The Physical Educator Vol. 80 • pp. 540–561 • 2023
https://doi.org/10.18666/TPE-2023-V80-I5-11264

WELLNESS

Developing the Civically Engaged Student Through Interprofessional Education and Community-Placed Service Learning: Three Years at Cardinal Wellness

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Abstract

While studies have examined the outcomes of interprofessional service-learning activities, the use of interprofessional, community-based health programming as an opportunity for fostering civic engagement in today's public health students is less studied. This article examines the benefits of a student-run exercise and nutrition program as an interprofessional education and service experience for undergraduate students participating in a service-learning course, degree-required practicum, capstone project, volunteer experience, or internship. An online survey with items from the Volunteer Functions Inventory, Civic Attitudes Scale, and Social Responsibility subscale of the Prosocial Behavior Battery was administered to 233 students from a diverse variety of majors. A significant increase in positive civic attitudes, volunteerism, and social responsibility scores was observed for students participating as part of one of two course-based service-learning projects, and scores on all three measures persisted at moderate-to-high levels for all students across six-semester cohorts and 3 years of

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program implementation. These results suggest that interprofessional service experiences are essential to the development of civic engagement competencies in today's students, largely through the focus on collective action for social change.

During the past decade, interprofessional education (IPE) for the health professions has grown in educational settings across the United States. With the development of the Core Competencies for Interprofessional Collaborative Practice (Schmitt et al., 2011), the inclusion of professions such as public health in IPE efforts has increased, and currently, schools of public health have been mandated to provide an interdisciplinary learning environment (Addy et al., 2015). For public health students, interprofessional experiences enable practice in clinical teamwork environments and enhance team-based performance (Chamberlin, 2015; Liller et al., 2020). Although the literature cites benefits of interprofessional education, interprofessional education and collaboration have unique barriers, including a lack of time for implementation and evaluation, competing priorities, and a lack of support from administration (Gonzalo et al., 2018). Helping students transfer the skills from interprofessional experiences in the classroom to legitimate real-world situations is another noted challenge (Chamberlin, 2015; M. Ryan et al., 2015). One potential method to encourage this application is through the pedagogy of experiential or service learning.

Experiential learning is a process during which students acquire knowledge and skills in the classroom and then apply their learnings in a cultural setting. This approach to learning originated with John Dewey (1938) and Paulo Freire (1970), both of whom viewed student experiences as central to the educational process (Kolb, 1984). Today, service learning as a type of experiential learning has become a unique pedagogical technique adopted by many universities as a method that moves beyond traditional health education and immerses learners in the realities and complexities of a multicultural community (Flannery & Ward, 1999; Mooney & Edwards, 2001). Service learning promotes knowledge through a cycle of action and reflection where students actively apply their learning in the classroom to a community issue (Mennen, 2006) and then reflect on their experiences as they work to achieve a specific objective with and for the community. Service learning can be distinguished from other

forms of experiential education through its goal of ensuring equal focus on the service provided and the learning that occurs (Furco, 1996). As such, it facilitates students in making the connection between practice and theory while fostering critical thinking skills such as analyzing, synthesizing, and evaluating (Horning et al., 2020).

While studies have examined the outcomes of interprofessional service-learning activities (Buff et al., 2011; Hope et al., 2005; Moton et al., 2020; Sullivan et al., 2015), there has been less research that examines how interprofessional, community-based health promotion programming serves as an opportunity for fostering civic engagement and social responsibility in today's public health students (Housman et al., 2012; Jacoby, 2015). While not a direct reflection of curricular learning outcomes, the need for students who can act as public health advocates in the workforce and in the general citizenry is significant; students must be prepared to act as decision makers to shape public policy that addresses today's ongoing public health concerns. These competencies require student-learning outcomes incorporated into health education and health promotion courses that assess civic engagement, empathy, and respect for diverse populations. Interprofessional experiences that involve community-based service may establish these competencies in students; such activities encourage an appreciation for diverse viewpoints (within teams and in community interactions) and an appreciation for collective action to address social issues (across majors and areas of practice; Wright, 2015). Scholarship is also still investigating the best modalities for implementation of interprofessional education in health promotion classrooms (e.g., simulations, class-based experiences, volunteer/extracurricular opportunities, or capstone internship or practicum work; Howell et al., 2021). In the context of content-specific health education and promotion curricula, there are ambiguities relative to which courses are the best fit for interprofessional experiences in higher education. Moreover, the analysis of interprofessional experiences that are sustained across multiple semesters is necessary and helps ensure program outcomes are not simple artifacts of a specific semester's students but instead expected outcomes connected to the overall scope of the program's design.

The purpose of this analysis was to investigate an interprofessional service-learning experience involving a community-based exercise

and nutrition education program for an underserved population, particularly attending to the success of the educational approach in fostering civic engagement, volunteerism, and positive civic attitudes among students. We explored the pre/post-involvement effect of interprofessional education with undergraduate health education and promotion students engaging in program activities in collaboration with exercise science, nutrition, and nursing students. We used a quantitative, survey-based methodology to evaluate positive civic attitudes, volunteerism, and social responsibility outcomes across six semesters, including two courses, multiple practicum experiences, and volunteering hours spanning 3 years of program administration. We suspected a significant increase in social responsibility, volunteerism, and positive civic attitude scores from precourse assessment to postcourse assessment for students engaging in the program planning Health Science (HSC) 302 course and the social marketing for public health HSC 494 course. Both courses encouraged embedded experiences at the program, with learning outcomes that assess student ability to integrate their engagement within health education and promote knowledge, skills, and planning activities. The course experiences were staggered across two subsequent courses, ensuring consistency in involvement and expectations. We also predicted no significant difference in social responsibility, volunteerism, and positive civic attitudes scores across the five semester cohorts of students serving in various roles at the program, because the roles associated with program involvement remained consistent across its sustained implementation.

The Cardinal Wellness Model

Cardinal Wellness (CW) is a comprehensive program of obesity treatment that provides community-driven physical activity and nutrition education programming. The program, delivered in a community church located in a highly concentrated area of poverty, includes 50 to 60 min of aerobic exercise, an accompanying sample of a healthy meal or snack, biweekly nutrition education sessions, and physical and biometric assessments of community participants every 3 months. Throughout the program's 3 years of implementation, 288 Zumba classes were taught on Monday and Thursday evenings, for 48 weeks per year. Four trained community instructors taught the Zumba classes, lending to the program's consistency. On

most program nights, at the end of the aerobic dance session, participants obtained a food sample and took home a recipe to make the meal themselves. Every 2 weeks, a 30-min nutrition education class was offered, with a curriculum adapted to align with the National Diabetes Prevention Program (2018). Thirty nutrition education classes and 160 different healthy food samples were provided across the program's duration. Free childcare was available for babies and toddlers during the exercise portion of the class, whereas older children were encouraged to participate in both the physical activity and the nutrition component.

The CW program was facilitated by a staff comprised almost entirely of college students taking courses at an adjacent Midwestern university. Students engaged through participation in a service-learning course (HSC 302/494), internships, practicum hours in exercise science, volunteering hours through a course with a community service hours requirement (HSC 180: Introduction to Community Health), or standard student employment. Table 1 shows a description of the roles and number of students involved in each position across the 3 years of program administration. Prior to working in the program, all students were required to complete human subjects training and were approved by the university's institutional review board.

The majority of students conducting the physiological assessments of participants were exercise science majors in concentrations ranging across pre-athletic training, pre-occupational or physical therapy, or health and fitness professions. The Exercise Science Practicum learning outcomes were to (1) acquire "hands-on" experience in an occupational setting; (2) demonstrate understanding of ability to assess indices of health fitness including body composition, muscular strength, and endurance, aerobic fitness; (3) demonstrate understanding of ability to assess indices of human mobility/stability and athletic performance; and (4) demonstrate knowledge and skills relevant to the National Association of Colleges and Employers eight professional development core competencies.

The nutrition education and food preparation portion of the program was primarily directed by a small group of undergraduate students majoring in nutrition and dietetics, overseen by a graduate student in the same program. The undergraduate students were

Table 1
Student Involvement in Cardinal Wellness, Fall 2018–Current

Pathway	No. of students	Primary student roles at program
Fall 2018 (n = 42)		
EXC Practicum	7	Physical Assessments
HSC 494	31	Social Marketing Focus Groups/Program
Service Hours (HSC 180)	0	N/A
Nutrition Assistants	4	Kitchen/Food Prep
Spring 2019 (n = 22)		
EXC Practicum	10	Physical Assessments
Service Hours (HSC 180)	7	Childcare, Program Check-In
Nutrition Assistants	4	Kitchen/Food Prep
Internship	1	Program Management
Fall 2019 (n = 52)		
EXC Practicum	8	Physical Assessments
HSC 494	33	Social Marketing Focus Groups/Program
Service Hours (HSC 180)	6	Childcare, Program Check-In
Nutrition Assistants	4	Kitchen/Food Prep
Internship	1	Program Management

Table 1 (cont.)

Pathway	No. of students	Primary student roles at program
Spring 2020 (n = 35)		
EXC Practicum	8	Physical Assessments
HSC 302	23	Social Media Programming/On-Site Courses, Kitchen/Food Prep, Program Check-In
Service Hours (HSC 180)	0	N/A
Nutrition Assistants	4	Kitchen/Food Prep
Fall 2020 (n = 45)		
EXC Practicum	7	Physical Assessments
HSC 494	36	Social Marketing Focus Groups/Program
Service Hours (HSC 180)	0	N/A
Nutrition Assistants	1	Kitchen/Food Prep
Internship	1	Program Management
Spring 2021 (n = 37)		
EXC Practicum	4	Physical Assessments
HSC 302	23	Social Media Programming/On-Site Courses, Kitchen/Food Prep, Program Check-In
Service Hours (HSC 180)	7	Childcare, Program Check-In
Nutrition Assistants	3	Kitchen/Food Prep

Note. HSC = Health Science; EXC = Exercise Science.

tasked primarily to select recipes, shop for food items, and prepare samples each evening. They also selected nutrition education topic ideas and delivered the content on selected evenings. Students taking courses with requirements for community service hours and from other health-related majors, including education and nursing, aided in health education, data management, promotional efforts, and childcare. All students were first trained in roles matched to their particular academic discipline, with subsequent training relative to the secondary roles. Students were shifted throughout the various program roles (i.e., exercise science students working in nutrition, health education students conducting physical assessments, etc.) as needed, on the basis of staffing needs each evening. Apart from general program engagement, two different health education and promotion courses were involved in service-learning projects associated with the CW program.

Health Education and Promotion Courses

The HSC 494 course worked primarily with senior majors completing their final semester of coursework before internship. The course sought to highlight the skills necessary for students to deliver health education programs in a variety of settings, where micro-level (interpersonal interactions) and macro-level (organizational and mass media) applications were emphasized. Many of the course objectives were achieved in the context of a semester-long group project, where each student was asked to identify a health problem and an appropriate audience, for which they developed a social marketing–driven health campaign. Across the Fall 2018, Fall 2019, and Fall 2020 semesters, approximately 30 students (each semester) were asked to take part in an immersive learning experience in which the primary audience was community members from the CW program and the health problems were selected on the basis of what was most relevant to the community. Using recorded videos of focus groups conducted with CW members, students worked together to devise a shortened list of health topics that seemed meaningful and matched to the interests of CW members. From that list, each student selected a specific topic, discussed as relevant by community members, for their larger course project. The plans were required to integrate community viewpoints as much as possible, including the use of focus group recordings and observations from the program's

social media site. The students also recruited for and conducted their own focus groups with community members each semester.

At the completion of the course, each student group was asked to orally present their written integrative summary. The summary featured a complete social marketing plan based on their insights from the focus groups, including an environmental analysis, problem analysis, target audience analysis, logic model featuring program goals and objectives, message design and positioning/branding justification, partnership analysis, and three required media deliverables. These included the storyboard for one video public service announcement, five social media posts, and one print material (billboard, flyer, brochure, etc.). The evaluation of student progress toward the proposed course objectives was completed in a variety of ways, including small and large course assignments focused on the development of community-based research and social marketing skills. These included two 50-point exams on course vocabulary and social marketing principles, as well as planning worksheets, a focus group moderator guide and report of findings, and a written/oral presentation of their final marketing campaign.

HSC 302 was the second in a two-semester program planning course sequence. The course focus was on establishing competency in needs assessment, program creation, program implementation, and program evaluation. The second course in the sequence, HSC 302, was focused most closely on program implementation and evaluation. Students in HSC 302 across the Spring 2020 and Spring 2021 semester were asked to implement the social marketing programs designed by the previous semesters' 494 students. The students first familiarized themselves with the topic and plans of the previous semesters' students through a briefing presentation assignment. Additionally, the students were required to attend the CW program twice across the semester, prior to their on-site class. At one visit, they were asked to help as kitchen staff, and at the other, they were asked to help as part of participant check-in procedures. Following, the social media content designed by the 494 students was published on the program's Facebook page and print materials were distributed on-site during brief educational sessions focused on each topic of interest. The students created a budget associated with the on-site educational session, as well as an evaluation plan

that integrated process and outcome evaluation markers through a postprogram survey that evaluated participants' engagement with the social media content. At the end of the semesters, the students created a final report and oral presentation to share the results of the social media and participant evaluation measures.

Method

Approval for this analysis was obtained from the university Institutional Review Board. At the end of program involvement, all students who participated in CW activities, including course-based activities, practicum experiences, and general community service, were asked to complete either an online survey assessment or an anonymous paper version available during a final evaluation class period. Students involved in CW through the context of an immersive learning course experience completed our survey assessment at the beginning and end of each semester, whereas all other students completed the assessment only at the end of their time working with the program.

The students were asked to reflect upon their work with CW and the class projects generally, using a prompt that permitted an open-ended response. Additionally, students were to complete the Volunteer Functions Inventory (VFI; Clary et al., 1998), the Social Responsibility subscale of the Prosocial Behavior Battery (Penner, 2002) and Civic Attitudes Scale (Mabry, 1998). The VFI is a 30-item measure of motivation to volunteer. The scale includes six separate functional motives, including protective motives (to protect one's ego from life difficulties), value development, career motives, social motives (volunteering to improve social ties), understanding (to gain knowledge/skills), and enhancement (to help develop one's ego). For each item, respondents are to indicate "How important or accurate each of the 30 possible reasons for volunteering were for you in doing volunteer work." Respondents answer each item on a 7-point scale. The Civic Attitudes Scale includes 10 items that measure civic attitudes related to participation in community service, and the Social Responsibility subscale of the Prosocial Behavior Battery includes seven items that assess the extent to which individuals are willing to assume responsibility to help others and solve societal problems, both on a 5-point Likert-like scale. Adaptations were made to existing scales assessing perceived course impact on civic attitudes, social

responsibility, and volunteerism to fit CW program involvement specifically.

Students were grouped into semester cohorts as well as course clusters to permit pre/post and post-only analyses. Regarding the pretest and posttest differences across HSC 302/494 students, paired-samples *t* tests were used in the investigation of significant differences. Analyses of variance (ANOVA) were used in the evaluation of the cohort effects for the three outcome variables. Significance was determined at .05. All statistical analyses were performed with the Statistical Package for the Social Sciences (v. 23.0 for Windows, SPSS Inc., Chicago, IL, United States).

Results

From a population of 233 unique students involved in the program across 3 years, a sample of 146 students completed the pre/post-test assessment as part of their participation in a course-based service-learning opportunity, whereas 34 participants completed only the posttest assessment as part of their participation in an internship, practicum, or volunteer experience. This entails that just over 77% of students involved in the program completed at least a posttest assessment to evaluate their experiences. Of those respondents, 138 students identified as female and 38 identified as male. The average age of our respondents was 21 years. When asked to report their ethnicity, 140 students self-reported as White, 32 students as African American, four students as Asian, and four students as Hispanic American.

Students were assessed pre- and postcourse relative to their perceptions of their own social responsibility, volunteerism, and positive civic attitudes. Across all three outcomes, statistically significant increases in scores emerged (Table 2). In more specific reference to actual scale items, when the students were asked to indicate their level of agreement that "social problems are more difficult to solve than I used to think," there was a statistically significant decrease in perceptions of difficulty ($t = 1.767$, $p = .088$). The postcourse average decreased from 4.11 to 3.82, for which 5 equals *strongly agree* with the statement presented. A statistically significant increase in scores was also observed in agreement with the statement "I feel I can have an impact on solving problems in my community" ($t = -3.071$, $p = .005$).

Table 2
Pre/Post-Test Outcomes: Social Responsibility, Volunteerism, Positive Civic Attitudes, All Students—HSC 302 and 494 (combined), n = 146

Scale	Pretest *M*	Posttest *M*	*t*	Significance (2-tailed)
Social Responsibility	4.1	4.53	-2.85	.008**
Volunteerism	4.13	4.57	-3.50	.007**
Positive Civic Attitudes	4.0	4.30	-1.79	.043*

*$p < .05$. **$p < .01$.

Apart from pre- to postcourse outcomes for students in the two course-based service-learning opportunities, outcomes were assessed relative to changes in average scores on the measures of note across semester cohorts. As Table 3 shows, students taking part in the program across the Fall 2019 and Spring 2021 cohorts demonstrated higher average scores across all three outcome variables than those participating in other semesters. Students participating as part of the Fall 2020 cohort reported the lowest average scores across all three measures, when compared to other cohorts. Three one-way ANOVA were conducted to evaluate if semesters of participation had a relationship with average scores on the social responsibility, volunteerism, and positive civic attitude scores. The independent variable, the semester of participation, included each of the six semesters of interest, and the dependent variable was the average score on each outcome variable. None of the ANOVA were significant at the $p < .05$ level: social responsibility, $F(5, 138) = 2.34$; volunteerism, $F(5, 140) = 1.69$; positive civic attitudes, $F(5, 132) = 2.67$. Even though average scores differed across semesters, none of the observed variance from semester to semester was more than expected by chance.

Discussion

In the current social landscape, the development and refinement of skills that enhance the ability of today's student to contribute meaningfully as civically responsible community members is an important agenda (Gal & Gan, 2020). One potential mechanism for enhancing these skills is involvement in community-based service learning, within and outside of the classroom space (Veyvoda

Table 3
Descriptive Statistics, Semester Cohorts, and Civic Engagement Outcomes

Semester/Variable	*M* (*SD*)
Fall 2018 (*n* = 35)	
Social Responsibility	4.33 (.69)
Volunteerism	4.43 (.33)
Positive Civic Attitudes	4.68 (.44)
Spring 2019 (*n* = 9)	
Social Responsibility	4.55 (.22)
Volunteerism	4.52 (.34)
Positive Civic Attitudes	4.49 (.19)
Fall 2019 (*n* = 39)	
Social Responsibility	4.67 (.21)
Volunteerism	4.62 (.20)
Positive Civic Attitudes	4.45 (.33)
Spring 2020 (*n* = 29)	
Social Responsibility	4.44 (.27)
Volunteerism	4.32 (.34)
Positive Civic Attitudes	4.12 (.50)
Fall 2020 (*n* = 36)	
Social Responsibility	4.32 (.11)
Volunteerism	4.12 (.07)
Positive Civic Attitudes	4.22 (.31)
Spring 2021 (*n* = 32)	
Social Responsibility	4.66 (.18)
Volunteerism	4.54 (.21)
Positive Civic Attitudes	4.56 (.16)

et al., 2020). While learning to better understand diverse perspectives and gaining knowledge of the lived experiences of others are important activity outcomes that can be fostered from interactions with community members, it is important for scholarship to investigate if these outcomes can be enhanced when students work interprofessionally, in conjunction with other students and the public from diverse personal and professional backgrounds (Chiva-Bartoll & Fernández-Rio, 2022). This study's assessment of an interprofessional service-learning experience involving a community-based exercise and nutrition education program for an underserved population examines, specifically, the impact of participation in a course-based service-learning experience that integrates opportunities for interprofessional learning on a variety of civic learning outcomes for health education and promotion students. Additionally, this study assesses these outcomes across six semester cohorts of students across various majors, to better understand if the observed effects can be maintained across time.

In relation to the effectiveness of program involvement on students participating in one of two course-based service-learning projects working in conjunction with the CW program, we observed a significant increase in positive civic attitudes, volunteerism, and social responsibility scores. The greatest change from pre- to post-course was in volunteerism scores; however, the change in social responsibility scores was also notable. While average scores across all three outcomes variables preinvolvement were high (above 4 on a 5-point scale), participation in the service activities, which includes close engagement with a variety of diverse community members, had a positive influence on the civic engagement perceptions of the health education and promotion students. Additionally, the ability to engage in a variety of tasks in an open nature (program management, fitness assessments, food preparation and safety, nutrition education) may have helped to establish the wider significance of one's impact on the well-being of participants, leading to higher scores in volunteerism and social responsibility. Our data reinforces the seminal work of Alexander Astin (1997) in that the environment students best learn "in" is the pervasive effect of the peer group on the individual student's development.

In addition to assessment of the outcomes of course-based service-learning involvement on students taking part in HSC 302 and 479, we investigated the effects across semester cohorts of students, coming from different majors and serving in different project roles, could be maintained across 3 years of program implementation. While the number of students serving in the various roles was different across each semester cohort (Table 1), postinvolvement scores across the three outcome measures remained generally consistent. The three semesters presenting the lowest scores included Fall 2018, Spring 2020, and Fall 2020. The low score across Fall 2018 could be contributable in some part to the novelty of the program, as this was the first semester that CW began serving the community. During this semester, overall participation numbers were quite low (between 5 to 25 participants each evening), as the program was still gaining momentum and integration within the community. This lack of clientele, another limitation, led to a more homogenous population overall, which would have likely impacted perceptions of diversity expressed by the students.

The Spring 2020 and Fall 2020 semesters also represented average scores, and again, these findings might be attributed to other extraneous factors. During these semesters, the number of participants and nature of instruction was altered dramatically due to the COVID-19 pandemic. In the middle of the spring semester, in-person exercise and nutrition classes were halted and shifted to online modalities (Facebook, largely), to protect participants' safety. On-campus courses were also shifted online, and those students designing in-person health education courses for CW were asked to instead present their content virtually, on the program's social media accounts. Such a shift removed the possibility for interaction and personal engagement with community participants, likely leading to the drop in average scores across all outcome variables. This method of instruction (for both the community program and the students) continued into the Fall 2020 semester, and lower scores persisted. While our analysis did not indicate a significant difference in scores across semester cohorts, the observed lower averages were heavily influenced by the arrangements made during the pandemic. The return to normal in-person instruction, live student programming,

and on-site training for students in Spring 2021 contributed to a return in more moderate-to-high average scores across all measures.

Nonetheless, when those semesters influenced by modality changes and the pandemic were removed, the postprogram scores across all civic engagement measures remained consistent, and moderate-to-high, across the 3 years of program implementation. Our findings are similar to that of R. Ryan (2017), who examined if significantly higher levels of empathy, social responsibility, community and personal involvement, self efficacy, and prosocial tendencies existed in students engaging in a service-learning project (n = 21) compared to students in a control group (n = 14), while accounting for preexisting differences in the groups due to the lack of random assignment. Similar to students in R. Ryan's (2017) study, CW students favored the variety of activities and appreciated the opportunity for civic responsibilities and volunteerism intertwined with their regular coursework, especially in working among peers for a common good. Maintaining an equitable number of student participants across the service-learning courses, practicum activities, and general volunteer hours was often challenging, yet the influence of involvement on positive civic attitudes and volunteerism remained relatively unchanged. We recognize that, as a test of only postprogram perceptions, those students drawn to participation each semester may be those who already maintain a commitment to civic responsibilities. However, such a finding may speak to the sustainability of the CW approach in establishing a long-term, evidenced structure for permitting students from diverse majors to work together, learn from one another, and develop an authentic understanding of the lived experiences of community members on their path to positive well-being.

Limitations

While the outcomes associated with our analysis suggest the value in integrating interprofessional, community-based projects to enhance the civic engagement competencies of future health professionals, there are limitations to the validity and replicability of our findings. First, the study assesses pre- and postprogram only students taking part in the course-based service learning experience. In that, we are unable to make claims regarding the impact of program involvement on students taking part in other program roles.

Additionally, average scores on all three outcomes measures are high (above 4 on a 5-point Likert scale), indicating that students may have entered the experience with preexisting positive attitudes regarding civic responsibility and volunteering. It may indeed be the case that students who already find value in civic engagement and community projects are drawn to take part in service-learning courses and community-based work or that students drawn to "helping" professions may take away more from these experiences than others do. In light of our cohort-based comparison, the analysis features the inclusion of the Spring 2019 semester, with only nine student responses available. As no course-based serving learning took place in this semester, it is difficult for us to make claims regarding the outcomes of this cohort compared against others.

Future Directions

Our analysis supports the continued inclusion of interprofessional, community-based projects to enhance the civic engagement outcomes of students in health and human services–oriented majors. The positive influence of our program across 3 years of student cohorts suggests that the positive outcomes from such programs can be attributed to program activities and are not mere artifacts from a single semester of students. It may be useful for research to assess long-term outcomes from students who engage in similar programs across multiple semesters. The influence of the program may be even stronger for these students engaging in multiple years of involvement. From the point of view of the university, future research may also benefit from considering the influence of involvement on students who are not part of the social sciences, because these students may be less likely from the start to take part in courses that involve community-based learning. Because the majority of students taking part in the CW program were doing so as part of a defined course project or requirement, future research may also benefit from assessing the impact of involvement (pre- and postexperience) on students taking part as volunteers or for non-course-based activities and comparing this influence against that of course-based outcomes. Additionally, while this analysis focuses on the influence of program involvement on civic engagement outcomes, future research should also consider the short- and long-term influence of such activities on

curricular competencies, subject-based learning, critical thinking, teamwork, and other pertinent applied learning skills.

Conclusion

Across 3 years of program implementation and over 200 student workers and coordinators, the CW program has established itself to be a sustainable method for encouraging interprofessional experience and civic-mindedness in health-related majors. There are several service-oriented programs, across universities, that provide experiential learning through one-off programs implemented in a single semester. We question whether social responsibility, volunteerism, and positive civic attitudes are as strong as CW. This may be an interesting comparison for a future study. The uniqueness of CW has been its sustainability, with weekly programming 50 weeks a year and a location embedded in an impoverished neighborhood, allowing community members to trust the university and the agents that facilitate the program.

While the pandemic influenced the nature of instruction and involvement, the program endured these challenges. For students taking part in structured, course-based service-learning projects, projects that positively impacted the health and well-being of community members in need, involvement led to increased interest in volunteering, more positive attitudes about one's ability to influence the community, and a greater sense of responsibility to address civic problems. Their interactions with other student professionals and work responsibilities outside of their traditional areas of practice likely contributed to these outcomes. As educators continue to pursue creative methods of instruction that promote real-world application, an appreciation for empathy, diversity, and critical engagement with the social problems in our communities today, it is evident that interprofessional, community-based service programs may be a potential mechanism for incubating these forms of learning.

References

Addy, C. L., Browne, T., Blake, E. W., & Bailey, J. (2015). Enhancing interprofessional education: Integrating public health and social work perspectives. *American Journal of Public Health*, *105*(S1), S106–S108. https://doi.org/10.2105/AJPH.2014.302502

Astin, A. W. (1997). *What matters in college?* Jossey-Bass.

Buff, S. M., Gibbs, P. Y., Oubré, O., Ariail, J. C., Blue, A. V., & Greenberg, R. S. (2011). Junior Doctors of Health©: An interprofessional service-learning project addressing childhood obesity and encouraging health care career choices. *Journal of Allied Health*, *40*(3), 39E–44E.

Chamberlin, J. S. (2015). *College faculty experiences assigning service-learning and their inclination to continue* [Doctoral Dissertation, Walden University]. ScholarWorks Repository. https://scholarworks.waldenu.edu/cgi/ viewcontent.cgi?article=1509&context=dissertations

Chiva-Bartoll, O., & Fernández-Rio, J. (2022). Advocating for service-learning as a pedagogical model in physical education: Towards an activist and transformative approach. *Physical Education and Sport Pedagogy*, *27*(5), 545–558. https://doi.org/10.1080/17408989.2021.1911981

Clary, E. G., Snyder, M., Ridge, R. D., Copeland, J., Stukas, A. A., Haugen, J., & Miene, P. (1998). Understanding and assessing the motivations of volunteers: A functional approach. *Journal of Personality and Social Psychology*, *74*(6), 1516–1530. https://doi.org/10.1037/0022-3514.74.6.1516

Dewey, J. (1938). Education, democracy, and socialized economy. *Teachers College Record*, *5*(40), 71–72.

Flannery, D., & Ward, K. (1999). Service learning: A vehicle for developing cultural competence in health education. *American Journal of Health Behavior*, *23*(5), 323–331. https://doi.org/10.5993/AJHB.23.5.1

Freire, P. (1970). The adult literacy process as cultural action for freedom. *Harvard Educational Review*, *40*(2), 205–225. https://doi.org/10.17763/haer.40.2.q7n227021n148p26

Furco, A. (1996). Service-learning: A balanced approach to experiential education. In J. Raybuck (Ed.), *Expanding boundaries: Serving and learning* (pp. 2–6). Cooperative Education Association.

Gal, A., & Gan, D. (2020). Transformative sustainability education in higher education: Activating environmental understanding and active citizenship among professional studies learners. *Journal of Transformative Education*, *18*(4), 271–292. https://doi.org/10.1177/1541344620932310

Gonzalo, J. D., Caverzagie, K. J., Hawkins, R. E., Lawson, L., Wolpaw, D. R., & Chang, A. (2018). Concerns and responses for integrating health systems science into medical education. *Academy of Medicine*, *93*(6), 843–9. https://doi.org/10.1097/ACM.0000000000001960

Hope, J. M., Lugassy, D., Meyer, R., Jeanty, F., Myers, S., Jones, S., Bradley, J., Mitchell, R., & Cramer, E. (2005). Bringing interdisciplinary and multicultural team building to health care education: The downstate teambuilding initiative. *Academic Medicine*, *80*(1), 74–83. https://doi.org/10.1097/00001888-200501000-00020

Horning, M. L., Ostrow, L., Beierwaltes, P., Beaudette, J., Schmitz, K., & Fulkerson, J. A. (2020). Service learning within community-engaged research: Facilitating nursing student learning outcomes. *Journal of Professional Nursing*, *36*(6), 510–513. https://doi.org/10.1016/j.profnurs.2020.04.005

Housman, J., Meaney, K. S., Wilcox, M., & Cavazos, A. (2012). The impact of service-learning on health education students' cultural competence. *American Journal of Health Education*, *43*(5), 269–278. https://doi.org/10.1080/19325037.2012.10599245

Howell, B. M., Redmond, L. C., & Wanner, S. (2021). "I learned that I am loved": Older adults and undergraduate students mutually benefit from an interprofessional service-learning health promotion program. *Gerontology & Geriatrics Education*, *42*(2), 252–267. https://doi.org/10.1080/02701960.2020.1791104

Jacoby, B. (2015). *Service-learning essentials: Questions, answers, and lessons learned*. Jossey-Bass.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development.* Prentice-Hall.

Liller, K. D., Pruitt, Z., & Burke, S. G. (2020). Interprofessional education: Reaching health professionals with an interactive professional virtual/online event on advocacy and policy. *Frontiers in Public Health*, *8*, Article 878. https://doi.org/10.3389/fpubh.2020.606394

Mabry, J. B. (1998). Pedagogical variations in service-learning and student outcomes: How time, contact, and reflection matter. *Michigan Journal of Community Service Learning*, *5*(1), 32–47.

Mennen, K. (2006). Use service learning to add real-world writing experience to your course. *Business Communication Quarterly*, *69*(2), 192–195. https://doi.org/10.1177/108056990606900209

Mooney, L. A., & Edwards, B. (2001). Experiential learning in sociology: Service learning and other community-based learning initiatives. *Teaching Sociology*, *29*(2), 181–194. https://doi.org/10.2307/1318716

Moton, R., Baus, C., Brandt, C., Coleman, A., Kennedy, K., Swank, S., Tran, M., Kazen, K., Allen S., Moote, R., & Evoy, K. E. (2020). Stop the bleed: An interprofessional community service learning project assessing the efficacy of pharmacist-led hemorrhage control education for laypersons. *Disaster Medicine and Public Health Preparedness*, *15*(3), 1–6. https://doi.org/10.1017/dmp.2020.8

National Diabetes Prevention Program. (2018). Retrieved July 1, 2021 from https://www.cdc.gov/diabetes/prevention/index.html

Penner, L. A. (2002). Dispositional and organizational influences on sustained volunteerism: An interactionist perspective. *Journal of Social Issues*, *58*(3), 447–467. https://doi.org/10.1111/1540-4560.00270

Ryan, M., Vanderbilt, A. A., Mayer, S. D., & Gregory, A. (2015). Interprofessional education as a method to address health needs in a Hispanic community setting: A pilot study. *Journal of Interprofessional Care*, *29*(5), 515–517. https://doi.org/10.3109/13561820.2015.1020360

Ryan, R. G. (2017). Social and cognitive outcomes of service learning: Results from a pre-post and control group comparison. *Journal of Community Engagement and Higher Education*, *9*(3), 19–34.

Schmitt, M., Blue, A., Aschenbrener, C. A., & Viggiano, T. R. (2011). Core competencies for interprofessional collaborative practice: Reforming health care by transforming health professionals' education. *Academic Medicine*, *86*(11), 1351. https://doi.org/10.1097/ACM.0b013e3182308e39

Sullivan, K., Charrette, A., Massey, C., Bartlett, D., Walker, C., Bond, I., Bylaska-Davies P., Scheidt N. A., & Fong, J. J. (2015). Interprofessional education with a community fall prevention event. *Journal of Interprofessional Care*, *29*(4), 374–376. https://doi.org/10.3109/13561820.2014.969834

Veyvoda, M., Van Cleave, T. J., & Olson, L. (2020). Service-learning in allied health education: Developing ethical practitioners through community-engaged teaching and learning. In E. Sengupta, P. Blessinger, & C. Mahoney (Eds.), *Civil society and social responsibility in higher education: International perspectives on curriculum and teaching development* (Vol. 21). Emerald Publishing Limited. https://doi.org/10.1108/S2055-364120200000021010

Wright, D. E. (2015). *Active learning: Social justice education and participatory action research*. Routledge.