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FUEL NKU: A Campus Community Hunger Initiative

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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.

Table 1. Summary of Organizations and Major Contributions to Community Engagement Work in Higher Education

Organization	Major Contributions
Association of American Colleges and Universities	…Liberal Education and America's Promise (LEAP) is a national advocacy, campus action, and research initiative that champions the importance of a twenty-first century liberal education—for individuals and for a nation dependent on economic creativity and democratic vitality (https://www.aacu.org/leap).
Campus Compact	Campus Compact is a national coalition of nearly 1,100 colleges and universities committed to the public purposes of higher education. We are a network comprising a national office and 34 state and regional Campus Compacts. As the only national higher education association dedicated solely to campus-based civic engagement, Campus Compact enables campuses to develop students' citizenship skills and forge effective community partnerships. Our resources support faculty and staff as they pursue community-based teaching and scholarship in the service of positive change (http://compact.org/).
Carnegie Foundation for the Advancement of Teaching, Carnegie Classifications	The Carnegie Foundation's Classification for Community Engagement is an elective classification, meaning that it is based on voluntary participation by institutions. The elective classification involves data collection and documentation of important aspects of institutional mission, identity and commitments, and requires substantial effort invested by participating institutions. Community engagement describes collaboration between institutions of higher education and their larger communities (local, regional/ state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity (http://nerche.org).
National Task Force on Civic Learning and Democratic Engagement	This report from the National Task Force on Civic Learning and Democratic Engagement calls on the nation to reclaim higher education's civic mission. Commissioned by the Department of Education and released at a White House convening in January 2012, the report pushes back against a prevailing national dialogue that limits the mission of higher education to workforce preparation and training while marginalizing disciplines basic to democracy (https://www.aacu.org/crucible).
Scottish Community Development Centre	The National Standards for Community Engagement define community engagement as "Developing and sustaining a working relationship between one or more public body and one or more community group, to help them both understand and act on the needs or issues that the community experiences." Our role in relation to community engagement is to develop useful frameworks, resources and tools and support those involved in community engagement activity to develop best practice through their use and application (http://www.scdc.org.uk/community-engagement/).

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, Stuff, Connell, Gossett, & Simpson, 2005; Casey, Goolsby, Berkowitz, Frank, Cook, Cutts, Black, Zaldivar, Levenson, Heeren, & Meyers, 2004). Food insecurity has also

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, Zaghloul, 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 and signs 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

Table 2. Demographic Characteristics
of Participants

Gender (n=125)	N	%
Male	44	34.9
Female	81	64.3
Year in School (n=124)		
Freshman	45	35.7
Sophomore	30	23.8
Junior	35	27.8
Senior	14	11.1
Location (n=123)		
Urban	19	15.1
Suburban	79	62.7
Rural	25	19.8
Interest in Joining an RSO (n=117)		
Yes	72	57.1

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

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

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

How helpful would a food bank be on campus to you (n=120)?	N	%
Not at all	3	2.4
Not really helpful	6	4.8
Might be helpful	39	31.0
Helpful	40	31.7
Very Helpful	32	25.4
Thinking about my next meal affects how I feel (n=126)		
Strongly Disagree	39	31.0
Disagree	32	25.4
Neutral	23	18.3
Agree	17	13.5
Strongly Agree	15	11.9

Days hungry in the past week (n=122)	Days	N	%
	0	93	73.8
	1	9	7.1
	2	14	11.1
	3	2	1.6
	5	2	1.6
	7	2	1.6

Table 5. Barriers (N=125)

	M	SD
Location on campus	2.75	1.097
Need for service	2.95	1.142
Embarrassment	2.71	1.142
Cost	3.03	1.099
What is stocked in the food bank	3.11	1.123
Knowledge	2.90	1.208
Shame	2.54	1.111
The food bank wouldn't help me	2.87	1.180
Whether I can take food for my children or family	2.85	1.090
Time	2.94	1.124
Other students	2.72	1.119
Privacy	2.77	1.151

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.

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,

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)

Civic Element	Features of Civic Element	Components of FUEL NKU
1. Civic Ethos	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.	Development of the food pantry as a way to address the well-being of all students and celebrate the worth of each person.
2. Civic Literacy	2a. The ability to think critically about complex issues and to seek and evaluate information about issues that have public consequences.	Navigation of the campus system and decision to establish food pantry as the most effective way to address food insecurity among students.
3. Civic Inquiry	3a. The deliberate consideration of differing points of views.	Establishment of the student organization, food pantry, and board of directors as a direct result of thoughtful and repeated discussions among students.
4. Civic Action	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.	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.

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.

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

I. Should the following be stocked in an on-campus food bank?	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Food	1	2	3	4	5
2. Kosher food	1	2	3	4	5
3. Halal food	1	2	3	4	5
4. Baby food	1	2	3	4	5
5. Fresh food	1	2	3	4	5
6. Vegetables	1	2	3	4	5
7. Fruit	1	2	3	4	5
8. Non-perishable food products	1	2	3	4	5
9. Candy	1	2	3	4	5
10. Soda	1	2	3	4	5
11. Milk	1	2	3	4	5
12. Bottled water	1	2	3	4	5
13. Prepared meals (e.g., Chef Boyardee, Dinty Moore, Campbell Soups)	1	2	3	4	5
14. Food that must be prepared at home	1	2	3	4	5
15. Uncooked pasta	1	2	3	4	5
16. Eggs	1	2	3	4	5
17. Toilet paper	1	2	3	4	5
18. Paper plates	1	2	3	4	5
19. Plastic cups	1	2	3	4	5
20. Can openers	1	2	3	4	5
21. Plastic forks	1	2	3	4	5
22. Plastic spoons	1	2	3	4	5

J. Would the following prevent you from using an on-campus food bank?	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Location on campus	1	2	3	4	5
2. Need for service	1	2	3	4	5
3. Embarrassment	1	2	3	4	5
4. Cost	1	2	3	4	5
5. What is stocked in the food bank	1	2	3	4	5
6. Knowledge that a food bank is on campus	1	2	3	4	5
7. Shame	1	2	3	4	5
8. The food bank wouldn't help me	1	2	3	4	5
9. Whether I can take food for my children or family	1	2	3	4	5
10. Time	1	2	3	4	5
11. Other students	1	2	3	4	5
12. Privacy	1	2	3	4	5

K. In the past 12 months…	Never	Rarely	Sometimes	Often	All the time
1. How often did you worry that you would not have enough money for food?	1	2	3	4	5
2. How often did you cut or skip a meal because you didn't have enough money to buy food?	1	2	3	4	5
3. How often were you unable to eat balanced or nutritious meals because of a lack of money?	1	2	3	4	5
4. How often did you go hungry because of a lack of money?	1	2	3	4	5

L. Next, we are going to ask you about food accessibility. How much do you agree with the following statements?	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. There is a grocery store near where I live.	1	2	3	4	5
2. I can get to a grocery store easily.	1	2	3	4	5
3. There are healthy food options near where I live.	1	2	3	4	5
4. There is a grocery store in my neighborhood.	1	2	3	4	5
5. I can afford to buy groceries.	1	2	3	4	5
6. I can afford to buy the food I need.	1	2	3	4	5
7. I can afford to buy food my family needs.	1	2	3	4	5
8. I can afford to go to the grocery store.	1	2	3	4	5
9. I skip meals because I can't afford to buy food.	1	2	3	4	5

L. (Continued)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
10. I know about what foods I should eat to be healthy.	1	2	3	4	5
11. I know what foods to buy to be healthy.	1	2	3	4	5
12. I know how to grocery shop.	1	2	3	4	5
13. I know where the grocery store is.	1	2	3	4	5

M. How much do you agree with the following statements?	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I know about programs to help me get food.	1	2	3	4	5
2. I know the resources in my community that will help me get food.	1	2	3	4	5
3. I feel there are rules and regulations that prevent me from getting food.	1	2	3	4	5
4. The grocery stores are open at times for me to buy food.	1	2	3	4	5
5. The services available fit my food needs.	1	2	3	4	5
6. The services available to help me get food are accessible for me.	1	2	3	4	5
7. I worry a lot about getting food.	1	2	3	4	5
8. I worry about where I will get my next meal.	1	2	3	4	5
9. I worry about when I will get my next meal.	1	2	3	4	5
10. I am embarrassed about going hungry.	1	2	3	4	5
11. I stress out a lot about getting my next meal.	1	2	3	4	5
12. I feel a stigma about needing food services.	1	2	3	4	5