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Tackling Wicked Problems Through Engaged Scholarship

Sharon Paynter
East Carolina University

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Abstract

Engaged scholarship combines the work of universities with that of community partners. The results can be powerful examples of the synergy that arises between theory and practice. By examining engaged scholarship and reflecting on the nuances that exist between it and engaged research, this paper follows the ways that research questions can be explored in a practical application versus in a controlled environment. I examine the benefits of community-engaged scholarship relative to service recipients, scholars, organizations, and communities at large. The academic benefits extend far beyond the universities; engaged scholarship allows for university programs to provide realistic training to students as an example of future work-related duties and assignments and to collaborate with community partners in service delivery. Results of collective collaboration and community-engaged scholarship can lead to a strengthened sense of community in lasting partnerships that increase dialogue surrounding challenging issues.

Introduction

The Great Recession of 2008 forced many organizations, both public and private, to begin an era of cutback management that will persist for years (Jimenez, 2012; Levine & Scorsone, 2011). Partnerships between public and private entities, including government, nonprofit, and educational organizations, could offer an avenue for maintaining or even re-envisioning service provision during austere budgetary times. Community-engaged scholarship is one way that collaborative partnerships can be created to benefit all stakeholders involved. University faculty can make important contributions to programs while preserving institutional academic missions through partnerships with government and nonprofit organizations.

My analysis explores how community-engaged scholarship benefits service recipients, scholars, organizations, and communities at large. First, I explain community-engaged scholarship and nuances that set it apart from engaged and applied research. I then use this framework to examine a case study bringing together university, nonprofit, government, and private business resources.

The Engaged Scholarship Model

Engaged scholarship differs from engaged research in an important way. Engaged research activities use protocol and frameworks to guide the collection and analysis of data. It is a framework rather than a methodology unto itself (MacQueen, McLellan, Metzger, Kegeles, Strauss, Scotti, Blanchard, & Trotter, 2001). Engaged research is a part of engaged scholarship, a larger concept where scholarly work is disseminated through teaching, research, and service (Boyer, 1990). Colleges and universities undertake both, though engaged scholarship is likely to have a greater impact on the stakeholders who collaborate in both academic and community settings.

Boyer (1990) suggested that scholarship is more than the conduct of original research. In his view, scholarship incorporates discovery with problem solving that assists individuals and institutions, and promotes educational progress. In this depiction scholarship is a dynamic process of building bridges between theory and practice that is accomplished through discovery, integration, application, and teaching.

This is in contrast to traditional academic work where knowledge is built for its own sake. There is a belief that traditional scholarship provides the freedom to explore ideas in creative, innovative ways in a university climate that is generally free from the pressures that come from clients seeking validation for decisions that might impact the fiscal health of the organization or project whose problems are being studied. Yet engaged scholarship can allow researchers to contribute to both the “climate of the university” and “stock of human knowledge” (Boyer, 1990, p. 17–23) by exploring research questions wherever they lead, with no prescribed notion of what the outcome might be.

Engaged scholarship frequently involves researchers from different disciplines and communities who need an interdisciplinary perspective in order to solve problems. Discoveries as important as the structure of life itself came through collaboration between scholars from different fields exploring problems without a preconceived outcome. The value of multidisciplinary research has been evident in the medical field for many years (for example, see Kim, Barnato, Angus, Fleisher, & Kahn, 2010; Rosenfield, 1992). For example, James Watson, an ornithologist, partnered with Francis Crick, a physicist, to uncover the coding pattern of deoxyribonucleic acid, literally discovering the DNA of human beings. In this case, the integration of multidisciplinary collaborations allowed the application of theoretical frameworks from two fields to questions in related fields. Yet some researchers are reluctant to engage in this sort of collaborative, cross disciplinary work because they feel pressure to find publication outlets and establish reputations in their home discipline.

Engaged scholarship allows the application of discovery and integration in community environments. Individuals and institutions benefit from applying the knowledge of research studies in real world environments. Real world dilemmas can even lead academe to broaden research agendas and scholarly investment while contributing to the needs of the larger community surrounding college campuses (Boyer, 1990).

Engaged scholarship is viewed in many ways within academia. For example, it may be considered a type of service, a type that must be distinguished from simply doing good works in a community or serving as committee member, student advisor, work on national boards, editorial boards for peer-reviewed journals, and the like. Many faculty members also work with community groups as advisors, board members, and volunteers. These activities are best described as "citizenship" (Boyer, 1990). When a researcher is able to tie citizenship to his or her area of specialization and professional work through activities that require accountability, rigor, and end with research, this type of service blends scholarship with community work.

The difference in engaged scholarship and research is difficult to pinpoint, though important to note. Many of the activities that make a project engaged research also allow it to be classified as engaged scholarship. Engaged research allows teachers to build bridges and stimulate critical thinking as they involve students in solving community problems if the findings are used in pedagogical settings. The simplest way to understand the distinction, at least in my mind, is to see engaged research as a part of engaged scholarship. That is, one might undertake a research effort that involves partnership with community members, with the aim of mutual benefit, but the effort stops after data are analyzed and findings reported. The expanded activities related to integration, application, and teaching are less emphasized than the research itself.

Engaged research allows for the transference of knowledge born of deeper understanding of theory that is gained through the integrated application of axioms in real world settings. Engaged research is likely to create opportunities for faculty to become better teachers and students better learners because both are able to translate theory through a more relatable lens. But the research itself falls short of being engaged scholarship, a more active and integrated approach that uses the findings in a deliberate effort to integrate theory and practice. In Boyer's terms, engaged research projects allow faculty to use knowledge gained through serious study, exploration, and understanding to offer students the best opportunity to develop and apply an understanding of the discovery being examined.

But engaged scholarship and applied research are not necessarily synonymous. The use of applied research to bridge the gap between theory and practice is a widely accepted practice (Koliba, 2007), and most often means that researchers take knowledge gained and apply it to community problems that the researcher defines. Engaged scholarship, in contrast, is "user inspired research" where the community defines the problem and in partnership with the researcher looks for a solution (Gibson, 2006).

Most academic units remain bound by the traditional models of scholarship that rely heavily on empirical tests of theory (including applied research) without rewarding faculty for engaging in work with community partners. With limited time, and the pressures of the tenure and promotion process, many faculty members choose to limit activities to conventional teaching, research, and service activities. In doing so the researchers most well trained to study, evaluate, and theorize on real world problems fail to become involved in working to solve the issues about which they write, and some might argue, are unable to meet the broadly defined public service mission of many colleges and universities. In short, the experts are unable to engage in activities that put theory into practice.

The civic engagement movement has prompted some level of tenure and promotion reform within the university community (Marullo, 1996; Kellogg, 1999; Koliba, 2007; Ostrander, 2004). Despite recognition that applied research has value, there are limited outlets for this brand of research in peer-reviewed journals and a lack of understanding of the time intensity engaged scholarship requires.

Hunger as a Platform for Understanding Engagement

Some topics are perfectly suited to bring together actors from many different perspectives. Hunger is one of those issues. Scholars from fields as varied as medicine (Casey, de Cuba, Cook, & Frank, 2010), nutrition (Weaver & Hadley, 2009), public health (Widome, Neumark-Sztainer, Hannan, Haines, & Story, 2009), anthropology (Cormier, 2006), political science (Collier, 2008), economics (Logan, 2009), public administration and policy (Berner, Paynter, & Anderson, 2009), sociology (Coleman-Jenson, 2010), psychology (May, Berry, & Andrade, 2007), and nonprofits (Bade & Daponte (2006) have undertaken work on the causes and effects of hunger across the United States and in other countries. A common thread among all of these examples is that hunger is an important topic.

Hunger and poverty are tightly linked but not all people who experience hunger are poor, according the official poverty guidelines. About 15 percent (46.2 million people) of the total population in the United States including 16.1 million children experienced poverty in 2011 (Carmen, Proctor, & Lee, 2011). In the same year, there were 50.1 million Americans who reported living with food insecurity (not knowing where the next meal will come from), among them 16.7 million children and 1 million seniors living alone (Coleman-Jensen, Nord, & Andrews, 2011).

Public administration and policy is an important lens through which hunger might be studied, and ultimately addressed. Embedded within public administration and policy literature are studies of organizations in the public and governmental sector as well as those that are private, nonprofit agencies. Together agencies providing social programs within these realms make up the social safety net (Grosh, Del, Ninno, Tesliuc, & Ouerghi 2008). As a scholar in a public administration program that is a part of a political science department, I see the interconnectivity between hunger, public policy and management, and other disciplines. As a result, this topic is one way to explore the ideas of engaged scholarship between university and community partners.

Historically, institutions of higher education have been tasked with fostering a learning environment, providing tools that contribute to social mobility and lessen inequality, and to the enculturation of generations that live, learn, and work within a society (Holmwood, 2011). These are the basic tenets of higher education, but since the 1970s universities are taking on a broader mission that includes activities ranging from promoting economic growth to disseminating research across various outlets including, in recent years, through social media (Thrift, 2012). Whether one favors the basics approach or the reinvention strategy, universities are clearly important components of communities. It is equally critical that university campuses engage in collaborations with community partners in active ways, including through scholarship.

Interestingly, though collaboration is an often researched and well reviewed concept in public administration literature (for example see Agranoff, 2007; Agranoff & McGuire, 2003; Clarke & Stewart, 1997; Gazely & Brudney, 2007; Henton, Amsler, & Kopell, 2006; O'Leary, Gerard, & Bingham, 2006), there is little attention given to the nexus between institutions of higher education engaging in work with community partners, especially in the United States. Public administration scholars have written extensively on civic engagement (Ostrander, 2004; Portney, 2005) and participatory governance (Murray & Shaffer, 2004). Two studies issue a call for more research on engagement between public actors and communities with one considering the role of coproduction public services as a way to maximize resources and integrate activities between organizations (Bovaird, 2007) and the other (Boxelaar, Paine, & Beilin, 2006) suggesting that genuine stakeholder participation will be more effective and genuine if a reflexive dialogue between agencies and community members is established.

Certainly there are many instances in the public administration literature where a researcher, or even institution, partnered with governmental agencies or nonprofits in research endeavors, but there is little attention given to how the relationship between partners developed, whether the community had a role in research design, goals, or analysis, or in how results were disseminated for mutual benefit. A notable example of the kind of work that might benefit public administration, engagement, and other social science research is a study of the relationship between the University of Kentucky and community partners who worked together on alternative food resources to address hunger (Tanaka & Mooney, 2010). The partnership I describe in this article is an attempt to shed light on the types of efforts that public administration scholars may be able to document through the lens of engaged scholarship.

Boyer (1996) expanded the concept of scholarship to include engagement with community partners. In doing so he challenged academics to look for partnerships that would allow the academy to work with practitioners to solve the kinds of wicked problems that plague societies. The result is the scholarship of engagement. There has been some guidance provided for university faculty interested in engagement work (Ward, 2003) and establishing the concept as a set of practices (Barker, 2004.) Sandmann (2008) provides a thorough review of the history and evolution of the scholarship of engagement in higher education. Engaged scholars work alongside community participants to address questions relevant to both sets of stakeholders (Barker, 2004). Engaged scholarship can benefit multiple stakeholders as evidenced by the activities and impact of the North Carolina Hunger Project (NCHP).

Using Engaged Research to Develop Engaged Scholarship

The NCHP is an example of the four phases of engaged scholarship, as it incorporates expertise and knowledge from practice and theory into a solution that guides both the strategic plan for the Food Bank of Central and Eastern North Carolina (FBCENC) has resulted in academic publications and has been used in teaching activities at East Carolilna University and the University of North Carolina at Chapel Hill. Together food bank and academic partners put the Boyer Model of Engaged Scholarship (1996) into practice, as demonstrated in Figure 1.

The work relies on a framework that built on strengths from both the academic and food assistance communities. The partnership drew from issue expertise of food bank staff and volunteers who are "hunger experts," as well as technical research skills from the academic community.

The transition from engaged research to engaged scholarship has been deliberate. Initial research centered on analyzing trends and using quantitative methods to describe or explain phenomena at the food bank. The missing meals model has been used in a number of ways and

Figure 1. Applying the Boyer (1996) Model to the Hunger Project Partnerships

Discovery

Developing information

- Interviews with key food bank staff and board members
- Examination of national hunger estimation models

Freedom to explore

- Reviewing methodologies to estimate demand for food assistance
- Critiquing industry practices and established models
- Developing a hybrid strategy to estimate the number of missing meals in the service area
- Use in lecture materials

Integration

Multidisciplinary approach

- Committee members from disciplines including public administration, political science, computer science, geography, human services and statistics

Collaboration

- Partnership between universities, nonprofits, private businesses including a multi-national software development firm
- Work between academic units to define a solution to a multidisciplinary issue
- Student projects to evaluate programs at the food bank

Engaged Scholarship

Application

Real world dilemmas

- Estimating number of missing meals
- Need to increase service capacity in social safety net programs
- Three Squares for CENC program

Community need

- Hunger prevention
- Nonprofit resource utilization strategies
- Boosted participation in food stamp program

Teaching

Transfer of knowledge

- University faculty instruct community partners on modeling techniques
- Student research assistants
- Classroom application

Critical thinking

- Comparison on various models
- Review of best practices and academic literature
- Creation of comprehensive model to estimate missing meals
- Development of program evaluation models for Three Squares for CENC

environments. For example, it is used within the food bank for strategic planning purposes, as the subject for peer reviewed academic journal articles, as the starting point for conversations among stakeholders (community presentations, addresses to state and national conferences), and as the foundation for classroom instructional activities at the collegiate level. The activities, data, and findings from the missing meals model have given partners in NCHP a way to inform communities in both the public and private sectors through a single project leveraging resources along the way.

The Missing Meals Model: Applied and Engaged Research

To be effective, non-profit organizations need to understand future demand for services and plan accordingly. Most often, social service oriented non-profits use service usage patterns to project demand. This method has an obvious limitation. If the organization was unable to provide sufficient service because of limited financial, human, or physical resources, past service numbers might be underestimated, and consequently the organization would effectively be planning the past rather than projecting the future. That is, if a food pantry ran out of food before all the hungry people were fed, the number would be artificially reduced because the demand outstripped supply.

There is a new movement in modeling demand for social services. These efforts estimate demand by understanding overall need for a service in a community, and then calculating what is available to meet that need–whether resources are provided by the individuals or other private sector providers, government, or non-profits that pick up where government leaves off. The difference between what is needed overall and what is provided is the service "gap." In the area of hunger, national and regional non-profits are turning to this method to understand unmet need, called "missing meals."

FBCENC, located in Raleigh, serves 34 counties and more than a third of the total population of the state. This food bank is the largest of the seven in North Carolina. There are more than 800 partner agencies located throughout the agency footprint, delivering upwards of 41 million pounds of food in fiscal year 2009-2010. While the NCHP has relationships with the other food banks in the state, this paper is focused on an effort to estimate missing meals with the FBCENC.

The FBCENC began a strategic planning process in 2009 that carried into 2010. Discussions about service provision, resource utilization, staffing, and other components of organizational management were discussed. Given its mission "…to harness and supply resources so that no one goes hungry in Central and Eastern North Carolina," the fact that its affiliates regularly report running out of food before filling all requests for aid troubled the staff and board. In response the FBCENC determined that it needed a reliable estimate of how many more resources would be needed to meet the demand for hunger assistance across the 34-county service area.

The problem was that a thorough, rigorous analysis of estimation techniques was needed to identify the unmet need. The FBCENC had expertise in food assistance practices, but the staff and board lacked training in statistical modeling. The food bank staff sought a partnership with East Carolina University to develop answers to their questions. University faculty were interested in engaging in this research for its potential to be a useful tool in the fight against hunger as well as the possibilities for using the project for academic publications and teaching resources.

An existing relationship with the NCHP offered an opportunity to collaborate on estimating unmet demand for hunger assistance. The board empowered the staff to reach out to community partners at area universities and local businesses to begin the process. The result was a committee comprised of two university faculty members, one research associate, two graduate research assistants, two members of the food bank executive team (directors of operations and agency services), a retired executive from a major information technology firm, and a board member. Together the Missing Meals Committee crafted a methodology based on the academic and best practices literature, experience of human services professionals, and expertise in the private sector. The FBCENC was interested in creating an accurate measure of the number of meals missing in their service area by asking:

1) How did the methodology used by Food FBCENC compare with that of the national hunger relief nonprofit Feeding America?

2) Would changes to the methodology improve the accuracy or applicability of the results?

3) Could a revised methodology be used to estimate the number of missing meals for the FBCENC service area overall as well as at the county level?

Assume a person eats three meals a day and that the person uses a combination of personal resources (e.g., salary), government sponsored programs (e.g., food stamps or free or reduced priced school lunches), or nonprofit assistance (e.g., food pantry boxes) to provide those three meals. The combination of resources should allow a person to achieve the three meals per day goal, or will show how many meals that person is missing because of deficient resources. Food banks across the United States use a calculus similar to this to identify resource gaps. But what if this calculation is not accurate? What if a more reliable formula could be created to produce a more accurate missing meals estimate? These are two of the questions the FBCENC pondered as it began a major strategic planning project in 2010.

The missing meals approach is appropriate to estimate future need for food bank services. The methodology is logical and uses reliable data, although there are some methodological differences in the approaches used within foodbanks across the United States. One food bank of comparable size and scope to the FBCENC is Food Lifeline in western Washington State.

Like FBCENC, Food Lifeline is a member of the national Feeding America network. This extensive hunger relief organization served more than 19 million meals in 2009 through its 300 partner agencies. Because demand for food assistance is difficult to quantify, Food Lifeline worked to create a methodology to increase food availability through government and nonprofit programs as well as to incorporate funds individuals contribute to food acquisition. The result is its Missing Meals Model. The methodology, hereafter described as the Missing Meals Model, was initially developed in 2009 by the Food Lifeline food bank and was considered for adoption by FBCENC as a part of the strategic initiatives it began in 2009.

The Missing Meals Model is based on an estimate of the people at risk of food insecurity. The logic behind the approach is refreshing because it is more holistic. It explicitly includes overall need for food and is easy enough to measure because in the abstract food is an inelastic good. That is, regardless of anything else, people generally need three meals a day to function. The methodology uses inputs from an individual's ability to buy food for themselves and their families, as well as the more traditional measures of participation in government programs or pounds of food being distributed via food assistance agencies. The model can be used with easily accessible public data (for example, some data sources are American Community Survey; Census 2000 and 2010; wage data from the Bureau of Labor Statistics; and various reports from state departments of health and human services administering SNAP or other food assistance programs) in a standard spreadsheet format with simple calculations, though the spreadsheets can be rather large.

With the Missing Meals Model, need for services can be identified across jurisdictions in a relative sense (due to lower incomes and therefore lower self-provision, lower federal program take-up rates, or lower food pantry provision) in each county, and therefore, what local policy effort may produce more meals. Targets can be created for each method on a county by county level in those areas (such as if summer feeding program take-up rates are very low in one county), and the FBCENC could work with the pantries in those areas to adopt plans on how to close the gap, such as a campaign to advertise the summer feeding program and developing local government support for more feeding stations. Performance measures can be set for the pantries, counties and the FBCENC overall, and meal provision via these different methods can be tracked. Long-term efforts can target employment to increase the number of meals self-provided, medium term efforts could focus on program take-up rates, and short-terms efforts can focus on increasing provision of food pantry goods. All efforts can be done simultaneously.

An alternative method, currently used by Feeding America, is based on estimates of the people actually experiencing food insecurity. National and large regional food assistance organizations are actively testing the missing meals approach, having seen the limitations of previous efforts to plan for future demand. The Feeding America Model involves the use of mathematical forecasting techniques which, while used in a relatively straightforward manner, is likely to be beyond the analytical training of most food bank staff. The assumptions necessary to collect data for both models are critical. Changing something as simple as how the number of clients is tabulated can drastically impact the result of the model.

For example, when household income was used to estimate the number of clients needing food assistance, a problem arose. Poverty thresholds are determined by age and household size. Average household size in the United States was about 2.6 people in 2011 varying from about 2.15 (District of Columbia) to 3.13 (Utah) (Census, 2011). The number of people is used in combination with age to determine the poverty threshold, a common measure representing what a family needs to survive. Age data are available so that one might learn how many households had people less than 18 years old, seniors, or other stratifications. The income data are grouped by the U.S. Census Bureau in increments of $5,000 for households earning less than $54,999 per year. The problem is that entitlement programs like SNAP use the poverty line to qualify households for services. Households with more than the poverty threshold can qualify, based on a complicated formula. In North Carolina, for example, some households making as much as 200% of the poverty threshold can be eligible for food stamps. As a result, the income level at which a household needs food assistance can vary and often falls in the middle of an income band. Some income groups, especially those in the lower strata ($25,000 or less) are always food insecure while other households at risk for food insecurity are not actually food insecure (Nord & Brent, 2002). To use the entire population for all income bands that might qualify for public food assistance would lead to an over estimation of need while excluding higher income strata is too conservative. That is, the models are very sensitive to the assumptions, data, and may be biased.

Feeding America uses data from the Economic Research Service Food Security Report conducted by the U.S. Census Bureau as a supplement to the monthly population survey. In this survey respondents were asked 18 questions on food security, among them did they report that they worried that food would run out before they got money to buy more and that they couldn't afford to eat balanced meals. These data are reported for adults as well as children in the household. As a result, Feeding America creates a measure that captures the number of households that reported food insecurity.

The Income-Based Missing Meals Method used by Food Lifeline relies on the number of households at risk for food insecurity. This model assumes all households within a single income band would be included in the estimation of the number of missing meals. This approach would yield a biased estimate for two reasons: 1) not all households below 185 percent of the poverty level are actually food insecure; and 2) not all households above 185 percent of the poverty level are actually food secure.

There has been some work around this issue. Nord and Brent (2002) used data from the Current Population Survey (2000) to consider whether respondents both above and below 185 percent of poverty who reported food insecurity were an anomaly. The study concluded that of all households reporting food insecurity 80 percent were below 185 percent of poverty and 20 percent were above this income level. Nord and Brent also report that of the 57 million households between 185 percent of poverty (approximately $31,000 per year) and $50,000 (about 300 percent of poverty) annually 3.8 percent are food insecure and 1.2 percent food insecure with hunger. As a result the NCHP research staff recommended using the Nord and Brent estimation to correct for the number of at-risk versus actual missing meals.

Alternatively, assumptions underlying service provision are equally important, and equally difficult to pinpoint. The food bank staff was quick to point out that all meals are not equal. The USDA uses four different models to estimate the cost of food. The four models, ranging from least expensive to most are the Thrifty Food Plan, the Low Cost Food Plan, the Moderate Food Plan, and the Liberal Food Plan.

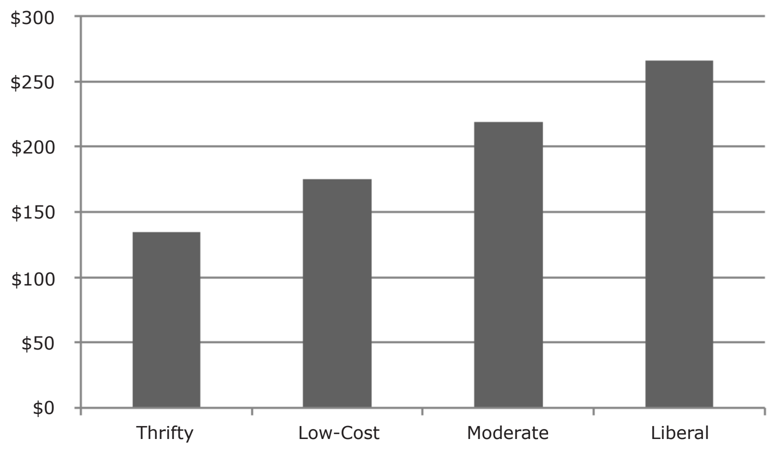
According to the 2010 USDA Thrifty Food Plan, which is the most conservative, three meals cost about $139 per week for a family of four, including two adults age 19 to 50 and two children between the ages of 6 and 11. Comparatively, following the highest cost Liberal Food Plan, the same number of meals for the same family would cost two times as much (see Figure 2).

The costs also vary based on the number as well as the ages of the people included in the calculations. When attempting to calculate the resources necessary to fill the gap between what a household can provide through its income, social services, and nonprofit resources, assumptions incorporated in the calculation are critical to the validity and reliability of the prediction.

The FBCENC staff educated the research team on what sorts of foods are included in each meal plan, what industry standards would be most reasonable to apply to the service area, and what kinds of inventory exist at the food bank. Using these pieces of information, the team determined that using estimates for the Low Cost Food Plan would make the most sense in FBCENC service area.

In the end, the team determined that more than 1.1 million people in the service area were at risk for food insecurity. Assuming these individuals require three meals a day and subtracting the total number of meals acquired through a combination of self provision (61.8 percent), government programs (27.3 percent), and the food bank (3

Figure 2. Cost of Meals According to 2010 USDA Food Plans



Sources: Author; USDA, 2011.

percent) meant that more than 98 million meals were unaccounted for each year. Armed with this information the FBCENC was able to initiate fundraising and programming strategies to narrow the gap.

The process of developing a methodology for estimating hunger is an example of applied research and most certainly meets the basic test for being an illustration of engaged research.

Turning Toward Engaged Scholarship

The board and executive team used information from the Missing Meals Model to develop a strategic plan that has an impact on operations, outreach, and agency service activities. University partners were asked to attend a number of board meetings to discuss the assumptions and findings from the model and ultimately to move into an advisory role for projects relating utilizing information from the Missing Meals Model. What began as applied research turned into engaged research, and ultimately moved into engaged scholarship where faculty learned about the nuances of the food assistance world through interactions with professionals in the field, and those same professionals were informed through patterns uncovered by faculty trained as professional researchers. These partnerships are ongoing and strong.

Student involvement in the project was also a core component of its success. Over the course of three years, 12 different students were involved in the project. Together they logged more than 5,100 hours, collecting, preparing, and analyzing data, conducting 8 focus group interviews, attending 21 meetings with the food bank and research team, co-authoring two white papers and two peer-reviewed journal articles, and assisting in presenting findings for the food bank board and at two statewide public health meetings.

The work has not ended with discovering and exploring hunger. The Missing Meals Model has also been used by FBCENC to justify expanding its programming through an outreach effort called Three Squares for CENC. Food bank staff partnered with county social service agencies to increase education and awareness of the federal food stamp program known nationally as SNAP, and within North Carolina as the Food and Nutrition Services Program (FNS). Three Squares for CENC is being piloted in six counties where need for food assistance is high as determined in part through the Missing Meals Model.

Since Three Squares is a pilot program, FBCENC wanted to evaluate its success as well as the need for expansion to other counties in the service area. One of East Carolina University faculty members designed a graduate course in program evaluation to give students an opportunity to apply theoretical concepts in a real world setting. The food bank allowed the program manager to work in conjunction with the professor to deliver course content, including meetings with students, lectures, and group sessions. Student teams were required to submit needs assessment and program evaluation protocols to evaluate Three Squares. Each team used public datasets such as the 2010 Census and state food stamp participation reports in conjunction with internal food bank data. Though differently conceived and proposed, each team recommended future evaluations rely on focus groups or interviews with key personnel from the food bank as well as social service agencies to pair qualitative data with quantitative analysis as a way to ensure reliability in the analyses.

The evaluation teams had three general program findings. One is that the problem of hunger is substantial, requiring a tighter connection between community actors collaborating on solutions. The second finding was that the food bank needed to clearly identify program goals, key staff responsibilities, and develop performance measures to determine program effectiveness. And finally, the teams recommended providing services in areas where households living on the margins of food insecurity, where poverty was not most rampant and where unemployment was lower than surrounding counties. The logic was that more households fall outside the social safety net in these areas and would not be eligible for government assistance, thus relying more on nonprofit food assistance offered through the food bank system.

Conclusion and Lessons Learned

The NCHP is the joint venture of public universities, a network of private nonprofit food pantries, and other actors including a few private corporations. The project is a multi-faceted study of hunger with an eye toward developing the most effective food assistance programming possible and provided many opportunities for engaged scholarship. Ultimately, the results of the modeling effort led to expanded programming, student projects, and a graduate course in program evaluation. Together these examples demonstrate the value of applied and engaged research as well as the power of engaged scholarship.

University faculty and community partners can learn two things directly from NCHP. The lessons are: 1) to understand the strengths and limitations both partners bring to a project; and 2) to develop a communication strategy that ensures accountability and adherence to deadlines.

The FBCENC adopted the goal of becoming a "trusted leader" as a deliberate part of its current strategic initiative. To accomplish this goal Food FBCENC dedicated resources including staff and funding to developing a reliable strategy for projecting service demand. When FBCENC could not accomplish the goal because its staff lacked technical research skills it sought help from university faculty in the area. In the initial phases of the project FBCENC was unclear about how its staff, board, and volunteers would contribute to developing a better assessment of service demand. As conversations moved forward both the FBCENC and the university faculty working on the project became more aware of the importance practitioner-based knowledge would bring to the reliability and validity of the work. At that point the project became more engagement than community service. The strengths and limitations of the partners were readily apparent.

Establishing a mutually beneficial relationship built on good communication, respect, and expertise is critical. Like any other team-based work, engagement projects can get mired down in meetings that become brainstorming sessions that produce few results. One of the keys to success for the NCHP was a summary list of action items that responsible parties generated at each group session. The list was sent to participants no more than two days after the meeting so that deadlines and commitments were clear. The simple process of project management kept the group on track for important deadlines like board meetings, community presentations, research conferences, and journal submissions.

Engaged scholarship falls outside traditional norms in university settings. In addition to the lessons learned relative to engagement with communities, university faculty can use these sorts of projects to boost student interest, understanding, and application of core concepts. Working in a collaborative environment can benefit organizations in all sectors. Engaged scholarship gives community partners contact with research and issue area expertise that might otherwise be unaffordable or difficult to access. In turn, research faculties are able to use examples, and sometimes partnerships, to enhance teaching and research findings in ways that not only increase reliability and validity of the findings, but also increase the likelihood that the work will actually be put to use, rather than withering on bookshelves. Importantly, this work allowed students in both graduate and undergraduate courses to work with data involving a major public policy issue (hunger) and applying techniques such as program evaluation, cost benefit analysis, survey design, and development of written and visual communication tools. Developing a sense of connection to policy problems gave students a way to better connect to theoretical and technical concepts that were otherwise difficult to understand or relate to. Admittedly, involving students is risky, takes more time, and requires vigilance on the part of instructors; but the payoffs are substantial for all stakeholders concerned. Three of the 12 students working on this project now volunteer with hunger relief agencies and one is working in the field post-graduation.

Engaged scholarship can be a carefully positioned win for all stakeholders involved, and is an enterprise that university and community partners can employ to better leverage scarce resources. While faculty are actively working to discover new ideas and find explanations for phenomena, the work is more difficult to recognize or quantify relative to counting a number of journal articles, books, other publications, or classes taught. Engaged scholarship is not community service alone. It is a more directed effort that blends traditional academic work with practice. As such engaged faculty have a responsibility to educate peers about the value of engaged scholarship as it differs from community service, and as a potential resource for data, teaching examples, and publications. An important part of the process is for university researchers to make clear connections between problems and potential solutions. Engaged scholarship may be a tool used in addressing the problem of hunger. This paper has been an example of how solutions can emerge when community partners work with university faculty, staff, and students. It is a call for linking research, social services, teaching, and learning to develop tools to tackle wicked social policy problems.

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About the Author

Sharon Paynter is an assistant professor in the Department of Political Science at East Carolina University.