

# Service Based Learning as a Tool to Develop Undergraduate Skills in Needs Assessment

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## ABSTRACT

**Purpose:** A primary responsibility in health education is to assess community health needs, which is often a difficult skill to master for the entry level health educator. This article outlines the outcomes of a long-term study of an undergraduate needs assessment course where students completed a real-world assessment with a community partner focusing on action and service-based learning. **Methods:** Through student reflections, survey of community partners, and instructor reflection, outcomes of the course are reported from multiple views. **Results:** Students showed improved problem-solving, better understanding of community and needs assessment process, and better understanding of importance of teamwork skills in this context. **Conclusion:** By navigating a real community health assessment, students benefited from a deeper learning experience. Community partners benefits included assistance in program planning and prioritization of health programs and events. **Recommendation:** This method is beneficial to both students and partners but it is important to prepare students well for this challenging work.

**Key Words:** service learning, needs assessment, health education, undergraduate research

## INTRODUCTION

Assessing needs and assets means engaging in a process to understand community health problems and is the initial responsibility among

certified health education specialists (National Commission for Health Education Credentialing [NCHEC] (NCHEC, 2015a). The first Area of Responsibility focuses on assessing needs has

seven competencies including, “planning the assessment process, accessing existing information, collecting primary data, analyzing relationships among factors that influence health, examining factors that influence how people learn, examining factors that enhance or impede the process of health education and promotion, and determine needs based on assessment findings” (NCHEC, 2015b, p 2-3).

Undergraduates training to be health educators are tasked with developing entry level skills in needs assessment via specific courses and preparation. A fundamental principle of this process that students must learn, is that health educators complete the needs assessment *with* people – not *to* them. This reciprocity-based principle allows for balance in the learning and actions of partners and students (Horney, Bamrara, Macik, & Shehane, 2016). In teaching this methodology, it is important to engage students in the process with community partners through an action and service-based learning approach (Geiger and Werner, 2004). According to Jacoby (2015), service learning is described as being “a form of experiential education in which students engage in activities that address human and community needs together with structured opportunities for reflection designed to achieve desired learning outcomes” (p 1). As part of the service-learning process, reflection is key throughout all aspects of the experience (Ebrahim & Julie, 2017).

The action learning approach helps to meet the following course objectives: 1. Demonstrate the steps necessary to conduct a needs assessment in a team approach. 2. Effectively gather and synthesize important health data from a variety of sources. 3. Examine and interpret needs assessment data from a variety of sources. 4. Explain both orally and through writing needs assessment process, data collection, and interpretation of data from a variety of sources. 5. Distinguish and respect how other individuals, organizations, and communities’ needs are different and understand why. 6. Prioritize health data to develop appropriate goals and objectives and formulate recommendations. 7. Work in a team setting to collaborate and engage individuals, organizations, and community partners in the need’s assessment process (Lanier, 2014).

## PURPOSE

The purpose of this study was to outline the outcomes of an undergraduate course in needs assessment where students completed a real-world assessment with a community partner focusing on action and service-based learning. The study is a long- term assessment that spans multiple semesters providing a unique perspective about course structure and design. By exploring the benefits and challenges of this type of learning through multiple lens’ this can help instructors better prepare future health educators in this area of responsibility and help in best practices for community partner collaborations.

## Literature Review

### Importance of Service Learning in Health Education and Public Health

The benefits of adding service-learning projects to college courses is supported by a wealth of research. In Health Education and Public Health, service-learning can be used as a tool to link course outcomes and objectives with real-world scenarios in which students gain immense skills outside of the textbook. From peer education to community advocacy, service-learning takes many forms in the classroom depending on the level of the student and the scaffolding of skills needed. In a study by Rahn et al. (2018), students (peer health educators) who completed a service-learning health fair course project developed an increase in self-efficacy, specifically in the implementation (III), administration and management (V), and serving as a health resource (VI) Areas of Responsibility (p. 15).

Service-learning has many benefits to student learning, however, if not purposefully crafted and implemented, can cause more challenges. In one reflective study, students reported that service-learning projects were the lowest rated activity due to lack of supervision and support from community partners, difficulty linking the project to their professional development, issues with time management and communication, and unrealistic outcomes from assignments (Post, Wallace, Davis, & Clinchot, 2017, p. 382-383). While this can also be deemed the ‘messier’ components of service-learning, these are important to address, nonetheless.

### Needs Assessments as a Form of Service-Learning

While incorporating an action-based strategy for learning the needs assessment process is not new to health education, many allied disciplines also incorporate these methods. Using community based collaborative action research (CBCAR), service-learning is often utilized by the nursing field in teaching students the importance of empathy, social justice, and advocacy via real-life lens (Krumwiede et al., 2014). According to a study by Ebrahim and Julie (2017), several important outcomes from their pedagogical study of a service-learning component in a need's assessment course were identified. Working with pre-clinical dental therapy students, they determined the importance of providing their definition of service-learning as it linked to course outcomes thus allowing students to better make those connections as well (Ebrahim & Julie, 2017).

## **METHODOLOGY**

### **Course Overview**

At a Midwestern University, students majoring in Health Promotion and Education are required to take a Needs Assessment in Health Education course. With a service and action learning approach, attention was given to developing and applying needs assessment skills including identifying community health issues, teamwork in data collection, conducting analyses, interpretation of data outcomes, and the prioritization of health needs and resource allocation. Prior to the start of the course, the instructor reached out to 8-10 community partners to identify needs assessment topics. During the first week of the course, students (average  $n=30$ ) were informed about possible topics and ask to rank them to their choice of topic and if they had students they would like to work with. Instructor used rankings to place students in teams of 3-4 and were then paired with their community partner. The first two weeks of the 16 week course focused on developing a team contract which included how to manage conflict and communication strategies, understanding the needs assessment process, completing CITI training, and meeting with their assigned community partner to learn about their ideas for tasks related to the assessment. Following these first two weeks, the focus was on the process of needs assessment including literature review, developing purpose statement and key questions, primary data

collection methods, data analysis, and data interpretation and recommendations.

Students were assessed via three ways: formative assessment and summative assessment of their paper, evaluation via community partners, and self and peer evaluations. Throughout much of the course, the instructor relies on formative assessment to guide the building blocks for each part of the project by turning in successive drafts of their paper. The major parts of the assessment paper include a purpose statement, key questions, background, methods, results, discussion, and group reflection. As students develop each section, they are given feedback and the instrument is revised, accordingly. Reflection is a key piece of the student learning. All groups turn in two reflections on their progress, and all individuals turn in four reflections related to their progress in the course. Peer learning is assessed at the mid-point and end of the semester when teams present their progress to the class for feedback. A final report is turned in at the end the semester containing all needs assessment elements for a summative evaluation. Communication with community partners was a key part of the process. Community partners complete a final evaluation of the student group via a final survey and provide qualitative feedback after the final presentation. Students provide weekly progress reports via e-mail or in person to the community partner. The community partner receives the final report and attends the final presentation.

### **Participants**

Community partners were from a variety of settings including higher education, K-12 education, healthcare, and other community-based organizations ( $n=16$ ). The Needs Assessment course was offered once every spring semester with approximately 30 students in the course each year (total  $n=166$ ). Students are usually juniors when they take the course, as it is an essential course before they take their capstone courses in the fall. Data collected from this study was ongoing from 2014 through 2018.

### **Data Collection**

A mixed methods approach was utilized to assess the impact of the course via student reflections, post survey of community partners, and instructor reflection. Before any data was collected, IRB approved this study and student consent to opt in or out of utilizing their reflections

for study were obtained. Students' reflection questions related to the level that service learning contributed to learning, challenges and benefits of service-learning work in context of needs assessment work, and any other feedback related to this type of learning.

Community partners were sent an e-mail at the completion of the course that contained a link to an on-line survey developed via SurveyMonkey™ that contained Likert scale questions related to the how well students met main course objectives, usefulness of data collected, how well project met intended needs, overall performance of students on a variety of factors, and several open-ended questions related to how the data be utilized and areas for improvement for course.

The instructor reflected about the process through journaling periodically throughout the course on the benefits and challenges associated with learning, group work, and working with community partners. The key themes from the journals were then categorized and organized.

All instruments were reviewed by experts who considered interpretability, clarity, construct, and face validity of each instrument.

### Data Analysis

Open-ended items were analyzed using a coding frame that was generated based on a thorough examination of all output. The coding frame consisted of key concepts and co-occurring concepts. The key constructs are for student data related to benefits and challenges of service-learning work. An item analysis was used to determine the frequency and percent of occurrence for each concept was tabulated manually. Closed-ended items in the community partner survey were analyzed using descriptive statistics.

To address issues related to study quality, several strategies were employed. The study utilized various sources of data from three types of respondents (instructor, student, and community partners). Triangulation of the data allowed the corroboration of the purpose of the study through multiple forms of evidence. Several key informants from the study were asked to review the final report to reduce bias on part of the researchers. Pattern matching was utilized centered on the key constructs in this study (Miles and Huberman, 2013).

## RESULTS

The results span five years that the course was offered. A total of 43 projects, 157 students (with consent), and 16 unduplicated community partners were engaged in this study.

### Student Perspective

Students reflected on how service-learning work contributed to their learning, benefits, and challenges. The results are broken down by the three questions posed to students and summary of key themes.

#### How do you think service learning and/or community engaged course work contributed to your learning or enhanced your learning in this course?

Many students felt that the work contributed greatly to their learning or enhanced their learning. It was challenging learning that helped students be better prepared to take on future course work. "I feel because of how this class was structured, its challenging nature--I am more prepared for future classes and future work." Students were able to learn to be more adaptable and flexible because according to one student, "this whole process prepared us for the future in that not everything will go the right way. There were several challenges we faced throughout our journey and we had to adapt, reflect, and keep going." Students appreciated being able to go into to the community to learn. They saw it as different than traditional coursework and an opportunity to get hands on learning. For example, "I retain more information through performing the process rather than reading about it in the classroom and discussing it through hypothetical scenarios." One student's reflection noted that, "It has shown me what each community is like and that there can be a variety of different needs in each. As a health educator it is important to go into the community and I have learned that it can be successful and a challenge at times."

#### Describe the benefits of service learning and/or community engaged course work for you?

Some of the major themes that arose from the benefits of this study are outlined in Table 1. They focus on ideas such as connections, networking with professionals, getting hands on experience, and opportunity to give back by serving vulnerable populations. Students found key connections through working with community partners and their organizations as a major

benefit. It afforded them the opportunity to network and learn not only how to conduct a needs assessment but about the community the organization serves and role of organizations in the community. It was a professional development opportunity that connected them to a mentor beyond the instructor for the course which many students found to be a real asset. The hands-on learning was, as noted above, an asset in their learning and was found to be very beneficial to students as a way to gain experience in the field and understand career options.

Describe the challenges to service learning and/or community engaged course work?

Some of the major themes related to the challenges of service learning noted by students are outlined in Table 2 included time, scheduling conflicts, and motivation and engagement of team members. Students found this work to be challenging in terms of time and scheduling conflicts. Students noted there were several issues that made this work challenging that included, trying to complete this work during the course of the short semester, other obligations a student has in and out the classroom, and working with group members with different schedules.

Students also noted challenges and frustrations when group members lacked motivation and engagement as they felt it was important community-based work that went “beyond a just a grade”. Many students recognized this project also required an added obligation to do good work for their community partner/mentor.

### Community Partner Perspective

Partners from all 43 projects from the past 5 years completed the survey and are included in the results. Overall, projects met the needs of the community partners needs based on a weighted average of 4.4 (scale 1-Not very well to 5-Very Well). Data collected from the projects were found to be useful to the community partner’s planning and program development based on a weighted average of 4.6 (scale 1- Not very useful to 5-Very Useful). Partners indicated several ways the data would be used in their organizations, included using it as a baseline data or in additional program planning. For example one partner indicated that “they plan to collect additional data as this served as a baseline but this was a great starting point for program planning for a new initiative”. Table 3. outlines

quotations from community partners on how the data was utilized at their organizations.

How well the students met course objectives from the perspective of community partners is summarized in Figure 1. Overall, community partners felt students did very well on all course-related objectives rating them, on average, a 4 point scale (scale 1-Not very well to 5-Very well). Students were able to develop their skills to more effectively identify health needs and work with a community mentor in this process. An area for improvement included working more effectively as part of a team for students. Community partners also assessed students on various professional skills with a similar scale (1- Not very well to 5- Very well), and found students to be dependable, got work done on time, and professional when working with the mentor. Community partners identified areas for improvement for students to be writing skills and identifying sources of information, as noted by the lower ratings.

### DISCUSSION

Dealing with real-world problems and assessments are challenging and may not always work out. This is a life lesson that most students will learn when they are in their first professional job, so preparing them early is important. This course employed a real-world design that was challenging and had risks that not all projects would be as successful as others, but meaningful learning still took place regardless of the outcome. This was an overall effective approach to not only prepare students, meet course objectives, but also helped community-based organizations meet their needs for data collection. Students found the work to be beneficial to their learning and provided opportunities to network and gain hands on experience. It was important to clearly outline and scaffold the sections of the project within the course so it was not overwhelming, and students could turn in low stakes drafts and obtain feedback. Continuing to reiterate the importance of reflection, adaptation, and flexibility during the project to students was important. One of the biggest factors to student’s success was communication within the groups and steering the groups back to their group contracts if groups encountered any conflict. Students ability to write professionally was a challenge and was noted by the community partners through their evaluation, so continuous feedback is very important through

successive drafts. Students also struggled with understanding what constituted an evidenced based source and finding appropriate sources for the background section, which often proved to be the most challenging section of the paper to write for students. Additional time, instruction, examples, drafts, and practice in this area is vital for undergraduate students.

There are several key factors related to course design, student learning, and working with community partners to consider before taking on this type of course structure. If someone would like to take on this design in their course, it is important to think about a few key elements including:

- Preparation: Prepare students well in regards to expectations & course objectives; clearly outline your expectations.
- Alignment: How does it align with your course objectives—does it? Is this appropriate for your course?
- Professionalism: Students should be reminded to be professional in all that they do, in and out of the classroom is very important. What is professionalism in terms of e-mails, working with community partners, and the community.
- Flexibility: Students should be reminded to be flexible and also course instructor must build this into course.
- Expectations: What are community site expectations – dress, behavior, safety, what to bring when not on campus conducting interviews or surveys?
- Choice: Will students have a choice in organization to work with? Will students be able to choose their topic for the project?
- Teamwork: Will the projects be individual or team-based?

Community partners were a vital piece to help with learning and mentoring students. With the help of community partners committed to each student team, they alleviated some of the challenges as they could connect students to the right people and places. Some of the success of the project hinged on the engagement of the community partner and if they were committed and responsive, which made a difference in the outcome of a project. When working with

community partners some keys to success include:

- Communication: Communicate often. Instructor should check in regularly and have students send regular progress reports.
- Partnership: Community partner should be thought of as true partner and co-educator and asked to share the responsibility for student learning, to be a mentor.
- Mutually beneficial: The instructor and community partner should agree upon projects/needs assessment that are mutually beneficial to meet both party's needs.
- Commitment: Discuss the time commitment for community partner so they understand clearly what is involved.
- Trust: Have trust and mutual respect for the community partner.
- Overview of Organization: Plan a time for community partner to provide overview of organization vision, mission, programs, and services to students by having them come to class early in the semester.

(Community Campus Partnerships for Health, 2017; Illinois State University Center for Community Engagement and Service Learning, 2018).

### Study Limitations

There are several limitations to this study. The sample is not a representative sample of the population of health promotion and education students in the United States and thus not generalizable. The research was on a small scale, involving one course at a Midwestern University.

### Implications for Further Research

Despite the limitations, the study offers unique insight over the span of 5 years through implementation of a service-based approach to teaching needs assessment skills to undergraduate students that has proven to be effective for students and community partners. There are opportunities to follow-up with students after graduation to see how they have continued to utilize these skills, particularly those they found

beneficial through this type of learning. Additional follow-up with community partners on how they are using the data from the course would be useful as well.

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Table 1. Benefits of Service Learning

Theme	Student Quote
<b>It is all about connections</b>	<p>"I think this course has really made me grow as a health educator because it got me out of my comfort zone. I learned how to better communicate with my group members and with other individuals in the community and I have made a few <b>new networks</b> now which will be really beneficial later on in my career."</p> <p><b>Networking</b> with community members, so when it was time for an internship or job searches I already had certain <b>connections</b>.</p>
<b>Hands on experience</b>	<p>"Major take-aways from this course is really just having that <b>hands on experience</b> out in the community. This project helped me <b>apply</b> my knowledge and skills onto something that is real, and can actually be used as a future reference to whomever may be researching a need in a school nutrition program."</p> <p>"It allows us to <b>put into practice</b> what we learn in the classroom and gain real experience and knowledge in our chosen major."</p>
<b>Professionalism</b>	<p>"Helped with <b>social skills</b> and getting out of my comfort zone. Chance to see what areas of public health I really enjoyed and didn't enjoy."</p> <p>"Service learning has helped me improve my <b>professionalism</b> and networking skills."</p>
<b>Ideas on career paths</b>	<p>"Gives a sense how broad the <b>community health field</b> is and <b>different settings</b>. After seeing all the projects done at different sites, I realized how big of an impact we can have on various populations."</p>
<b>Giving back to community</b>	<p>"I loved the opportunity to go into the <b>community</b> and work with other individuals. I think that this experience was more valuable than just sitting in a classroom and taking notes because as a health educator we are called to go out and <b>engage in our community</b>."</p>
<b>Serve vulnerable populations</b>	<p>"Really understanding how a community agency works, and <b>understanding needs</b> of their clients was so impactful for me. This has been such a beneficial learning experience that has not only helped me but helped an agency and their clients."</p> <p>"Community engaged course work gave me a real-life experience and helped me <b>understand the health disparities</b> that exist within a community."</p>

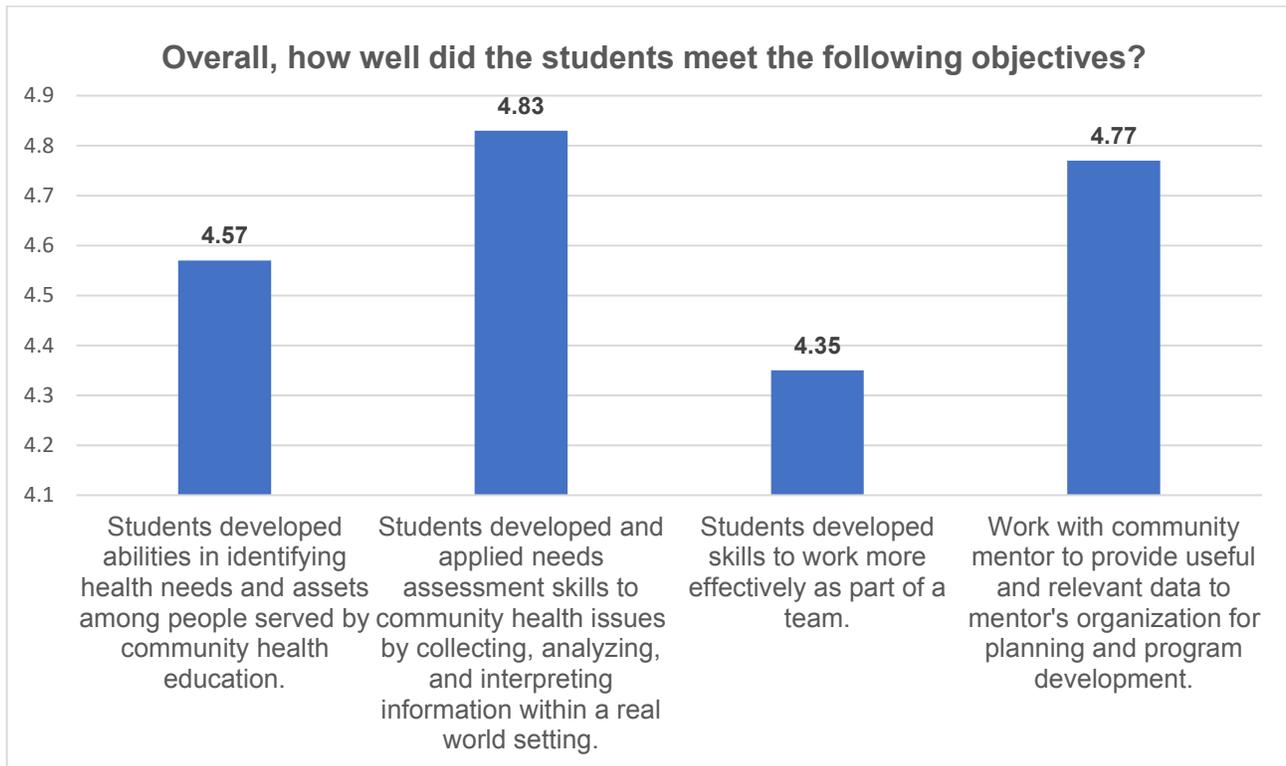
**Table 2. Challenges to Service Learning**

Theme	Student Quote
<b>Schedule conflicts</b>	<p>“Some challenges that were faced were the <b>coordination of schedules</b> amongst groupmates and organization liaisons”</p> <p>“I would say the major challenge is when I worked with others to try and align our schedules to go into the community together.”</p>
<b>Time</b>	<p>“It can be difficult to manage time with other coursework and class activities”</p> <p>“<b>Everyone is busy</b> so it can be a struggle finding the perfect time.”</p>
<b>Necessary foundational knowledge/skill</b>	<p>“It was an <b>overwhelming process</b> at times that I felt <b>intimidated</b> by at times because it was all so new”</p>
<b>Team member engagement</b>	<p>“This was a very important project but was challenging because not all team members had the <b>same motivation</b> to do a good job. They did not understand it was not just for a grade but for a community partner and it was hard to get them to care, and that was frustrating.”</p>

**Table 3. How Data Will be Utilized from Community Partners**

Quotes from Community Partners
<p>“We got some valuable information on where LINK customers get their information so this will allow us target our marketing to them about using LINK at the market and the double value coupons.”</p> <p>“I plan to consider this information when discussing ways to enhance our breakfast participation at Washington elementary with principal and cafeteria staff! I have already started a few conversations with what I learned”</p> <p>“We will use, 1) to share with community partners and, 2) Work to develop either a website or some type of web platform where parents/caregivers/daycare providers can have access to new information on infant feeding strategies”</p> <p>“We will use it when deciding what policy to focus on with our REALITY Illinois group during the next Illinois Tobacco Free Communities grant cycle. We may also incorporate it into the next community health needs assessment.”</p> <p>“When crafting the content for our organization’s social media accounts, we will definitely use the information from this project to remind people of ways to interact with social media in ways that improve quality of life, and avoid uses that are creating stress or anxiety.”</p>

Figure 1. How Well Students Met Objectives of Course



**Figure 2. Community Partner Assessment of Students on Various Professional Skills**

