Service Learning: A Vehicle for Building Health Equity and Eliminating Health Disparities

Service learning (SL) is a form of community-centered experiential education that places emerging health professionals in community-generated service projects and provides structured opportunities for reflection on the broader social, economic, and political contexts of health.

We describe the elements and impact of five distinct week-long intensive SL courses focused on the context of urban, rural, border, and indigenous health contexts. Students involved in these SL courses demonstrated a commitment to community-engaged scholarship and practice in both their student and professional lives.

SL is directly in line with the core public health value of social justice and serves as a venue to strengthen community–campus partnerships in addressing health disparities through sustained collaboration and action in vulnerable communities. (*Am J Public Health.* 2015;105:S38–S43. doi: 10.2105/AJPH.2014.302364)

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THE INSTITUTE OF MEDICINE has called for integration of ecological approaches that consider the social, economic, and political context of health into public health education.[1] However, there are limited reports on how to teach and measure the outcomes of education programs that link learning and application of these concepts in public health.[2] Service learning (SL) is one such pedagogy that can enhance student awareness of and commitment to the elimination of health disparities.[3–5] SL is a form of community-centered experiential education that locates emerging health professionals in community-generated service projects and provides structured opportunities for reflection on the broader social, economic, and political contexts of health.[4] Through guided reflection on academic readings and service, students link their service experience to broader systems-level thinking,[5,6] enhance cultural humility,[7,8] and increase their civic engagement.[9] Although widely applied in the clinical health professions of nursing,[10] medicine,[7,11] pharmacy,[12] and public health,[6,13,14] research on the impact of SL on students, faculty, and community partners is relatively new.[4]

We present an innovative SL initiative modeled on the reduction of health disparities through exploration, reflection, and action on the social determinants of health. Our program consists of five distinct week-long intensive SL courses that are focused on binational, urban, rural, and indigenous communities in the southwestern United States. Specifically, we describe our program's contribution to graduate public health education and ways in which students, faculty, and community partners discover and act on the social determinants of health.

ORIGINS OF THE SERVICE-LEARNING INSTITUTES

In 2005, the College of Public Health started a series of rural and urban field-based courses with funds from a Health Resources and Services Administration Maternal and Child Health Bureau (MCHB) School of Public Health Leadership training grant that evolved from a history of having MCHB certificate students conducting service-oriented projects.[15] In 2009, the Community–Campus Partnerships for Health, Health Disparities Service-Learning Collaborative provided the resources and mentorship to expand and develop an integrated SL program. Since then, five distinct week-long intensive programs have been developed in collaboration with community partners and doctoral students (Table 1).

Course development starts by having three to five meetings with agencies during the 4 months before the program to identify salient issues, events, needs, and opportunities that exist within the agency and community. Faculty, the agencies' program managers, community health workers, and outreach staff work together to develop objectives, activities, and reflection questions. In addition, several phone calls and e-mail exchanges are made with regard to materials required for the SL course and to co-develop assessment tools and promotional materials for community events.

All faculty, and in some cases, partners, develop structured critical reflection opportunities. Individual journal writing, small and large reflections, and summative oral presentations and papers are typical reflection strategies. Daily reflection questions guide the student's individual reflections. Small service-based group reflections help organize thoughts and feelings experienced during unique service activities. During large group reflections, faculty and community partners help students connect and contextualize issues encountered in academic readings and service activities. Students participate in a pre-SL orientation regarding ethical conduct; peers and community partners later reinforce themes.

The Arizona Health Education Centers Program, the MCBH Leadership Training grant, and institutional funds sustain these courses. Furthermore, Masters' students are required to take one SL course in family and child health, health behavior and health promotion, and policy and management. Doctoral students are required to take two courses, but they can elect to coteach one of

TABLE 1—Overview of Service Learning Courses and Community Impacts

Course Name	Course Location	Communities of Focus	Course Themes	Types of Partners	Student Impact	Community Impact Highlights
Urban Family & Child Health	Tucson, AZ	Refugees, immigrants, homeless, food insecure, adjudicated youths, GLBT, urban Native Americans	Immigration policy, health reform, juvenile justice, food systems, mental health, community health workers	FQCHCs, local and tribal health departments, immigrants, refugees, and GLBTs, serving not-for-profit agencies	2 MPH internships with a FQCHC and refugee resettlement agency. Topics included employee wellness and development of a wellness promoter program.	Prospective assessment of agency needs pre- and post-roll out of the ACA. Conducted > 300 surveys and 2 focus groups with staff and patients, and developed 6 reports on knowledge, attitude, and behavior related to the ACA.
Indigenous Family & Child Health	Hualapai, Navajo, Hopi, White Mountain Apache Nations	Families, elders, schools, and tribal and county health agencies and programs	Indigenous health systems, sovereignty, traditional lifestyles, CHRs, school health, relationship between tribal and federal health systems	Tribal health departments, area health education centers, boarding schools, traditional healers	2 MPH internships with tribal health department and tribal college. Topics included needs assessment, culturally relevant programming, and evaluation of a summer health research program.	Increased computer, Internet, and presentation-making skills among 50 CHRs. Improved evaluation tools for CHR program. Introduced interactive health education to 2 reservation-based schools.
Border Health	US–Mexico border sister cities that span 3 Arizona counties and 3 Mexican municipalities	Border crossers, migrant farm workers, Mexican health systems, nongovernmental organizations	Binational/border health, globalization, economic development, immigration, migration, promotoras de salud (community health workers)	Local and Mexican health departments, local and Mexican health centers, local and Mexican immigrants, migrants, and farmworkers; not-for-profit organizations, faith-based organizations	3 student internships and 2 dissertations with a GLBT nonprofit, Mexican Institute for the Family, and a farmworkers serving nonprofit organization. Topics included need assessments, development of culturally relevant programming, and community-based environmental health research. Employment: 1 student employed by the AHEC to coordinate border health activities.	Organized and conducted 4 community-wide health forums and produced forum summary reports for partners and county leadership. After town forum state health department investigated concerns of high number of young children with disabilities. Results showed that there had been no pediatric services before, so children with any disability were seen in Tucson. Numbers were not abnormal.
Rural Health	Gila County, Graham County, San Carlos Apache Nation	Rural copper mining towns, San Carlos Apache Nation	Rural and Indigenous health care access issues, environmental and occupational health, rural community collaboration to promote health	Local and tribal health departments, AHEC, rural hospitals, schools, food bank	5 MPH internships with AHEC, local health departments, and medical centers. Topics included planning, implementation and evaluation of employee wellness programs, developing a homebound seniors program, and development of a community farm to supply the community food bank with produce.	In conjunction with the local health department faculty and DrPH students advertised and conducted a 2-h workshop for community leaders on "Helping Community Residents Get Enrolled in the Health Insurance Marketplace/Affordable Care Act (Obamacare)."

Continued

TABLE 1—Continued

Urban–Metropolitan Health	Greater Phoenix metropolitan area	Immigrant families, undocumented immigrant families and children, urban Native Americans	Health equity, immigration, stress, community art, promotoras de salud	Homeless shelter, community gardens, community clinic	3 MPH internships with state and local health department and nonprofits. Topics included integration of behavioral and physical health, evaluation of peer-run organization, and development of *promotor* program for a local nonprofit and human rights organization. Employment: Student hired by nonprofit.	Conducted 2 community health assessments; analyzed and reported data. Both survey results were used by 2 different entities: one in rebranding the behavioral health clinic and the other in expanding services to targeted community. Also increased number of student volunteer services to nonprofit organizations.

Note. ACA = Affordable Care Act; AHEC = Area Health Education Centers; CHR = community health representative; DrPH = Doctor of Public Health; FQCHC = federally qualified community health centers; GLBT = gay, lesbian, bisexual, and transgender; MPH = Masters in Public Health.

them. In our most recent student admissions survey, more than 58% of the incoming students said that the SL program was either very important or important in terms of influencing their decision to attend our college. Table 1 provides an overview and the impact of each course.

The urban family and child health SL program provides students with the opportunity to learn about current health and social policies that affect urban families and children. This course responds directly to agencies that serve immigrant and migrating populations, including undocumented and mixed immigration status families, resettled refugees, urban American Indians, and gay, lesbian, bisexual, and transgender and adjudicated youths. Panel discussions and guided observation activities are organized with human rights organizations, legal systems, and the Mexican Consulate. Students' SL ranges from neighborhood cleanup and meal preparation to development of culturally relevant health education and physical activity sessions, quantitative and qualitative formative assessment, analysis, and report preparation. In 2013, in light of monumental shifts in health reform and the challenges identified by community partners, the course focused on the Affordable Care Act (ACA). Faculty and partners from federally qualified community health centers, tribal clinics, and local health department programs prepared opportunities for critical dialogue on the development of the new health care law and implications for health care delivery and prevention for immigrant, indigenous, and refugee families. Faculty and partners codeveloped instruments to assess ACA knowledge and outreach, education, and training needs among staff and clients. Student teams conducted assessments and led focus groups with clients and staff in several sites, performed all analyses, and prepared policy briefs and presentations on findings and recommendations. Faculty and students increased their understanding of the ACA and vulnerable populations and provided much needed data to partners to prepare for the rollout of the ACA.

The indigenous family and child health SL program addresses the complex interaction of the social determinants of family and child health through working in Native American communities in northern Arizona. Through collaborative activities, presentations, and conversations with staff working for federal, tribal and state health care agencies, native healers, and reservation residents, students learn about the array of local health care services and the challenges and strategies of health care systems working to serve rural, culturally distinct populations. This course uses exchange of skills teaching approaches. Students are paired with tribal community health workers or community health representatives (CHRs). CHRs take students on a home visit to observe and assist with services provided by CHRs. Students provide nutrition and health education, reduce the risk of injury by rearranging electrical cords and throw rugs, and haul water. In return, students build CHR skills in looking for credible health information from the Internet, develop simple PowerPoint (Microsoft, Redmond, WA) presentations for community presentations and educational handouts,

and develop simple evaluation forms to gain input from their clients. Students gain insight into spiritual health and healing by visiting traditional and religious leaders, and experiencing the social camaraderie generated by planting, building a *ramada* (a roofed shelter), and breadmaking outside on an open fire.

The border health SL course focuses on the complex relationship of migration, health, and economic development at the United States–Mexico border. This course rotates each year among United States–Mexico border sister cities, giving students an opportunity to live in an Arizona border community; these students cross the United States–Mexico border almost daily. SL opportunities include a combination of applied traditional public health opportunities addressed by local, state, and federal health departments of both countries, including immunization and vector control campaigns, chronic disease prevention education, and access to care. These experiences are coupled with service in governmental and grass roots organizations focused on social determinants of health, including food insecurity, housing, humanitarian aid to border crossers, economic development, and immigration issues. This program also incorporates interactive tours and discussions with agencies and individuals integral to the globalized and militarized United States–Mexico border environment, including the Mexican consulate, the US Border Patrol, and associated immigration detention centers, humanitarian aid groups, local policy coalitions, and border crossers. Students present their final team reflections at the end of the course to community partners and faculty, integrating migration, health, and economic development within a framework of advocacy and elimination of health disparities.

The rural health SL course is designed to expose students to rural health disparity issues, such as recruitment and retention of an adequate health professional workforce, and rural health assets, such as the compassionate collaboration of innovative and dedicated rural individuals and groups to attend to a variety of population and clinical health needs. The course also focuses on community economic development, the occupational and environmental health issues of copper mining in eastern Arizona, cattle ranching, and cotton production, as well a major employers like county, city, and tribal government, tourism, small business, and a large service sector. Although students learn about factors that influence public health in a rural and Native American communities, they also perform services such as working with cooperative extension to teach oral hygiene to Head Start children with disabilities; weeding, planting, and digging post holes for a new greenhouse at the community farm and food bank; organizing sports equipment, cleaning, and painting facilities at a tribal youth summer campgrounds; and teaching health to Boys and Girls Club members ages nine to 14 years, and encouraging them to consider a health career.

The Phoenix urban SL course immerses students in the day-to-day work of federal, state, tribal, and nonprofit public health programs that serve the ethnic, racial, social, and economic diversity within the sixth largest city in the country. Students observe, reflect, and discuss how public health programs address socioeconomic challenges, migration issues, cultural beliefs, health behaviors, and access to life-sustaining resources in urban settings. This program is designed to develop, implement, and evaluate educational activities in collaboration with the community and respond to community-identified concerns. The learning modalities are diverse, and include community panel discussions with residents and leaders of the area, walking and talking tours of public art, and how the integration of art and design enhances community wellness. Students participate with residents in community gardening as a form of teaching about food deserts and sustainable development. Students are also exposed to services designed for the urban Native American population, and how these nations address homelessness among tribal members and issues related to access to care in nonreservation settings. Students also witness the critical needs of mixed immigrant families in a county known for its anti-immigrant attitudes.

EVALUATION AND DISCUSSION

Process and outcome evaluation occurs at student and community levels, whereas faculty assessment remains qualitative. Students conduct a postcourse self-assessment that focuses on how SL influenced their perspective on learning, view of service, choice of career or specialization, and perspectives on working in a diverse community.[16] This evaluation is coupled with a faculty evaluation of student's daily journals, final reflection papers, and presentations.[13,17]

Table 2 highlights major findings from the student results and provides information on the impact of the faculty and community on these results.

PERSPECTIVES ON SERVICE-LEARNING COURSES

Students reported several interpersonal changes as a result of SL, and taken together, demonstrated increased cultural humility, leadership, and commitment to community-engaged scholarship and practice in student and professional life. Several students described feelings of personal transformation:

> Service as a method for transformation—that is what our experience has been here. We were given an opportunity of a hands-on experience, not just to say, oh, we did that, that it enabled us to transform something inside of us, and bring it back to other places we work, other communities, to create change.

Students also described a renewed sense for real-world public health:

> [T]he classroom became real. For the first time as students all of our senses were engaged. Service learning allows us to engage first hand in communities and see public health theories in practice in the real world.

Other students connected theories and policies learned in class to vulnerable populations encountered in service, and as one student clearly described:

> The theories and polices we discuss in class have real world implications and we have experienced a snapshot of those implications to keep now that we have taken part in a service-learning project.

By focusing on health disparities in context and community, students came away with a sense of urgency and action to engage during their academic program. Since 2009, at least 20% of enrolled students developed their internships based on the partnerships made and the health disparities

TABLE 2—Selected Demographics and Post–Service-Learning Assessment Results for Service-Learning Students and Community Partners

Student Demographics (n = 107)	No. (%)
Gender	
Women	94 (88)
Men	13 (12)
Ethnicity	
White, non-Hispanic	67 (63)
Hispanic	13 (12)
American Indian/Alaska Native	6 (6)
African American	6 (6)
Age, y	
20–24	27 (25)
25–29	50 (47)
30–34	11 (10)
≥ 35	19 (18)
Academic program	
Maternal and child health	47 (44)
Health behavior health promotion	12 (11)
Doctor of Public Health	11 (10)
Student assessment (n = 107)	
Increased a responsibility for own learning	86 (80)
Increased awareness of own bias and prejudices	83 (78)
Increased awareness of many roles of health professions	106 (99)
Service learning helped to define personal strength(s)	93 (97)
Service learning enhanced personal leadership skills	83 (78)
Increased ability to communicate ideas to persons different than themselves	94 (88)
Service learning helped to defined career path	70 (65)
Plans to continue service with service learning partner	50 (47)
Plan to integrate service learning into career path	97 (91)
Community partner assessment (n = 35)	
Felt the benefits outweighed the cost	29 (83)
Felt valued as a teacher by the University faculty	33 (94)
Felt service learning made University aware of community needs	26 (74)
Felt community served by agency benefited	31 (88)
Anticipate a relationship with the University	97 (91)

encountered during these courses. One student described her journey in the following way:

> I was incredibly moved by how dedicated public health workers are to their communities on both sides of the border, and the amount they are able to accomplish with many barriers and limited resources. This course strengthened my interest in working with rural and underserved communities, and this has led to an internship I'm planning for this summer.

Some SL students shifted their academic and career plans to intern and work with community partners based on the social justice issues encountered (Table 1). Two student clubs were formed as a result of SL, including the Learning Understanding Community Health Advocacy; this club provides a venue for students to continue to partner and organize social justice service events with community partners for the larger student body. In 2010, a small group of students taking the border health SL course worked with faculty to develop a course focused on the Guatemala–Mexico border. This course grew in popularity, and now involves more than 25 different students in planning and financing.

Although our community partners were not directly financially compensated for their contribution to the courses, they described a desire to partner with the university and a renewed sense of commitment to public health and pride in their community; one partner described how participation in SL, ". . . reconnected me with my passion to see change." Others described how working with students affected their sense of community, "I felt so proud of my community seeing students engaged in working in the community." Faculty members described transformation and inspiration; one faculty member explained, "Service-learning transforms faculty, students, and community partners in ways that contribute to cultural humility and builds respect for all of our unique contributions to solving big, complex public health problems of today." Overall, SL programs contributed to new partnerships and the development of research and practice endeavors among faculty and community partners. By coming back year after year, faculty, and thus, the university, are seen as long-term partners and as relevant to the technical, research, and overall community needs.

CHALLENGES

SL courses require an enormous amount of time and energy to develop, implement, and sustain. To overcome these challenges, our program significantly engaged doctoral students as coinstructors. Once doctoral students completed a SL course, they were invited to coteach it. Coteaching brings new energy, directions, and partnerships to the course and helps to alleviate potential burnout among faculty and partners.

Another challenge was measuring the nuanced changes in cultural humility gained by students over time and how such change affected academic and career choices.

CONCLUSIONS

SL was described to be directly in line with the core public health value of social justice,[4,18] and served as a venue to strengthen community–campus partnerships in addressing health disparities through sustained connection and action in effected communities. Academic public health programs engaged in SL strengthened the student's ability to learn and act on social and health disparities. Our experience with SL was that it created the necessary space for student, faculty, and community partners to coanalyze social determinants of health and locate community-centered solutions. ■

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Contributors

Each author contributed to the development, writing, and submission of the article. Each author has participated in the service learning courses.

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Human Participant Protection

Reporting these results are exempt from the University of Arizona human subject protection program because they are considered an evaluation of an education program.

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