>
<td>What’s the big picture from this program in your eyes?</td>
</tr>
<tr>
<td>What types of improvements should be made to what you taught today?</td>
<td>What types of improvements should be made to what you taught today?</td>
<td>What is the meaning of this experience to you?</td>
<td></td>
</tr>
<tr>
<td>What have you learned about yourself today?</td>
<td>What things have you learned about yourself today?</td>
<td>What personal challenges are you overcoming by participating in this experience?</td>
<td>How was this overall experience different from what you pictured before you began teaching and working with children?</td>
</tr>
<tr>
<td>What things did you problem-solve about today?</td>
<td>What things have you learned about children today?</td>
<td></td>
<td>How did children change as a result of participating in this program?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>How did you change as a result of participating in this program? Will you be participating in community service in the future?</td>
</tr>
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</table>
NVivo, they met a third time to review the coding. The researchers discussed ideas for data reduction and consolidation. The researchers determined that there were cross-cutting themes, which applied irrespective of the type of journal question that the high school students were answering. Thus, a decision was made to determine cross-cutting themes rather than coding the multiple journal questions independently. The coders decided on a list of themes. They decided to review data independently to consider the list of themes and to find representative quotes that exemplified key themes in the data. Finally, they held a fourth meeting to determine a final list of themes with key quotes representing themes. Consensus was reached for the list of themes and quotes and disagreements were resolved by consensus.

The copies of the Healthy Goal Sheets collected by high school students also were coded. This analysis provided information on the types of goals that high school students and the children were developing. Moreover, information recorded on the Healthy Goal Sheets provided process information about barriers (roadblocks) to goals and ideas for overcoming barriers to achieving goals. The first and second author coded the goal sheets to determine common eating and exercise goals for the children, roadblocks, and ideas for overcoming roadblocks to achieving goals. They reached consensus on final lists of goals, roadblocks, and ideas to overcome roadblocks. They resolved disagreements by consensus.

Roles of the Researchers

The first and second authors, who served as coders, were aware that their biases based on being in the health field, working in the area of obesity prevention, and working in the community could influence their interpretations of categories in the data. The third author was not involved in the field, but had significant expertise in qualitative coding. Thus, potential bias was addressed and trustworthiness was improved through the use of a coder who was not familiar with the study procedures and data collection at the Boys and Girls Club. An audit trail was maintained by the first author and reviewed by the second author in a series of meetings throughout the study.

Results

Table 2 presents the themes reflecting high school students’ perceptions of their learning.

There were three general categories reflecting the perceptions of what they learned through delivering the program and through working with children and what they learned about themselves.

Category 1: Learning through delivering the program. Several themes were revealed: (1) learning that activities had to be fun, (2) feeling that the experience was rewarding, (3) having opportunities to practice or showcase leadership skills, (4) ideas for improving the manual and delivery of lessons for the children, and (5) things learned from teaching the children (see Table 2). The high school students reported that fun was a necessary component for the CHEE program. Both the high school students and youth wanted to have fun. For instance, one female, age 15, reported that fun was important for the children, “The kids are willing to open up to you and have fun in any situation. It’s not easy, but you have to be willing to make it fun…. The kids just need someone who will listen and make it fun.”

Forty-five of the high school students reported that the experience was rewarding and that they wanted to engage in community service in the

<table>
<thead>
<tr>
<th>Program</th>
<th>Children</th>
<th>Self</th>
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<tbody>
<tr>
<td>Learning that activities had to be fun</td>
<td>Learning new things about children</td>
<td>Changing one’s own beliefs and behaviors about healthy eating and exercising</td>
</tr>
<tr>
<td>Feeling that the experience was rewarding</td>
<td>Voicing the idea that making a difference for children is important work</td>
<td>Learning new things about oneself</td>
</tr>
<tr>
<td>Having opportunities to practice or showcase leadership skills</td>
<td>Understanding a new culture and encountering others in a new way</td>
<td>Learning to be more patient</td>
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<tr>
<td>Developing ideas for improving the manual and delivery of lessons for the children</td>
<td>Building new attachments with children</td>
<td>Leaving one’s comfort zone to coach the children</td>
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<tr>
<td>Learning from teaching the children</td>
<td>Liking coaching and working with the children</td>
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Table 2. Themes for the Three Categories of Learning: Program, Children, and Self
future. Only two of the high school students, one boy and one girl, did not want to participate in service in the future. The high school students reported that the experience was rewarding because they “liked community service,” “liked helping others,” and “loved giving and helping the community.” Others mentioned that teaching children opened their views to a new type of service opportunity—teaching children about health.

A benefit of participating in the program was learning by being a teacher. These lessons can be seen in Table 3, which presents sub-themes about what the high school students learned by being in a teaching role.

Many of the high school students discussed the importance of capturing children's attention and engaging them in the lessons as being critical to the success of their teaching efforts. Several high school students also commented on the children's love of learning. For instance, one 17-year-old female wrote, “I did not picture the children to enjoy learning as much as they did.” Most of the high school students viewed teaching as a rewarding experience. However, some felt teaching was challenging.

Teaching the children also provided new leadership experiences (“I learned that I can be a leader,” female, age 15) and afforded opportunities to solidify leadership skills (“I now know an easier and more approachable way of leading,” male, age 16). One leadership skill mentioned was learning to motivate others. A 15-year-old male stated, “… motivation can help the person do much better and it helps them to have self-confidence.” As leaders, the high school students often “problem-solved” to help children learn new material or to help them overcome barriers to reaching healthy eating and exercise goals. The high school students felt that they were role models for the children, as one 15-year-old female wrote, “The kids really do need a role model and I love being theirs.” High school students also wrote that they learned to speak in a more assertive and louder tone of voice. When asked about what was learned as a leader, one student (female, age 16) responded, “I need to speak up and out more.” Another part of leadership was learning to say “no” when necessary, which was typically to encourage positive group exchanges, motivate the children to feel happy with their growth, and encourage the children to engage in positive behavior. For example, a 15-year-old female said, “You can’t always be the nice guy. I need to know how to say ‘no’ to keep the kids under control.”

<table>
<thead>
<tr>
<th>Table 3. Subthemes Within Learning by Being in a Teaching Role</th>
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<tbody>
<tr>
<td>Learning a new content area (about healthy eating and exercise)</td>
</tr>
<tr>
<td>Learning how to work “with the kids’ imaginations”</td>
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<tr>
<td>Learning to pay attention to the child and give specific information</td>
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<tr>
<td>Learning to repeat information from the previous lesson</td>
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<tr>
<td>Learning that children benefit from “visuals” or seeing visual examples</td>
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<tr>
<td>Learning that children like active play</td>
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<tr>
<td>Learning to be adaptive and go with the flow of the lesson and the child’s level of understanding when teaching</td>
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<tr>
<td>Learning that children are very energetic</td>
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</table>

**Category 2: Learning through working with children.** The second primary category represented learning about the children. There were four main themes: (1) learning new things about children, (2) voicing the idea that making a difference for children is important work, (3) understanding a new culture and encountering others in a new way, and (4) building new attachments with children (see Table 2). High school students learned that children love to learn (“they will try to make the best out of the lessons,” female, age 15) and were eager to learn about ways to eat healthy and become more physically active. A 16-year-old male wrote, “Some kids are very intelligent, but they don't always show it and you wouldn't know until you take the time to actually communicate with them.” Many of the high school students reported that the children had a lot more energy than they expected. Although they saw the children as energetic, this was tempered with attitudes of patience and caring. Others reported feeling very positive about working with children (“I like seeing the smiles on children’s faces,” female, age 17) and (“I’m more able to work with kids than I thought,” male, age 15). Thus, the high school students viewed teaching and making a difference for children as important work that would positively impact children’s lives in the future.

The high school students reported that they encountered a new culture, realizing that the children they served were residing in low-income families. On the other hand, they also found that the children were similar in terms of their values, love of learning, and desire to have fun. The high school students reported that they began to think about the children and their lives in new ways. Most reported working with the children was more fun than they had expected, because “they really enjoy us coming in. I'm able to make a small difference.
in these kids life” (male, age 17); “they are really good kids if you get to know them” (female, age 14); “they get excited about the smallest things; playing with kids is fun” (male, age 16).

Encountering children in the community program was linked to theme four, which was the opportunity to build new attachments with children. The high school students reported that the service experience allowed the children to attach to them (“they grow attached to you,” female, age 14), and, in turn, allowed the high school students to build new bridges and attachments with the children they were teaching (“I’m going to miss the kid I taught all week,” female, age 15).

Category 3: Learning about the self. The third major category was learning about the self. There were five major themes: (1) changing one’s own beliefs and behaviors about healthy eating and exercising, (2) learning new things about oneself, (3) learning to be more patient, (4) leaving one’s comfort zone to coach the children, and (5) liking coaching and working with the children (see Table 2). Theme one reflected that the high school students learned new things about healthy eating and exercise through teaching the children. Teaching about being healthy thus helped the high school students improve their own eating and exercise habits (“I am eating better. I’m eating more healthy foods—more vegetables”).

Theme two represented the notion that while teaching the children, the high school students also learned many new things about themselves. For instance, some learned that they could make connections with children and these connections facilitated their abilities to teach the children. They learned that they could hold conversations with the children and were excited to “learn things about them (children)” (female, age 15). Along with learning how to connect, many of the high school students also stated that they learned to be patient and flexible as teachers of young children to “give them time to open up” (female, age 17) and grasp new material. Several mentioned changing their views, in a positive way, about children as they enjoyed working with them (“I changed my look on children and how they can be super cool,” female, age 15). Another 15-year-old female stated, “I thought that the kids would be a problem [difficult to work with], but they are really amazing.” A female, age 16, learned that, “I really like kids and I am capable of holding their attention.” Several of the high school students learned that they were kinder, more patient, and more accepting of children than they had first believed. Thus, working with the children allowed opportunities to form more positive views of the children, and the act of working with and teaching children (“making an impact in their lives”) was the third theme for personal growth and change.

Additionally, a common theme was coming “out of my comfort zone” or “coming out of my bubble” and doing something new, often referring to teaching or leading children’s groups. The high school students felt that they could be friends with the children and accomplish more, in terms of teaching others and making a positive difference in their lives, than they originally thought would be the case. In coming out of their comfort zones, the high school students gained self-confidence. A subtheme in the area of coming out of one’s comfort zone was overcoming shyness in order to lead a class and assist children as they set healthy goals.

High School Students’ Suggestions for Improving the Program

The high school students had suggestions for improving program delivery and the lessons provided in the CHEE manual. They recommended more structure in terms of having a clear amount of time for each activity. They requested more fun games to play with the children in the event they completed lessons quickly. Some of the high school students felt they worked best with just one child and did not like having multiple children to work with during a teaching session. Others wanted more ice breaker activities so they could spend more time getting to know the children at the beginning of each lesson. Others wanted to improve the Traffic Light Diet. They wanted other ways to teach about healthy and unhealthy foods rather than discussing red, yellow, and green foods.

Children’s Goal Sheets

Exercise goals. Children’s exercise goals were coded into three categories according to their specificity: very specific, intermediate level of specificity, and non-specific. Specificity was defined as whether the goal detailed an exercise (intermediate level) or whether the goal provided a number of repetitions needed or specified a time involved in exercising (very specific). An example of a non-specific goal was to “exercise more.” A goal at an intermediate level of specificity would be to “run more.” Other exercises mentioned by the children were interests in playing sports or playing with others, including siblings. A few of the children reported they would like to dance during commercials while watching television, which was
something discussed in their lessons with their high school leaders. A specific goal would be to do “10 jumping jacks every day.”

Eating goals. The coders identified the same three levels (very specific, intermediate, and non-specific) for eating goals. An example of a non-specific eating goal was “eating healthy.” If the child identified a specific healthy food to eat this was an intermediate goal. Examples included “eat fruit” or “eat veggies.” Other intermediate goals were to “not eat candy,” “eat strawberries,” “eat fewer chips,” or “drink less soda.” Examples of very specific goals listed an amount to eat and examples were “eat one slice of pizza, not two” and “eat three fruits and one vegetable every day.”

Roadblocks to goals and ideas for overcoming them. The high school students and children were able to determine roadblocks to attaining healthy eating and exercise goals and ideas for overcoming these roadblocks. Roadblocks recorded by coders included: “having junk food at home” and “not having healthy food available.” The children lived in an urban environment and did not have much outdoor space to be active. Also, weather and safety could be significant barriers to exercising. Finally, time spent playing video games and watching television were roadblocks. Ideas for overcoming roadblocks were to help parents buy health foods, turn off the TV, go outside to play more, control portion sizes (i.e., eat smaller portions at meals), find healthy snacks in the refrigerator (rather than potato chips or candy), and play more sports with friends and siblings.

Discussion

The high school students gained valuable skills from their service experience. For example, they learned how to teach the children and how to be leaders of children’s groups. As such, they felt that the experience was an opportunity to improve upon their abilities as leaders, a phenomenon that is common through participation with service-learning activities (Colby et al., 2003; Chung & McBride, 2015; Zeldin et al., 2013). The high school students’ reflections indicated that they felt relatively comfortable in teaching the material, and many indicated finding the experience enjoyable and fun. This supports the value of the coach model for those doing the teaching (Sanders et al., 2015). Participating in the program also improved the high school students’ knowledge about nutrition and reaffirmed the importance of daily exercise as a healthy activity. In fact, several of the high school students mentioned that they learned new information about physical activity and nutrition in the process of learning what to teach the children. Thus, the leaders were also learners and gained valuable insights and new information (Camino, 2000; Zeldin et al., 2005).

Reflective Journaling

The high school students’ journals provided a more in-depth description of the meaning of their experiences. They reflected on their lessons learned and experiences in working with children, which was a new experience for many of them. They described their participation as being rewarding and meaningful. Consequently, the high school students gained insight into the experiences of the children they served and knowledge that allowed a “valuing” the community (Bringle & Hatcher, 1999; Eyler & Giles, 1999; Giles & Eyler, 1994). The social interactions that occurred between the high school students and the children with whom they worked resulted in a bonding experience, and the high school students reported having a newfound appreciation for children. The high school students gained an appreciation of the socioeconomic status of the area and the commonalities between themselves and the children. Many of the high school students described how their thoughts and feelings about children and the area of town in which they were volunteering were transformed through this experience, thus increasing their social awareness (Chung & McBride, 2015; Flanagan & Christens, 2011; Zeldin et al., 2013). The children were learning from the high school students, who were also learning from the children, allowing a reciprocal exchange of culture and a shared experience promoting the social and emotional learning of the teachers (Colby et al., 2003; Flanagan & Christens, 2011; Zeldin et al., 2005, 2013).

Fostering Civic Engagement

This experience encouraged enthusiasm for continued community service and civic engagement (Colby et al., 2003, Eyler & Giles, 1999; Giles & Eyler, 1994), with all but two of the high school students reporting they would continue to find and participate in service opportunities. In addition to inspiring future work within the community, acting as coaches for the children seemed to be effective in helping the high school students to identify teaching either as a possible future career or as an activity that they did not wish to pursue in the future. Some students reflected upon their experience with an appreciation for the challenges of teaching and an understanding that it “wouldn’t
be ‘right’ for them,” while others appeared to have had their eyes opened to the possibility of teaching as something they would enjoy as a future career. High school students and their teachers were able to share critical information about food insecurity and the impact of poverty for children, and this improved their sensitivity in working with the children. Moreover, having high school coaches residing in different economic environments allowed them to share information to enhance understanding.

Healthy Eating and Exercise Goals

The collection and evaluation of the healthy goal sheets served as a validity check, allowing high school students and leaders of the service program to ensure that children were discussing healthy eating and exercise with the high school students. Moreover, this data showed that the coaches were working with children to develop goals during the goal-setting time. This data also provided a window on goals and roadblocks to healthy goals for children in our urban setting. Critical information about barriers to physical activity and healthy eating for the children also was gained, which will allow for improving lesson planning in the future. For example, many of the children set goals to eat healthier, but acknowledged the environmental barrier of seeing junk food at home deterred healthy eating. The high school coaches had a good understanding of the children’s issues, in terms of food insecurity, and were able to frame coaching to meet the children “where they were” in terms of realistic goal setting based on what types of foods were available at home.

Analysis of roadblocks discussed by the high school students and children also indicated that some children mentioned that there was limited availability of healthy foods at home. The children expressed an interest in having healthier foods and alternatives to unhealthy snacks in their homes to help in reaching their nutritional goals. One idea for future programming will be to develop a newsletter for parents with recipes for cooking on a budget. Incorporating parent input into the program, through offering parent meetings to discuss the program and healthy eating, may help to open discussion about healthy foods at home. Moreover, in the next iteration of the program, our team will add lessons about healthy snacks that can be purchased and available in the refrigerator and add handouts for children to share with parents about healthy snacking.

Study Limitations

Several factors may have limited the generalizability of study findings. It may be that the themes were positive in nature because of a social desirability bias. However, several of the high school students offered suggestions for improving the program, which indicated that they felt they could express negative impressions. High school students’ positive impressions may also have been influenced by the scheduling of their service activities. Specifically, the high school students arrived to the Boys and Girls Club after having volunteered at a nearby homeless shelter for adults. Anecdotal information from field notes indicated that they thought working with the adults was “more sad” in comparison to their time with the children. Volunteering with multiple organizations throughout their day may have influenced high school students’ answers. On the other hand, the ability to compare experiences at different sites may be positive in that the high school students had experiences for comparison, allowing them to make clearer judgments of their experiences with the children. The high school students volunteered to participate in the experience. Hence, a potential limitation is that the volunteers in this study were predisposed to having positive attitudes about service learning; but, this is the typical process for gaining volunteers for service projects. In a similar manner, the elementary school students were volunteers, and thus a positive selection bias could be influencing study results. Finally, the supervisors on site may have had a large role in the success of the program and our team did not assess their role. Thus, in future studies it will be important to assess the role and impact of supervisors assisting the high school students.

Lessons Learned and Conclusions

The service program provided a large teaching team to reach and engage with young children. Development of a university/community partnership was at the core of delivering an evidence-based intervention on what might be considered “a shoe-string budget.” The instruction was free of charge and the only program costs were purchasing crayons and paper and making copies of the manual for the high school students. The high school teachers were paid a stipend through their schools and the leader of the community program was a staff member; the first author volunteered to work with the children as did the high school students. Although there was some information
about goals for the children, more information about their perceptions and the impact of the program for children should be examined in future research.

There were some lessons learned from delivering the program. For example, the lack of space (rooms large enough to hold all the children) necessitated that nutrition lessons be delivered to some of the children in the gymnasium, which amplified noise, at times making it difficult to hear. Moreover, this setting did not allow high school students and the children privacy or a place to sit at a table when working with the children to set goals. This might have impacted their ability to discuss roadblocks to reaching goals. Moreover, the children had different levels of knowledge about nutrition and different amounts of support, in terms of having healthy foods at home and parents who provided healthy meals. This could complicate goal setting and achievement of goals selected by children. However, the high school coaches were flexible and discussed alternatives with children and emphasized that they were learning critical information about health that they could use at any time, even a later date, which made the discussion comfortable and fostered learning for the children. Being flexible and “meeting the children where they are” was an important lesson learned for both fostering child engagement and ensuring that the healthy goals were appropriate and achievable for the children.

In summary, partnering with the high schools where students volunteered to participate in a service-learning experience was an effective partnership for providing health education for young children. The high school students viewed the program positively. They learned about leadership and teaching while improving their own health knowledge. Most of the high school students anticipated participating in service in the future. They also learned to reach out to young children and greatly valued the opportunities to build relationships with them. They had “fun” during their service and also thought that the children had fun, which made the experience a positive one fostering cultural exchange and building long-term positive views for high school students and children. In the future, researchers should examine the long-term impact of the service experience for the high school students and the children and gathering more information about the influence of context and socioeconomic status (of the high school students and children) on perceptions should be examined. More information from the mentees’ perspectives will provide a well-rounded view of the experience. The project allowed for a broadening of high school students’ understanding of teaching younger children from an urban area. The high school students gained wisdom in the sense of gaining practical intelligence for helping others (Sternberg, 2000). The program may be portable in that it has the potential to be implemented with college students, and this is a new population that could be engaged to help youth in summer programs.

References


**About the Authors**

All of the authors are with the University of Cincinnati. Laura Nabors is a professor in the Health Promotion and Education program in the School of Human Services. Kristen Welker is a graduate assistant in that program. S. Elizabeth Faller is an assistant director in the Center for the Enhancement of Student Teaching.
Editor’s Note

What would it look like if community-based participatory research were the norm, not the exception, in graduate education? Keisha Ivey and her fellow authors of this featured Community Perspectives submission demonstrate how bringing diverse individuals together to collaborate, identify needs within communities, and then tailor research design and implementation strategies best to address those needs is a valuable training tool for the next generation of scholars.

The authors identify language, trust, and access not only as essential principles of their project implementation, but of their collective project learning, one involving faculty, students, and community. In order to successfully interface with lay communities, Ivey and her colleagues remind us, there needs to be a shared language—one free of jargon. Shared languages facilitate trust. Trust is critical, as Ivey and her team point out, to gaining access to typically hard-to-reach community members and research participants.

The benefit to the project team afforded by a community-based participatory approach is thus the privilege of actually effectively reaching those the work intends to effect. This benefit is catalytic; it produces, Ivey and her colleagues note, more meaningful understanding of community needs and assists in tailoring more culturally appropriate research endeavors.

Moreover, it is also generative. It broadens the learning horizons to include varied and creative ways of formulating research questions. What more important goal could we set for graduate education than that of learning to unlearn what we think and know? What more important skills could our graduates acquire than those involving negotiations of language, trust, and access? As Ivey’s team makes clear, these skills are what allow us to learn from an education confined not to instruction in the classroom, but informed by experiences lived beyond our ivory towers.

Dr. Katherine Bruna
Iowa State University
Associate Editor
Student and Community Engagement
“All Voices Matter”: Perspectives on Bridging the Campus-to-Community Gap

Keisha D. Ivey, Kaleb Murry, Deanna Dragan, Marcus Campbell, Jacqueline Maye, and Christopher Spencer

Introduction

Project Sharing Opinions and Advice about Research in the Deep South (SOAR) aims to increase the involvement of community members to enhance the importance, relevance, and cultural appropriateness of disease research and interventions offered in the Deep South. SOAR recruits and trains community partners to include them in conversations about how best to identify and address mental and physical health disparities. Additionally, SOAR underscores the importance of addressing issues faced by ethnically diverse and underserved community members.

Project SOAR

To date, SOAR has provided a foundation for better patient-centered outcomes by opening up new, and broadening preexisting, avenues for scientist/community collaboration wherein university and community partners share power and fulfill the goal of implementing culturally competent research within a community context. Conversations among community members and our academic partners have revealed a significant need for research specifically tailored to environmental justice/ecological health and chronic illness education in rural areas (e.g., diabetes and HIV). More specifically, community/academic partnerships are necessary to facilitate change and create the most nurturing environments possible for residents within each community.

Project SOAR has recruited, trained, and maintained community action groups in two under-resourced communities in Alabama—Holt in Tuscaloosa County and rural Sumter County. The community members are primarily African American men and women, with one Caucasian woman participating. These individuals range in age from 33 to 77. Community members have been trained to work collaboratively with academic research partners both within and outside the academy to respond to the communities’ place-based concerns. For the Holt community, these concerns have centered on ecological health and environmental justice and limited access to healthy and sustainable food and water due to a variety of environmental toxins. For the Sumter community, concerns have centered on diabetes and other chronic health conditions and enhancing resources available at a small rural hospital. Across both community projects, committee members provide useful, directive, and relevant feedback on recruitment fliers, survey items, and intervention components to be used within their contexts. Moreover, they facilitate dissemination of important research opportunities and findings to community members. They also serve as networking bodies, putting research partners in contact with potential study participants or other partners in the community. The voices following reflect the lived experiences of students and community partners as they actively engage in the project.

Student Perspectives

Kaleb Murry and Deanna Dragan

As graduate research assistants, we have worked primarily with the Holt in Action Committee. Our experiences with the Holt committee have reinforced the value of community perspectives on community research. With each research presentation, community members give thoughtful and beneficial feedback to the...
researchers who have assisted the projects in various aspects of community engagement. We believe that this type of feedback is a valuable part of research, especially within small communities. It is essential that researchers take the time to engage with these community members. Each of the project partners has received helpful feedback from the committee that has contributed to more easily understandable and more engaging project materials.

In addition to the unique research experience that we receive from being a part of the team, we feel we have an increased knowledge and understanding of local community issues and a deeper understanding of community dynamics unique to this area. As newcomers to Tuscaloosa, we are grateful for this understanding because conducting research in a community that you are unfamiliar with feels quite disconnected and it has really highlighted the importance of understanding the context and environment in which you are conducting research. Hearing the firsthand accounts of the eco-health issues within their community is an experience that allowed us greater insight into the topics that are most important to underserved communities. During our initial visit to the community meetings, we felt welcomed and encouraged to participate by the SOAR team members as well as the community members. As young researchers, participating in this project has influenced the way we think about recruitment in research studies and the extent to which psychologists communicate with jargon and terminology that is unfamiliar to community members.

The process between the researchers and committee members has been interesting and valuable to observe and participate in. There is a sense of excitement during discussions and that passion lingers even after the meetings have concluded. We have enjoyed watching the group dynamics transform from the first session to the most recent. We think the communication style between committee members and the SOAR team has become more comfortable and open. Additionally, it seems to be one of the most well-received research presentations about eco-health and environmental justice. The members seemed significantly more emotionally invested in the topic. This is a credit to the SOAR team in identifying a major interest of the members and bringing in a speaker on that topic. The SOAR team views reciprocity as vitally important to sustaining great relationships with the members. It is time that psychologists and other professionals were more attentive to the reciprocity of working with a community rather than treating them only as participants to further their own careers.

Overall, being on the SOAR team as a graduate student has shaped our approach to research. The meetings have been inspiring, fulfilling, informative, and productive. It is our hope that more graduate students will have more opportunities to get involved in community-based projects and that more projects like this will be initiated across the country.

Committee Member Perspectives
Jaqueline “Jackie” Maye,
Holt in Action Committee

I came to know about Dr. Rebecca Allen’s project SOAR through another project I was working on through Holt in Action. These meetings have given the members of our community a venue to talk about our concerns on health and safety and the SOAR team has shared what other communities have done in our situation in both printed articles and videos. We’ve had speakers to come to each meeting on subjects we’ve chosen and it’s been a wonderful learning experience.
During our monthly meetings the community members from different organizations, locations, generations, and backgrounds have the opportunity to fellowship and share current events and news. I look forward to the positive changes and how we as community members will be a part of them, and how our participation will make a difference for Holt through educating not only the advisory board [but also how] we can now share what we've learned with our community.

Marcus Campbell,
Sumter Community Committee

Project SOAR has allowed us to bring a diverse team together to discuss what works best for our people in Sumter County. Exploring different ways to get health education messages out, maximizing the media and redefining the importance of regular visits with your health care professional are some of the objectives of the committee. Project SOAR is right on time for our county—it's exactly what we need. Health and wellness are essential for a great quality of life. Serving on this committee has been encouraging and I'm gaining such valuable information. As a citizen, I value hearing varied perspectives from other citizens in other counties, and our meetings consistently reinforce the notion that health and well-being is a priority. There are many challenges in Sumter, and I'd venture to say health education and advocacy is a top priority.

Now that it is being reiterated and reemphasized regularly in our meetings, we, as community action members, are reiterating and reemphasizing that information within our community, and people love it! For example, we had a speaker present on the various consequences of diabetes and restricted or abnormal blood flow. I have a family history of diabetes and so do the majority of other committee members and we didn't know this information previously because the resources for that level of education aren't here. As members gain this knowledge, as well as further our resources, we can share that with our other community members, and I don't think my family or other community members would accept that information if it wasn't coming from me—like if it were coming from a doctor or a university or academic professional. I used to work in pharmaceutical sales, and we would have to go work in various regions.

If I learned one thing, it's that what works in Boston doesn't work in Tuscaloosa, and what works in New York may not work in York, Alabama. People here only trust people they know and can relate to, and I think the way information is currently delivered serves as a barrier. The way people talk to each other is so important and we don't talk the same way as folks do in Tuscaloosa or in Boston, so we can't assume that the same issues exist in each place or that the solution will be the same in all of those places. Sumter is an area where there are different challenges regarding things like income; it's different here than the living there, the industry is different, and there is little to no job security. People here don't have the money, the means to travel, or the insurance to get to a professional or to get a proper diagnosis so they're going to try a home remedy. Project SOAR is helping to combat that and is getting the word out about clinics and resources we have available.

In today's society, there is no way, especially in a small county like Sumter, to operate without a partnership like the one we have because of SOAR. Working with a university gives Sumter the opportunity to discuss and communicate that things that work in Boston or even Tuscaloosa will not work here. It allows us to tell our story, and it helps us identify...
and meet the needs of our citizens. It will let us take the things that do work in other places and adapt them to fit our needs. The research team and other partners have allowed the committee to lay it out on the line—what we need—and so folks in Sumter feel respected and they are working with them. For example, we have ongoing discussions about language. Language is something that needs to be addressed and discussed early on. You have to know who you are trying to identify with. This is great research, but you want to make it comfortable for whoever you’re working with and language is the engine that’s going make that vehicle run. In our meetings, language barriers were one of our very first discussions. Putting the right language out there for citizens to identify with. You’re not going to use a complex word with a 98-year-old who’s been hearing something different for their entire life. We want to make sure when we advertise things that it’s accessible to everyone and catches everyone’s attention. It’s important for folks to understand what you’re trying to say if you want them to do things like get their blood pressure checked. Some language barriers might even be different on the southern part of Sumter County and that’s why we have a group of citizens from all over.”

Christopher Spencer

Academic/Community Member Liaison Perspective
Christopher Spencer, Academic/Community Member Liaison

I work closely with campus units and community partners in fulfilling the university’s mission, which focuses on teaching, research, and service. I was approached by Dr. Rebecca Allen over a year ago to serve on the senior leadership team for SOAR. One of my main functions as a member of the team was to assist in the recruiting of community partners to serve on the committee. Therefore, after the team selected the areas in which we wanted to form action committees, I immediately made contacts with residents and community leaders in both Holt and in Sumter County. We were very successful in recruiting a diverse group of members in both areas and I’m very excited about what I’m witnessing in SOAR.

I have seen community experts pouring their hearts and thoughts out to students, faculty, and staff members from The University of Alabama. They have not been shy about sharing their opinions and advice about research with the University research team and other professors. The members have made great suggestions and their voices have been heard and valued by researchers. I have also witnessed the development of our graduate students as they have left campus and traveled out in the community to participate in these committee sessions. I’ve worked with several projects in my nine years at The University of Alabama, and I can truly say that this is true community-based participatory research. The students, faculty and staff are learning from the community partners and the community partners are learning from researchers. I think everyone has been transformed and now understands that all voices matter in conducting research!

Conclusion

Overall, there was agreement among project members that SOAR has broadened the scope of research questions being asked in the academic setting and has provided new avenues by which community members can go about addressing their community’s needs. This collaboration is an iterative process; the community makes their needs known to researchers who then formulate questions and a plan by which to conduct the research. This plan is presented to community members, who give innovative and practical feedback. This process brings all community voices together bridging the campus/community gap, and it increases the relevance and efficiency of research to ensure that community needs are identified and addressed.
Bibliography

In putting together this report, the authors were informed by the theories and practices of many well-known community-based participatory research documents, including the following:


About the Authors

Keisha D. Ivey, Kaleb Murry, and Deanna Dragan are doctoral students assigned to the Alabama Research Institute on Aging in the Department of Psychology at The University of Alabama. Marcus Campbell is chair of the Sumter County Commissioners in Livingston, Alabama, and board member of the Black Belt Community Foundation in Selma. Jacqueline Maye is a program assistant at The University of Alabama and secretary of the Holt in Action board of directors. Christopher Spencer is program officer with the Black Belt Community Foundation and director of resource development for community engagement in The University of Alabama’s Center for Community-Based Partnerships.
Instructions to Book Reviewers

Book reviews published in *JCES* are intended to speak to a wide range of issues relevant to the scholarship of engagement. Reviews of books within the social sciences, natural sciences and math, medicine and health, the environment, law, business, philosophy, religion, and the arts and humanities are encouraged. All book reviews submitted to *JCES* should provide readers with a broad overview of the book, but should go beyond description to discuss central issues raised, strengths and limitations of the text, and current issues of theory and practice raised by the book that are germane to the subject matter and engaged scholarship. Book reviews should introduce readers to literature that advances knowledge, provides practical advice, disseminates best practices, and encourages conversation and dialogue. Faculty members, administrators, staff members, students, and community partners are invited to offer their interpretations of the literature. If you are interested in writing a book review for *JCES*, please contact Drew Pearl (andrew.pearl@ung.edu) for a current list of books available to review. Reviewers are also welcome to suggest titles.

Dr. Andrew J. Pearl
University of North Georgia
Associate Editor, Book Reviews
New Waves, Paradigms, and Theory: Moving Public Engagement Forward

Review by Trina Van Schyndel
Michigan State University

Margaret A. Post, Elaine Ward, Nicholas V. Longo, and John Saltmarsh (Eds.),
Publicly Engaged Scholars: Next-Generation Engagement and the Future of Higher Education.

Introduction
Collectively, the narratives and reflections contained in Post, Ward, Longo, and Saltmarsh's edited volume, Publicly Engaged Scholars: Next-Generation Engagement and the Future of Higher Education, live up to the book's three-part promise: to help others better understand (1) the context in which the next generation of publicly engaged scholars is coming into engaged work; (2) their interests, motivations, experiences, career goals, and challenges; and (3) potential future paths and considerations for moving the public engagement field forward. Alongside this promise, the book expands on a new paradigm for publicly engaged work—the “collaborative engagement” paradigm. According to the editors, “what makes collaborative engagement distinctive is its focus on community, the recognition that learners are co-creators of knowledge through democratic education, and the involvement of a diverse range of participants in deliberative conversations to address real-world problems” (p. 62).

Those who would benefit most from reading this book are those who are looking for a fresh take on public engagement and its future, those who want to understand the current (and perhaps upcoming) generational differences within the public engagement field, and also emerging publicly engaged scholars who are seeking advice and kinship with others who do the work they do.

Broad Overview of the Book
The broad aims of the book are to help readers understand emerging and newly emerged publicly engaged scholars and the context in which these scholars find themselves doing their work. The use of a collaborative approach to writing and the use of narrative to expand on points of interest are evident throughout the book. They are reflected in how the sections and chapters are structured, as well as in the collaborative engagement paradigm advocated for in the book.

Part One: The Collaborative Engagement Paradigm
Chapter 1 begins with a summary of the new “collaborative engagement” paradigm, which helps set the stage for the remaining chapters. Chapters 2 and 3 provide a historical overview of the development of civic engagement—a precursor to collaborative engagement. Chapter 4 is devoted to the role of teaching and learning in the new collaborative engagement paradigm. It highlights the need to include the concepts of deliberative dialogue, democratic education, and community engagement in pedagogy, as well as the importance of an asset-based orientation undergirding each of these concepts. Chapter 5 is devoted to an exploration of how research done through the collaborative engagement paradigm is different from traditional research. It argues that research done in this new way will increase both the relevance of the research and its potential benefit to society. To do so, it must include community-driven priorities; shared, equitable decision-making; a focus on social and cultural change; and co-creation of knowledge. Finally, Chapter 6 focuses on institutional structures, procedures, and policies that must change if we are to see the adoption of this new collaborative engagement paradigm within higher education. Key to this transformation will be addressing issues of legitimacy, agency, and inequality regimes within higher education institutions, as well as how these issues influence the work of publicly engaged scholars. Higher education institutions have proven notoriously slow to change; therefore, as we work toward a collaborative engagement paradigm, it is important for publicly engaged scholars to also build strategic social networks to create a sense of fit and agency in their work. They must sustain themselves in their work, even as they seek change in how they do their work.
Part Two: New Public Scholars

The narratives included in Part Two represent voices of emerging and newly emerged publicly engaged scholars, some of whom are further along in their careers, education, and aging than others, but all of whom question the current status quo of higher education and public engagement. The opening to Part Two and Chapter 7 together explain the impetus behind this book, with each of the following chapters representing the voices and experiences of 22 emerging and newly emerged publicly engaged scholars. Chapter 8 focuses on five emerging scholars and their pathways into public engagement. From there, Chapter 9 highlights four newly emerged scholars who identify as scholar-practitioners and who have created hybrid staff/faculty roles for themselves within higher education. Chapter 10 includes four publicly engaged scholars for whom the focus of their engaged work is highly oriented toward the community, with two scholars working inside higher education and two working outside higher education. Chapter 11 brings in the voices of four newly emerged scholars working in faculty roles in higher education but with varying paths into their work. Finally, Chapter 12 summarizes these 22 narratives by highlighting common tensions and concerns, including: professional development, identity development, legitimacy, marginalization, and validation. It also questions what these tensions and concerns might mean for the future of higher education.

Part Three: The Future of Engagement

The future of public engagement will rely not only on understanding the next generation(s) of publicly engaged scholars, but also on understanding the reality of today’s higher education landscape. It will also take acknowledging how this reality could be altered to reflect a new vision for higher education that includes public engagement as a core principle. Chapter 13 highlights the importance of student voice and power in creating this new vision, while at the same time highlighting challenges of doing so in light of increased institutionalization of public engagement leading to more bureaucratic control. It also argues that we should be training students to lead in a way that asks them to challenge the current paradigm rather than merely working within it. Chapter 14 further notes that we should move beyond a false dichotomy of a capitalist knowledge regime in competition with a public knowledge regime. Rather, we should focus on building a new vision for higher education that transcends either of these regimes—a public engagement knowledge regime. Finally, Chapter 15 notes that perhaps a blended form of public engagement, which includes an ecosystem comprised of civic engagement, workforce development, and diversity and inclusion, represents the way forward. In this chapter, Cleveland State University is presented as an example of how higher education institutions might move forward with making public engagement a core principle of higher education.

Central Issues Raised and Critiques of the Book

Of the key issues raised in this book, several stand out to me: the discussion of generational differences in the field of public engagement, the use of theory to understand why and how these differences exist, and the collaborative engagement paradigm that frames these differences.

Generational Differences

While I can appreciate a need to distinguish among individuals and groups of publicly engaged scholars, from the evidence offered in the book, who constitutes the next generation seems dependent on your point of view. For example, I would categorize myself as next generation, and those profiled in the book would also classify themselves as next generation. However, when reading about those profiled, I thought to myself, these mostly seem to be the current generation, not the next generation. Many scholars profiled in the book have completed their doctoral studies and/or have director roles or tenure-track positions, while I am only in my third year of doctoral studies and still only hold a coordinator position. There is a need to empirically test the idea of generational differences among publicly engaged scholars. Without having a more concrete definition of who is next generation, I think the term next generation can come across as ageist, implying that the previous generation is out of date and no longer has anything useful to offer. For example, think of how we update our mobile phones to the next generation model. We completely replace one with another. Perhaps a better way to approach this subject would be talking about waves of scholars entering the field. Waves do not necessarily entirely replace one another and may in fact build on each other. Yet each is still unique. Sandmann, Thornton, and Jaeger (2011) use this terminology when describing the first wave of Carnegie Community Engagement Institutions. These waves of publicly...
engaged scholars would still need to be defined more concretely, but I do think this terminology would be more inclusive.

The Use of Theory

Beyond a change in terminology, I would advocate for more in-depth use of theory in analyzing and interpreting the narratives of publicly engaged scholars. The Afterword of the book calls for stronger use of theory in understanding the personal narratives put forth in Part 2. Perhaps more importantly, it also calls for the creation of new theory from these types of narratives. I agree with the conclusion that more use of theory will help advance the field of public engagement, just as it did feminist studies and civil rights studies, and that we cannot rely solely on narratives of personal experience to move the field forward. So while it is heartening that the topic of theory was included in the Afterword, more use of theory throughout the book, specifically to help readers understand the narratives presented in Part 2, would have strengthened the book. For example, from the field of higher education there are multiple theories that might be applied, among them identity development (Abes, Jones, & McEwen, 2007) and career development (Brown & Lent, 2005). Additionally, the creation of theory from the narratives found in the book would also have been an important contribution to the field. Although the collaborative engagement paradigm helps frame the book, such frameworks only speak to what is, not necessarily the why and the how of what is, as a theory would. Future research, especially taking a grounded theory approach, could focus on developing theory to explain why and how publicly engaged scholars are moving toward the collaborative engagement paradigm put forward in the book.

The Collaborative Engagement Paradigm

To me, the collaborative engagement paradigm is one of the most intriguing aspects of the book, and it is tied to the ongoing conversation in the public engagement field regarding how we define exactly what it is that we do as publicly engaged scholars. The model presented in the book briefly details how deliberative dialogue, democratic education, and community engagement all contribute to the new paradigm of collaborative engagement described and advocated for in the book. A more detailed exploration of each of these areas, citing prior scholarship, would be a welcome addition to future work on the collaborative engagement paradigm. Additionally, although it is mentioned in the written description of the model (p. 62), the addition of an asset-based orientation as undergirding these concepts would be a useful addition to the visual representation of the model (p. 63), as would references to the work of leading scholars in the area of asset-based community development, such as Kretzman and McKnight (1996).

Conclusion

In summary, the strengths of this book lie in how it sets readers up to understand the next generation of publicly engaged scholars in Part One, provides examples of varying kinds of newly emerged and emerging scholars in Part Two, and finally sets the stage for thinking about how to envision the new collaborative engagement paradigm advocated for in Part Three. In terms of weaknesses, I believe one of them is addressed in the Afterword—the need for more use of theory. Future work on this topic could also re-examine the collaborative engagement paradigm to add more depth and a more holistic visual to this model. Finally, more research and better terms and definitions are needed as we seek to describe each successive group of publicly engaged scholars.

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The editorial team of the Journal of Community Engagement and Scholarship would like to acknowledge and thank Stylus Publishing for providing copies of the book for this review.
About the Reviewer

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Technology has opened the gates of knowledge acquisition, not only enhancing the amount of information students can access, but also widening the number of opportunities of what students can do with that information. On one hand, this technological spur has increased the demands of focusing on the importance of research production. However, it has also served as a renewed call to reconsider institutional priorities such as teaching and service.

Sustainable Solutions: University-Community Partnerships brings attention to utilizing information and knowledge acquisition as a tool to address problems and issues that impact people, communities, and their environments. In this book, the authors place Portland State University (PSU) at the center of this conversation, discussing the role of holistic development, interdisciplinary learning, and community partnerships.

This book appeals to a wide audience of readers interested in creating university-community partnerships through developing and working on sustainable projects. This book contains 272 pages, and is organized into 14 chapters, each exploring a university-community project implemented by PSU. The projects are grouped thematically in several categories, including service, exchange, cooperative, and/or systemic/transformative partnerships and relationships. Although the university-community projects described in this book are vastly different from one to the next, they are all products of university-community partnerships, and move beyond volunteerism or transactional service-learning projects to create a stronger social and economic impact that can be sustained. The authors reference Aristotle and Emerson to challenge readers to move from the historical idea of education in the classroom, to education into our communities, where students are truly building relationships and partnerships with local stakeholders. Throughout the chapters, the authors refer to several components that stand out in sustainable community partnerships (e.g., trust, respect, shared decision-making, mutual benefit, resource sharing). In the literature, scholars have identified these components (Benson & Harkavy, 2001; Mayfield & Lucas, 2000; Mihalynuk & Seifer, 2002) as critical aspects of service and community experiences.

Each of the 14 chapters focuses on a different university-community project. Each chapter begins with a summary of how students, faculty, and community partners engaged in the work and built the relationship. The various projects are described in a reader-friendly way that moves from interpretations of theoretical frameworks to a discussion grounded in practice. Illustrating this approach, Chapter 1 incorporates a model of collective impact in a community orchard project (Pond & Ackerman, 2015), creating opportunities for social sustainability, civic leadership, and community-based learning. In addition, many of the community engagement projects provide a list of student learning outcomes and/or conclusions and findings. This is discussed against a backdrop of impact, challenges, and the overall sustainability of the project.

Central to the core thesis of this book, it is clear that university-community partnerships reflect a core institutional value for PSU. This type of work is intentionally embedded in the curriculum and is part of the overall culture of the university. For example, PSU offers credit-bearing university-community partnerships as well as an undergraduate minor focused on civic engagement and delving into community partnerships. PSU has also consistently allocated funds and space on campus. For example, the Institute for Sustainable Solutions seeks to “develop solutions to complex sustainability challenges...address inequities...unlock opportunities for faculty and students...[and] enhance PSU students’ educational experience”
(https://www.pdx.edu/sustainability/institute-for-sustainable-solutions). These examples highlight that a focus on university-community partnerships extends beyond a written institutional mission statement, and the book does a great job describing several cases where these principles come to life as students, faculty, and staff at PSU engage with the local community.

Another theme in this book worth exploring is the focus on developing cultural competency locally and abroad. For example, Chapter 10 describes a partnership between PSU and Universidad Tecnologica de los Valles Centrales de Oaxaca in Mexico. In this university-community project, those involved had opportunities to gain cultural competency by further understanding the roles of governmental involvement, facing language barriers, working with partners across different socioeconomic statuses, and being immersed in the livelihoods of people with different beliefs and ways of living. These experiences are deeply connected to gaining the “awareness, knowledge and skills necessary to work effectively across cultural differences” (Pope & Reynolds, 1997, p. 270), a foundation required to gain cultural competence.

Beyond collaborating with community partners and stakeholders, the authors of this book bring attention to the importance of preparing students from a multidisciplinary perspective. For example, in Chapter 8, the authors describe a project aimed to create healthier modular classrooms. For this project alone, students and faculty members from schools of engineering, architecture, and computer science worked together, learning from one another, and bringing unique sets of skills and knowledge to fulfill a common goal. This type of university-community partnership emphasizes the importance of cross-disciplinary research, learning across curricular boundaries, and situating that learning to address real-life community challenges.

Overall, Sustainable Solutions: University-Community Partnerships offers great examples of community engagement projects and building partnerships inside and outside of the university campus. Although the authors recognize each type of university-community project cannot be implemented in every community, it does leave a valuable lesson, understanding the principles of design behind each project. However, a shortcoming of this book is not incorporating a closing chapter that brings together lessons and perspective from the editors, perhaps with an accompanying call for action for universities and community stakeholders to explore how these projects might be adopted and adapted in different contexts. Nonetheless, the book does conclude with small biographical summaries from over 30 contributors to this edition. Reading through their statements, it is clear their work is situated in a context that values community engagement, is aligned with expanding education and research, and seeks to support university-community projects from an interdisciplinary perspective.

Above all, in many cases, the projects started with the passion, vision, and desire to improve local communities, bringing individuals and communities together to think critically about current issues. In conclusion, this book brings forward a number of best practices embedded in building and maintaining university-community partnerships. The lessons provided can help other universities, communities, and stakeholders to re-imagine how to carry out sustainable work, focusing on the role higher education should play in the world.

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About the Reviewers

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Book Sheds Light on Practices for Instilling Civic Values and Engaging College Students in Political Life

Review by Matthew Hudson-Flege
Clemson University


Institutions of higher education have played a central role in American democracy, from the early days of the revolution, when colonial colleges were centers of debate and breeding grounds for early American political leaders, to the development of land-grant institutions created in the mid-19th Century to serve America’s working citizens (Mathews, 2017). Today, amidst concerns about political apathy among Millennials, or those born between the early 1980s and mid-1990s, (Commission on Youth Voting and Civic Knowledge, 2013), coupled with higher education priorities shifting away from public service and more toward cost-effective career preparation (Small, 2017), it is important to reflect on the critical role that colleges and universities can play in fostering civic participation, and to share best-practices for doing so. The Kettering Foundation’s new book, *Beyond Politics as Usual: Paths for Engaging College Students in Politics*, provides readers with an overview of the political learning, values, and action of American college students today, and presents several practices employed by colleges, universities, and nonprofit organizations throughout the country to promote civic values and encourage engagement in the political process. The collection of thoughtful essays in this book can be useful for a diverse audience interested in these issues, from faculty members and administrators, to community partners, to student leaders.

The book begins with an introduction by the editors, Marin and Minor, program officers for the Kettering Foundation. Their introduction provides a summary of the Kettering Foundation’s interest and involvement in higher education and democracy, and describes the genesis of the current publication, which emerged from a series of meetings with college and university faculty and others on how college experiences could best be shaped to encourage today’s college students to become involved in the political life of their communities and the nation.

The second chapter, by Constance Flanagan, provides a comprehensive review of the literature on opportunities and challenges for political learning among college students today. Flanagan describes the period of young adulthood as a formative period ripe for the development of civic values and political engagement. She cites research, however, which cautions that simply exposing college students to diverse issues, populations, and community needs is not enough to spark positive civic growth, and may even reinforce negative stereotypes in some cases. Rather, colleges must proactively structure conversations and experiences, and provide opportunities for thoughtful reflection, in order for college students to crystallize their views and foster civic engagement. The remainder of the book provides several rich examples of such initiatives.

Chapters 3 through 6 are essays focused on classroom experiences. In Chapter 3, Elizabeth Hudson explores perceptions of civic engagement as reported by college students participating in deliberative dialogue courses at seven colleges and universities. In Chapter 4, Timothy Shaffer shares his experience with integrating the study of democratic practice and theory into a communication studies course at Kansas State University, noting that while colleges and universities have embraced civic education through the development of centers and hiring of professional staff focused on these issues, such efforts have rarely been integrated in courses outside of political science and related disciplines. In Chapter 5, Elizabeth Trennanelli presents students’ experience with deliberative democracy in a specialized course dedicated to the topic, as well as in honors courses with deliberative democracy components, at Gulf Coast State College, a community college in Florida. Finally, in Chapter 6, Lindsey Lupo and Rebecca Brandy Griffin discuss the role of political science instructors in teaching civic skills, and share their experiences integrating political participation exercises.
in political science courses at three universities in Southern California. Taken together, these chapters provide a wealth of ideas for faculty members at diverse institutions, and from a broad range of disciplinary backgrounds, who may be interested in embedding civic education in their classrooms.

Chapters 7–12 are essays focused on co-curricular opportunities to develop civic values and promote political participation. In Chapter 7, Mark Small provides an overview of the Living-Learning Communities (LLC) movement, describes the experience of students involved in an LLC focused on civic engagement at Clemson University, and proposes strategies for colleges and universities to integrate civic education into diverse LLCs. Chapters 8 and 9 present civic participation organizations spanning multiple campuses. Rhonda Fitzgerald, Jo Constanz, and Darby Lacey describe students’ experience with the Sustained Dialogue Campus Network, a campus movement at 44 colleges and universities founded by the late diplomat Harold Saunders. Joelle Gamble, Lydia Bowers, Taylor Jo Isenberg, and Madeleine McNally present results of a survey of members of the Roosevelt Institute Campus Network, a student policy organization with chapters at 120 colleges and universities in 38 states. In Chapters 10 and 11, Martin Carcasson of Colorado State University and Lisa-Marie Napoli of Indiana University present the experiences of their students who are trained in deliberative dialogue and facilitate political discussions in the local community. Building upon these essays, in Chapter 12, Katy Harriger, Jill McMillan, Christy Buchanan, and Stephanie Gusler report the results of a follow-up survey of alumni from Wake Forest University’s Democracy Fellows program, a four-year program engaging students in deliberative dialogue efforts. The authors report that, 10 years after graduation, Democracy Fellows alumni were more politically engaged, and more comfortable communicating about political issues, than a comparison group of Wake Forest alumni who did not participate in the program. As a whole, these chapters provide rich ideas for administrators, community partners, and students who wish to enhance or expand co-curricular activities that promote civic education and engagement.

The book concludes with an essay by David Mathews, president of the Kettering Foundation, who provides a brief history of the role of higher education in democracy. Mathews concludes that the “challenge for higher education in a democracy is to align what they do with the work citizens do—to nurture and facilitate it” (Mathews, 2017, p. 237). Asking whether college students are adequately learning how to do the work of citizens is a pressing question that must continually be explored by colleges and universities and related stakeholders.

One critique of the book is that only one of the essays focused on a two-year community college. Given that approximately two out of five undergraduates in the United States are enrolled at community colleges (Ginder, Kelly-Reid, & Mann, 2016), a broader discussion of the ways that two-year colleges can promote civic values and political participation would be helpful. However, the absence of additional essays about programs at two-year colleges in this book may not stem from a lack of interest from the book’s editors so much as from the challenges presented by Trentanelli in Chapter 5 of this book, namely heavy teaching loads for community college faculty and more limited resources. A second critique is that given the related content of each chapter, there is considerable overlap in many of the literature reviews introducing individual authors’ essays. Readers interested in the entire book may be tempted to gloss over these individual chapter introductions given their apparent redundancy, but in the process may miss out on important background context relevant to the initiatives described in each essay. A final critique is that the book was mostly divided between curricular and co-curricular approaches to promote civic engagement, and a broader discussion of how the two approaches can be integrated across disciplines could also be beneficial.

Nevertheless, Beyond Politics as Usual does a commendable job of shedding light on the political learning and action of college students today, and offers several examples of successful initiatives to promote civic and political engagement on college campuses and in local communities throughout the United States. I am a current graduate student in an interdisciplinary program focused on community engagement, and this book helped me to reflect on the value of the opportunities I have had to connect my studies to pressing issues in the community. As an instructor for a freshman seminar at a local community college, and as an aspiring professor, I picked up several ideas for how to incorporate civic education, both in and out of the classroom, particularly for students majoring in disciplines where such opportunities are rare. I believe that a wide audience of faculty members, administrators, community partners, and student leaders interested
in enhancing or expanding efforts to instill civic values and promote political participation among college students will find this book to be a worthwhile read.

References


About the Reviewer

Matthew Hudson-Flege is a doctoral candidate and research assistant in Clemson University's international family and community studies program and a college skills instructor at Greenville Technical College. Hudson-Flege received his master of nonprofit management from Regis University, and his BA in global development studies from Eckerd College. He has served in both AmeriCorps and the Peace Corps.
Key Role of Communities for Environmental Sustainability in Rural Canada

Review by Allison J. Bailey
Lewis F. Rogers Institute for Environmental & Spatial Analysis
University of North Georgia


Halstrom, Beckie, Hvengaard, and Mundel have compiled a collection of studies centered on regional environmental issues in rural Canada. According to Halstrom, rural communities in Canada have a “key role to play in terms of environmental sustainability” (p. xi). The editors divide the compilation thematically: sustainability as critical to public policy; engagement and collaboration between citizens, municipalities, and higher education researchers; and recommendations on the environmental policy process. The rural communities highlighted in the research reflect a cross-section of Canadian culture and a broad scope of geographic regions.

Religious practices and the cultural lens of rural life factors into sustainability planning and process. However, these also serve as challenges to implementing sustainable methods by local governments and small city planners. In Chapter 1, Douglas calls for power structures based in rural values in a “decentralized network of rural regions with strong constituent community governments” (p. 11). Location of the rural community in Canada mitigates the conflict of cooperation on natural resource management. All of the articles ground their studies within the lens of place and analyze allocations of space. University researchers assist to collect data, analyze community engagement, and encourage shared governance structures. In some cases, university researchers act as mediators employing commonalities to bring disparate groups together (Alexander and Jones).

Some chapters include detailed maps to guide the reader in comprehending the space and place concerns; however, others rely only on narratives and descriptive location terms. If one is unfamiliar with Canadian geography, one may lose sight of the full meaning of the impact of the environmental actions taken by the various people groups in their locale. Community mapping is crucial to explaining sustainable development in relationship to the needs of the rural communities. According to Corbett, Hamilton, and Wright, “community maps represent a socially or culturally distinct understanding of landscape” and aid in building “community cohesion” (p. 273). This theme of building up rural community life and providing guidance for sustainability pervades the narratives throughout this book.

Many case studies, such as Chapter 5 by Chauvin, Chapter 10 placed in Northwest Ontario, and Chapter 3 in Alberta, are grounded theoretically and pragmatically in public engagement. The engagement of the public in regard to wildlife management as a sustainable practice is examined. Do rural Canadians share resources with wildlife or have an androcentric view? Alberta, for example, created a Purple Martin Landlord Program to promote social learning and citizen science. The town of Craik developed an ecovillage. Pelee Island houses myriad insects, amphibians, birds, and mammals. The local government called for balancing human interest and wildlife preservation. This ecosystem approach ties economic growth to sustainability.

Rural communities represented in this book realized the positive economic impacts of ecotourism. First Nation communities, such as Red Rock Indian Band, were not quick to embrace ecotourism. More education on the benefits is needed to fully persuade residents to buy-in, and train for jobs to sustain an ecotourism industry in these Canadian rural communities. Demographic shifts of out migration are also causing problems for building a sustainable rural Canada. The young labor force needs to be convinced there is a life for them within the rural communities. As these laborers migrate to the cities, retirees are left behind, draining economic resources. This, in turn, creates a different kind of sustainability problem, one not based on environmental issues, but merely on the economic survival of the community as low
population density leads to a critical mass for demand of services and infrastructure. However, by focusing on environmental sustainability, wildlife preservation, ecotourism, and citizen science, rural communities can experience a growing economy that will attract a more educated workforce to return.

This book shows how rural communities can achieve their goals of sustainability and create communities that are vital and vibrant when higher education researchers, local government officials, industry partners, service organizations, and community members band together.

Irvine, Keenan, and Vodden (p. 131) recommend these steps to taking rural communities from where they are to where they need to be:

1. Identify the issues impacting the community
2. Map the locations of impact
3. Examine affected infrastructure
4. Discover citizens who will need help and citizens who can help
5. Evaluate economic factors
6. Explore impacts on natural environment
7. Assess ways to address concerns

In doing so, rural communities develop an action plan to reach sustainability, engage all stakeholders, and move forward as a thriving community. By compiling these narratives, case studies, and research articles, the editors provide an action plan for rural communities everywhere, not just in Canada. This book is well-suited for anyone who wishes to learn how to create a more sustainable community that maintains economic viability, grows an educated and engaged workforce and volunteer network, and promotes citizen science and wildlife preservation.

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About the Reviewer

Allison Joy Bailey holds the EdD in higher education administrative leadership from Argosy University. She is an associate professor at Lewis F. Rogers Institute for Environmental and Spatial Analysis at the University of North Georgia.
Mission and Description

The mission of the Journal of Community Engagement and Scholarship (JCES) is to provide a mechanism through which faculty, staff, and students of academic institutions and their community partners may disseminate scholarly works from all academic disciplines. JCES accepts all forms of writing, analysis, creative approaches, and methodologies. JCES is a peer-reviewed journal open to all disciplines. Its purpose is to integrate teaching, research, and community engagement in ways that address critical societal problems through a community-participatory process. Normal publication frequency is twice a year, though special issues on timely topics are published occasionally.
Manuscripts that advance the field of community-engaged scholarship, focus on community issues, and involve community partners and students will be given favorable consideration. Manuscripts should be free of all forms of bias. Submission of a manuscript that is accepted for publication implies commitment to publish in this journal. Manuscripts must have been submitted for exclusive publication in JCES and not simultaneously submitted elsewhere, and should not have been published elsewhere in substantially the same form. Authors in doubt about what constitutes prior publication should consult the editor at jces@ua.edu.

Manuscripts are sought that contain substance, context, and clear language, along with the relevant philosophical, historical, and theoretical principles that underlie the work.

Manuscripts must be submitted electronically in Microsoft Word with a separate cover page containing the manuscript title, the author’s or authors’ names, position/rank/title, department/college/institution, mailing address, telephone number, and email address, and four to six topical/methodological keywords at the bottom. Indicate on the cover page the section of JCES for which the document is intended—Traditional, From the Field, Community Perspectives, Student Voices, or Book Review (see Types of Manuscripts). This is usually a straightforward decision, and no change of category will be made by the editors without first conferring with the corresponding author.

Our blind review process requires that two copies be submitted. One copy must include author names and other identification information on the cover page. This copy, which provides the essential information needed for publishing and administrative purposes, must contain authors’ names, titles, institutions, mailing addresses, email addresses, and telephone numbers. A second, masked copy, with author names and other identifying information removed, is sent to the reviewers, who make one of the following three recommendations to the editor: accept, revise and resubmit, or reject. Both the blind and non-blind copies must be submitted together. All submissions and inquiries must be emailed to jces@ua.edu. Paper submissions will not be accepted. Text should be double-spaced in 12-point Times New Roman font. Each manuscript must include an abstract of no more than 150 words. Article length should not exceed 35 pages, including supplementary material such as tables, figures, photos, and graphics. Such material, essential to the research narrative of most projects, should be on separate pages following the text (one table/figure/photo per page), with their placement indicated within the text. All tables and figures must have a title and all photos must include captions. Photos should be sent as 300 dpi color images to the same email as the manuscript. Both manuscript and photos should be sent as attachments to the email. Because of costs, editors reserve the right to publish images in color or black and white, although as many as possible will be published in color.


Authors of accepted papers must obtain and provide to the editor on final acceptance all necessary permissions to reproduce in print and electronic form any copyrighted work, including photographs and other graphic images. Authors wishing to display video associated with their published document should first upload the video to YouTube and then send the relevant link to jces@ua.edu.

Manuscripts that comply with our standards will be distributed for review within two to four weeks of submission. Consistent with a thorough scholarly review, authors will be notified of a decision in a timely manner.
Types of Manuscripts

All manuscripts (Traditional, From the Field, Community Perspectives, Student Voices, and Book Reviews) are accepted on an ongoing basis. All submissions and inquiries for all types of manuscripts should be sent to jces@ua.edu.

Traditional
Manuscripts for this section run the gamut of engagement research. Examples include theoretical and descriptive research employing a variety of research methods, from survey to content analysis, from experimental to historical, from grounded theory to case study. Topics range from mistakes and subsequent adjustments by research teams in New Orleans after Hurricane Katrina; food insecurity causes and solutions; issues of Cooperative Extension in university/community partnerships; fostering individual and university resilience with at-risk youth; theoretical, conceptual, and methodological foundations of community engagement; research and evaluation issues within service-learning programs; how disasters can provide opportunities for research on civic engagement and service learning; community issues that inform political participation among college students; evaluating academic/community partnerships in matters of health, finance, education, politics, family, spirituality, and many, many more. Ninety percent of our submissions fall in the bread-and-butter category.

From the Field
A second important segment of the journal is devoted to less theoretical, but no less important, from-the-field research. This section of the journal, also refereed, is reserved for studies that are likely to have a practice or case-study orientation. Research that emphasizes best practices, practice wisdom, and applied knowledge is especially appropriate, with less emphasis on theoretical foundations. Examples from previous submissions include how being jailed affects the health of homeless women; social change resulting from the political, cultural, and economic systems of Indigenous peoples; how a university team of faculty and students established a thriving partnership in Tunisia; the development of contemporary engineering skills through service learning abroad; discovering that collaboration is the key to tourism in Southern Appalachia; how creating a health partnership network enriched a rural community; and many more.

Community Perspectives
While community partners may also serve as authors or co-authors of manuscripts in the first two categories, most community submissions to JCES fall in the Community Perspectives category. Community insight and resources are key elements in engaged scholarship, and JCES welcomes submissions that describe, analyze, assess, or offer critiques of community-engagement activities. Community Perspectives are more informal and eclectic in topic, writing style, analysis, and presentation. Previous submissions include a federally funded grant that addressed obesity issues in the Alabama Black Belt; an interpretive essay about the opioid epidemic in Northern Kentucky; a model mental-health partnership that other urban areas could replicate; and many others.

Student Voices
Students are involved in all categories of manuscripts accepted by JCES, but Student Voices is the section where their words receive special attention. In this section, students have explored how they came to discover the importance of engaged research in their educational development. They have commented on numerous special projects, highlighting the rewards and frustrations encountered. Examples include Al’s Pals, a superlative school-based mentoring relationship between college volunteers and elementary school students; a collaboration between undergraduate students and their faculty advisor in South Africa to help a community while expanding their own intellectual horizons; efforts by a group of students to educate other students about service and nonprofit organizations that help foster a lifetime of service commitment beyond graduation; and
lessons learned from a small village health fair to further transform lives and embrace diversity through cultural synthesis. These and other submissions to Student Voices have added spice to the JCES menu and more such submissions are encouraged.

Book Reviews
The review of timely books devoted to the scholarship of engagement is essential to the advancement of the field. From the outset, the editor and book review editor of JCES set an ambitious goal of five or more books to be reviewed in each issue. Classic reviews have included Fitzgerald, Burack, and Seifer (Eds.), Handbook of Engaged Scholarship; the role of anchor institutions in community engagement for economic development; several books on the similarities and differences between the concepts of “service” and “engagement”; how engaging parents and other constituencies breathes life into K–12 schools; and many others.

**JCES Review Process***

**Manuscript Receipt**
- Editor scans for style and documentation standards, requests revisions if necessary
- Editorial staff assigns manuscript number, sends acknowledgment email to corresponding author (usually, but not always, the first author)
- Editor selects appropriate reviewers

**First Review**
- Editorial staff sends manuscript to reviewers, with review form and return due date
- Editor reassigns manuscript if reviewer unable to complete review
- Editorial staff sends reminder email one week in advance of due date
- Editorial staff sends reminder email one week after due date if review not yet received
- Editor receives reviewers’ evaluation and rating forms

**Editor Options**
- Editor accepts manuscript (proceed to **Edit for Publication**)
- Editor sends corresponding author the recommended revisions and requests resubmission
- Editor rejects manuscript (end of process)

**Revise and Resubmit Instructions**
- Editorial staff notifies author of publication decision
- Editorial staff sends to corresponding author a letter regarding the decision, reviewer comments, and manuscript with edits and tracked changes
- Editorial staff requests resubmission within four weeks

**Resubmitted Manuscript and Second Review**
- Editor scans for compliance with reviewer evaluation; if necessary, author is sent request for further revisions
- Editorial staff sends to the original reviewers the revised manuscript, a copy of the original manuscript with editor’s and reviewers comments and tracked changes, the review form, and a copy of the letter to the corresponding author
- Editorial staff requests return of second review within two weeks

**Editor Options Following Second Review**
- Editor accepts manuscripts (proceed to **Edit for Publication**)
- Editor accepts manuscript with minor revisions

**Accept with Minor Revisions**
- Editor sends corresponding author notification of decision to accept with minor revisions and requests a final revision within two weeks
- Editor ensures minor revisions have been made (proceed to **Edit for Publication**)

**Edit for Publication**
- Final editing and proof reading by editor and editorial staff
- Editorial staff sends proof to corresponding author
- Editorial staff negotiates editorial changes with corresponding author
- Editorial staff sends official copyright forms for corresponding author’s signature

**Publication**

*Authors’ names on all documents viewed by reviewers, including manuscripts, letters, emails, and other identifying information, are masked throughout the process.*
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