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Addressing Cultural Competency in Pharmacy Education through International Service Learning and Community Engagement

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Abstract: This paper describes the design, implementation and evaluation of a course in international service learning and community engagement for pharmacy undergraduate students. The course offered students opportunities to cultivate cultural competency in an international setting foreign to their own—Sub-Saharan Africa. The experience consisted of pre-departure preparation seminars followed by subsequent community immersion to experience, explore and confront personal attitudes and perceptions. A key feature of this course was its emphasis on a continuing cycle of learning, community engagement and reflection. Three students participated, a near-maximum cohort. Their daily self-reflections were qualitatively analyzed to document the impact of their cultural learning and experiences and revealed meaningful learning in the domains of self-assessment and awareness of their personal and professional culture, exposure to a participatory health delivery model involving the patient, the community and a multidisciplinary team and opportunities to engage in patient care in a different cultural setting. This proof-of-concept course provided students with experiences that were life-changing on both personal and professional levels and confirmed the viability and relevance of international service learning for the pharmacy field within its university-wide mandate.

Keywords: cultural competence; international service learning; undergraduate pharmacy education

1. Introduction

Cultural competence is deemed essential to delivering quality healthcare in countries with racially and ethnically diverse populations [1]. The literature on health disparities suggests that culture is a predictable contributing factor irrespective of an individual's access to the healthcare system, yet despite a steady improvement in health over the past several decades, there is increasing recognition that health inequities continue to be a problem among vulnerable and marginalized groups, such as the physically and mentally disabled, people living in poverty, aboriginal people, those living in rural and remote populations and immigrants [1–3]. The movement towards cultural competence has gained international attention, creating an impetus for post-secondary health professional programs to introduce curricula that cultivate such competence [1,2,4].

Anderson *et al.* define culture as the “integrated patterns of human behavior that include the language, thoughts, communications, actions, customs, beliefs, values and institutions of racial, ethnic, religious or social groups” ([1], p. 68). In this context, culture creates unique patterns of beliefs and perceptions as to what health and illness mean, how symptoms are recognized, to what they are attributed, how they can be prevented and treated, the threshold for seeking healthcare, likely prognosis, expectation of care and adherence to treatment protocols [1,2]. Others who postulated that culture is also shaped by social factors, such as socioeconomic status, supports/stressors and environmental hazards, have suggested considering these elements in the definition of culture [2]. Accordingly, cultural competence implies the awareness that there is a relationship between health beliefs and behaviors and “having the capacity to function effectively as an individual and an organization within the context of the cultural beliefs, behaviors and needs presented by consumers and their communities” ([1], p. 68).

While research on cultural competence is still in its infancy, the evidence linking informed shared decision-making between providers and the patient with improved treatment agreement and health outcomes postulates that improved cultural competence can similarly contribute to positive health effects [5,6]. The emphasis on cultural competence has brought increased awareness and attention among policy makers, healthcare managers and health professionals to provide services that are culturally appropriate and has clarified the need for cultural competency training within post-secondary institutions [1,2]. Nursing and medicine have been leaders in developing situated placements, including international service learning to promote cultural awareness in their curricula [7–15]. The need for cultural competency training has also been articulated in the pharmacy education literature, with the acknowledgement that practicing pharmaceutical care without cultural competency can put patients at risk of poor patient outcomes [3,4,16–18]. With this acknowledgement, pharmacy organizations in North America have introduced policies or statements addressing the need for cultural competence training within their curricula [18–21].

The need for cultural competency is also consistent with the goals and visions of the University of British Columbia (UBC) in Canada. In his May 2010 presidential address to the University Senate, UBC's President and Vice-Chancellor endorsed the University's commitment to promote cultural competence: "People who do not know how to recognize, understand and appreciate cultural difference or how to communicate across cultural and situational boundaries, are people who are unable to function effectively in many circumstances, and who do not enable, and may impede critical work within our societies... Universities are excellent environments in which to acquire skills in dealing with diversity and to acquire the necessary training." ([22], p. 3). Aligned with this strategic vision, a variety of curricular and extra-curricular opportunities exists at UBC to help students cultivate such competencies [23].

While cultural competency training was not yet part of the UBC School of Pharmaceutical Sciences' educational outcomes and plan, the existing literature and endorsement by professional bodies together with UBC's university-wide vision supported the need for a demonstration project to introduce such learning experiences into the pharmacy curriculum. This article summarizes such a proof-of-concept project designed, developed and implemented as an innovative international service learning and community engagement course for pharmacy students at UBC, which then evaluated students' learning based on faculty reviews of their self-reflections and assessments. To our knowledge, comparatively little has been written to document the impact of cross-cultural learning within an international service and community engagement course context for pharmacy students [24]. To build on the notion that students learn best by experience and that they also learn by reflecting on and documenting on their experiences, at the end of the course, students in this project participated in further critical analysis of their written reflections and written report and assessed them within the context of the course's general objectives (Table 1) [25,26].

2. Design

The demonstration project was carried out from January, 2011, to December, 2011, in two phases: (1) designing, developing and implementing a service learning course—International Community Learning (ICL) for Pharmacy Students—that was elective, innovative and promoted community engagement; and (2) course delivery, management, supervision and evaluation. From the students' standpoint, their project experience consisted of pre-departure preparation (January and April, 2011), field experience, including structured written reflection (May and June, 2011), and retrospective reflection and critical analysis of their overall experiences for additional course credits (September and December, 2011). Ethics approval from the University's Office of Research Services was not required, since this was an instructional development/improvement study rather than a research project involving human subjects. This manuscript describes the design, implementation and evaluation of a new course using student learning indicators and their submitted assignments. Once the course grades were assigned, students were asked for their written permission to have their assignments published, and they were free throughout to submit or withhold any of their written notes and materials for publication.

The course was established collaboratively with UBC's Go Global program, a coordinating office that develops and facilitates a variety of university-based international learning opportunities combining academic instruction with community engagement and service in international contexts [23]. Community

engagement is characterized as a public service, which occurs in reciprocal and mutually beneficial partnerships between the university and the community, whereas service learning is characterized as teaching and learning that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility and strengthen communities [27].

Service-learning programs are different from other experiential education approaches, such as internships, co-ops or volunteer placements, because they intend to benefit both providers and recipients, while ensuring a balance between the service provided and the learning that occurs [28–33]. In addition to this balance, the course was structured to address community concerns, to integrate its community partners into planning and coordinating the service-learning placements, to emphasize “reciprocal” learning ([27], p.68) and teaching with a community partner as co-educators and to consist of authentic work done in the field [25]. Central to the student experience was an emphasis on recurring cycles of learning, field experience and critical reflection. By having students immersed in and experiencing a foreign culture and its public health issues first-hand, they learned to link international experience with service learning and community engagement (1) to build cultural sensitivity and (2) to appreciate the delivery of healthcare in low income countries where access to trained health professionals is limited and treatment decisions are often based on patient history and physical examination, rather than laboratory and diagnostic procedures.

The overall course goal was to provide student opportunity to cultivate cultural competency by experiencing life in a low income country—Uganda in this case—and to engage in service learning and community engagement as part of a local, multi-disciplinary health team, The AIDS Support Organization (TASO), providing care to HIV/AIDS patients [34]. The general outcomes for this course included:

- knowledge—to possess a baseline level of disease and drug knowledge to manage HIV/AIDS and its associated complications;
- skills—to engage in multidisciplinary patient care, to work collaboratively with ethnic and racially diverse staff, health professionals and patients and to use knowledge of health-related culture/ethnic beliefs, values and practices when designing care plans;
- values—to contribute to patient care and societal benefits through advocacy for health improvement and to be accountable for positive patient outcomes.

The course’s learning objectives were framed to align with pharmacy education pedagogical frameworks (Table 1) [18,21]. Learning activities to accomplish and reinforce these objectives are summarized in the table. These learning activities were proposed as guides rather than as prescriptions to allow flexibility for students to experience a range of activities and to accommodate the community’s needs. Since pharmacy students were neither licensed pharmacists nor under the direct supervision of a licensed pharmacist, they were instructed to provide no recommendations related to medication management at any time.

Table 1. Learning objectives for the international community learning course—six weeks.

Reflect on personal attitudes, beliefs and assumptions. Gaining insight how these affect care and delivery.	
Generic Cross-Cultural Topics	Specific Learning Activities
<ol style="list-style-type: none"> 1. Consider the importance of collaborative multi-disciplinary teamwork. 2. Demonstrate understanding of the value of the unique contributions of each team member. 3. Demonstrate understanding and respect for others' perspectives on health and wellbeing, and acknowledge differences and similarities in perceptions. 4. Examine and identify patterns of health and illness from a health provider and community perspective. 5. Identify positive and negative factors influencing health and wellness in the community. 6. Explore approaches to health services and practices in the community. 	<ul style="list-style-type: none"> • Researched the local community: history, socio-demographics, practices and rituals, access to health services and support networks, epidemiology of acute and chronic illnesses, <i>etc.</i> • Attended: <ul style="list-style-type: none"> ▪ Biweekly clinics shadowing health providers assessing/triaging clients to medical care or counseling. ▪ Biweekly shadowing sessions with a pharmacy technician dispensing medication. ▪ Monthly family clinics to observe family planning/education on various contraceptive methods. • Toured: <ul style="list-style-type: none"> ▪ The AIDS Support Organization (TASO) facilities (example: a laboratory testing for diseases, such as malaria, HIV and TB). ▪ Hospitals in order to interact with staff/patients. ▪ Rural communities to observe TASO drama group education on HIV risk factors/prevention. ▪ Outreach clinics to observe distribution of medications, social support counseling, collection of blood samples and follow-up home visits to ensure treatment outcomes. • Participated in scheduled multi-disciplinary meetings: <ul style="list-style-type: none"> ▪ Weekly, to update TASO staff on their projects. ▪ Monthly, when discussing challenging patient cases. • Worked on two projects: <ul style="list-style-type: none"> ▪ Prepared/ delivered a child/guardian workshop on child rights, HIV/AIDS education and hand hygiene to prevent diseases. ▪ Conducted a needs assessment for female hygiene resources, included interviewing teachers/students at high schools and summarizing the findings. • Debriefed with local Uganda contact and UBC sponsors and reflected—integrating learning objectives/activities. • Drafted written learning outcomes and insights.

Student recruitment. Students in their second and third year of the four-year baccalaureate pharmacy program were invited to participate through email and class presentations. The Go Global office limits normal ICL placement to a maximum of four students per site in order to ensure positive learning experiences and to avoid overwhelming local community resources. Interested candidates were screened by both the Go Global office and the course instructor by reviewing students' online application, a resume, a brief essay and an interview. The 250 word essay required students to discuss their learning goals for this experience and to document how their personal and academic experiences had prepared them to achieve these goals. Three students, two from the second year and one from the third year, were selected.

The student learning experience. Student experiences consisted of both preparatory and onsite phases: (1) a pre-ICL preparation period between January and April, 2011, at UBC, and (2) a six-week service and community engagement period during May and June, 2011, in Uganda. Student preparation progressed through a series of pre-departure seminars organized by Go Global and supplemented by the pharmacy elective course. Preparatory seminar topics familiarized students with the international setting and context by foregrounding issues relevant to responsible global citizenship. Topics included: issues of race, gender and class; personal attitudes about stereotypes; colonial and neo-colonial relations; cultural sensitivity; encouraging encounters with others; teamwork; group work to impact social change; and purposes of international service learning. Recommended readings and weekly discussions further explored the contexts of health and healthcare delivery: Fadiman's *The Spirit Catches you and you Fall Down*, Williams' *The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good* and Kissoon's journal article: *Out of Africa—A Mother's Journey* [35–37]. Accommodations in the host country were arranged by Go Global together with local community partners. Students received no remuneration for their participation either in Canada or in the host country.

While in Uganda, students attended two additional preparation workshops facilitated by the local Go Global representative. Their first engagement was scheduled on arrival and re-introduced students to the purpose of their placement, re-examined student expectations, addressed questions and concerns and familiarized them with cultural customs in Uganda. The second workshop was held at mid-session to review and reflect on the first three weeks of their ICL experience and to reconfirm the goals for the remaining three weeks.

Students carried out their service and community engagements at TASO's regional office in Mbale in east-central Uganda. The ICL syllabus was structured to offer sufficient flexibility for students to experience a range of activities (Table 1). Students completed three sets of written assignments to document what they had learned: (1) a daily log of their six-week activities; (2) a journal documenting their daily reflections of their learning; and (3) at the end of the six-week period and under a separate, elective course number, a report capturing key aspects of their overall ICL experience—a description of their community (geographical, demographic and historical information), aspects of their pre-ICL expectations that had been met, as well as those that had not and a summary of the recurrent learning themes within their reflective journals. Throughout, instructional and learning procedures were guided by careful small-setting application of Chickering's Seven Principles for Good Practice in Undergraduate Education [38].

3. Assessment and Discussion

Student learning indicators and their activity logs were summarized in an Excel spreadsheet. Raw data from students' daily reflections and their final written reports were reviewed jointly by both students and the course instructor and thematically analyzed. To promote deep learning and to ensure rigor with the analysis process, students used a three-step approach, which was guided by the course instructor. Each student first reviewed their own work and identified key learning themes. Second, students exchanged and reviewed each other's reflections and analyses; and then, third, they discussed their proposed themes collectively and with the course instructor and, together, agreed upon appropriate labels for each learning theme. This process was repeated through several iterations of review and discussions, contributing to and consistent with principles of (1) Angelo and Cross' multiple low-stake formative evaluation in preference to few high-stake summative evaluations [39], (2) Ramsden's distinction between deep and surface learning [40] and (3) Pashler's (*et al.*) focus on the need for iteration to integrate abstract and concrete representations of concepts [41]. Excerpts from students' reflections were selected to serve as supporting evidence for the learning themes.

3.1. Assessment—Students' Reflection and Explication of Their Learning

Individual student reflections and their follow-up written reports revealed that the ICL had a powerful impact on their development as healthcare professionals, as members of interdisciplinary teams and on the substance of their learning. Students summarized their learning experiences into eight broad themes:

- living with the disease—acknowledging patients as experts;
- living with the disease—cultivating community responsibility;
- culture and beliefs influencing health;
- traditional *versus* Western medicine;
- overcoming communication barriers;
- multidisciplinary teams providing care in resource-limited settings;
- non-professionals as healthcare providers; and
- providing care that is both patient- and population-centered.

The following excerpts from students' own logs and reflection journals coupled with observations from the course instructor illustrate each theme and show how students articulated their learning and experiential engagement beyond the course objectives and learning activities.

Living with the disease—patients as experts. Through its community-driven outreach programs, TASO also aims to reach and provide psychosocial support to clients living in rural communities who cannot afford to travel to community centers. As part of this initiative, TASO has recruited and developed a cadre of its HIV/AIDS clients as peer educators to change others' knowledge, attitudes, beliefs and behaviors. By collaborating in TASO's outreach program, students came to view people with HIV/AIDS not only as end users of healthcare services, but also as "illness experts", with the knowledge to educate others with similar illnesses in the community. Students repeatedly mentioned

how individuals in the community gained greater acceptance of their own disease when there was support from others in similar situations.

How is it that people can break away from the stigmatization of having HIV/AIDS in this society and have the courage to come out and get treatment? I can't help but believe that... the drama crew consisting of clients with HIV/AIDS is one of the keys to this success... What's great is that the atmosphere that they create is something that draws people in voluntarily; people get tested of their own accord rather than something they are pressured into negatively. It really creates the ideal environment for detection and prevention of HIV/AIDS. ...Given the enormous stigma and discrimination that individuals with HIV/AIDS are faced with in their communities... Members of the drama group are truly an inspiration... They are not hiding behind their disease, and are living openly with HIV. This mentality may take years to develop, but they truly do act as role models for others who are fighting to combat stigma.

Living with the disease—finding a higher purpose. Students' undergraduate therapeutics and pharmacology courses had provided them with basic knowledge about HIV/AIDS, how it is transmitted, its pathophysiology, complications and treatment. However, the core curriculum provided scant opportunity to understand HIV/AIDS from the patients' perspectives and did not address fundamental questions like: “*What does it mean to test HIV positive?*”, “*What it is like to live with the disease?*” By integrating community service with structured learning activities, the field experience provided students with real-life opportunities to explore these questions. Through numerous one-to-one interactions with TASO HIV/AIDS clients during their community visits, students gained new appreciation about how individuals with a life limiting disease could maintain a positive outlook on life, have the strength to create a sense of well-being that allows them to transcend their illness and find a higher purpose and feel a sense of responsibility to support others living with the disease in their community. Using their personal experiences and unique talents, many of those living with HIV/AIDS have initiated grassroots activities, which have become critical in strengthening the capacity of both communities and TASO to deliver public health messages and education related to wellness, prevention and treatment:

What surprised me the most is that clients who are HIV positive are able to take such a devastating disease and channel it into such positivism. Such a drama program is so congruent with their mandate of “living positively with HIV”. The drama group—HIV positive members—was not a self-pity group but rather a group of individuals that have chosen not to allow this disease to take control of their lives. They have been able to accomplish this through music, dance, and theatre to empower other clients like themselves.

Culture and beliefs influencing health. Through interactions with local people in urban and rural villages, students identified that people often had belief systems about their diseases that were different from their own. Coming from a Western biomedicine paradigm, they were accustomed to seeing HIV/AIDS solely from a pathophysiologic perspective—as a dysfunction of biologic processes. However, many people with whom they interacted in their communities had formulated non-biomedical beliefs to explain their illness—as in Anne Fadiman's novel, “The Spirit Catches you

and you fall down”. Students came to acknowledge that different belief systems exist outside the realm of their own personal understanding. As one student observed:

...on a visit... the social worker at CURE Hospital—pediatric surgical hospital—commented that many mothers in the rural communities believe that the root of [hydrocephalus and cleft lip] stems from witchcraft and displeasure of the gods... Mothers believe that [those] congenital malformations are the results of curses by those who wish ill of the parent or gods who punish the mother through their children. Had I not read a similar scenario in “The Spirit Catches you and you fall down,” I would have thought the concept of witchcraft and curses was absolutely absurd compared to conventional or western ideals regarding pathology.

With any cross-cultural experience, individuals will have preconceptions influenced by their own cultural upbringings. Consequently, these ICL students had preconceptions about who would be most likely to have traditional (or non-biomedical) beliefs about illness. They learned the dangers of such stereotyping about beliefs in witchcraft or traditional practices. One student noted:

I always had the belief that those who believed in black magic, witchcraft, and spirits were less educated and those who have been less exposed to western medicine and culture. However, I was taken aback when my host sister who is an educated, high achieving A level student with aspirations of becoming a doctor or nurse proclaimed she believed a boy in her class was bewitched leading him to lose his mind... she said, “A very smart boy at my school today forgot everything (how to read and write)... yesterday he performed well on his exams, and those who were jealous cursed him... that’s why I fear doing too well on exams...”

Traditional versus Western medicines. Students also reported that the cross-cultural international service learning experience facilitated an improved understanding of traditional vs. Western approaches to treatment, and they garnered a greater appreciation of the similarities and differences of traditional medicine versus that of Western medicine. Another student stated:

...many of the pharmaceutical agents...used in practice are derivatives of plant-based substances... we saw and tasted aloe vera... crushed and smelled the leaves of Camphor... picked leaves off the Artemisia plant, an agent that is the active ingredient in Coartem... a common traditional herbal remedy used by locals to treat malaria when boiled and drunk. When I think of medications, the first thought that comes to my mind are tablets and capsules. It wasn’t until I was walking through the botanical garden in Entebbe that I realized that I was actually standing in a “natural” formulary, because many of the plants are made into drugs. In that instant, it made it possible to understand that though agents may look different... some of the herbs and plants that the locals used were very similar to what we may have as prescription.

Overcoming communication barriers. Prior to their ICL experience, students were apprehensive about living and working in a community speaking foreign languages and dialects. Despite the fact that English is the national language in Uganda, it is not always easily understood due to the prominence of

traditional languages and dialects. The ICL experience changed their perception about language differences as barriers to communicating health information. They realized that not sharing a common language was not always a hindrance, but often an opportunity to explore other avenues of communication. As one student noted:

Before I came to Uganda [for this ISL experience], I saw communication as a problem... a barrier, and I had a great fear of not being understood. What I've realized is that not being able to communicate through language isn't a disadvantage, but rather an opportunity; an opportunity to exercise other means of communication [pictures, body language, song and dance] and understanding of one another through other means and media. It wasn't difficult, because sometimes [communicating to others] can be as easy and simple as a smile...

In realizing that language differences can be overcome, students demonstrated the importance of non-verbal communication in providing health education. In particular, students reported incorporating demonstrations that minimized language use, while educating locals, many of whom spoke no English. One student observed that:

A group of kids were waiting in the TASO pediatrics clinic...we wanted to try out some of our activities for a workshop we were developing but we did not speak the local language. The only commonality between the kids and I was a smile... in the past I've realized that the most learning takes place through "watching" and "doing"... we corralled a group of [children] who spoke minimal English... taught and demonstrated proper hand-washing technique [at the water pump... 50-60 adults stopped in the midst of what they were doing to watch... by one simple act we... educated 10 kids but also 60 adults... I never thought it would entice the adults as well...change through demonstration was more far-reaching in conveying information than I thought...

Multidisciplinary teams provide holistic care in resource-limited settings. Students gained perspective into the significance of interdisciplinary healthcare in Uganda. In particular, students observed collaborative efforts between healthcare providers when re-assessing the therapy and lab work of certain HIV/AIDS clients who were not achieving desired outcomes. Each provider contributed their respective clinical expertise in patients where a single provider would have been unable to address all therapeutic needs. After witnessing the collaborative efforts displayed by local care providers, students became motivated to advance their future interdisciplinary collaborative identities as healthcare workers in Canada.

Every month the medical team consisting of doctors, clinicians, nurse officers, and pharmacy technicians [there was no pharmacist!] will sit down together for a conference to review all the files of HAART therapy patients. In those reviews, they will re-evaluate their CD4 count and the trends they see, whether their antiretroviral therapy is appropriate, and address any other alarm medical concerns they can identify while looking at laboratory results and counseling report.

I saw how TASO utilized their resources to the fullest—all clinicians, pharmacy technicians [there was no pharmacist!], counselors, and other staff were expected to work to their fullest capacity to get the job done, and when they could not go about it alone, they consulted together. Coming from a country with some of the best healthcare in the world, I really do envy the advanced collaborative efforts of these clinicians, this is something I would like to see happen more in my own health institutions.

Non-professionals provide holistic healthcare. TASO was an all-encompassing facility providing a variety of specialized services, such as social support, medical services, drug dispensary, family planning and diagnostic/laboratory facilities. These services were provided by a host of professionals including nurses, physicians, pharmacy technicians and counselors, as well as non-professionals. Students observed the value of such a multidisciplinary team that extended beyond the traditional healthcare providers they were familiar with—physicians, pharmacists, nurses—to provide care that was holistic and that considered both the physical and psychosocial needs of clients. The students had never before considered the range of other roles, such as social workers, nannies and dramatization clubs that also contributed towards helping the clients. As one student noted:

[In the Pediatrics ward] there's always a nanny present to take the height and weight of the children prior to every appointment and also to observe the children in a process they call "Play therapy". Children often have difficulty vocalizing how they feel and any discomfort they may be experiencing, therefore the nanny's role is to watch and document any changes in behavior, activeness, and or visual appearance. I don't think I would have ever expected to actually see a trained and hired nanny in the clinical setting.

Patient-centered and population-centered care. Students witnessed similar interdisciplinary services at the CURE Hospital, a facility providing pediatric surgical care. In their didactic lectures, students could see only one face of HIV/AIDS—that of the disease. The ICL experience showed students that there is more to consider beyond the disease pathology—including things, such as financial burdens, spirituality, basic necessities, social support and other social determinants of health. Students learned from social workers who ran the facility that having centralized services eased the burdens of the child and the family affected with the disease.

Not only were children medically tended, their families were also provided a facility to work alongside various professionals—counselors, doctors, nurses, religious leaders—to provide care for their children/family and thus allowing them to continue. Poverty is a resonating theme. ...CURE hospital ensures meals are provided for the families, transportation is arranged, laundry space is available, and provision of spiritual faith and healing, not to mention coordinated fundraising with parents for the child's treatment. It is an all-encompassing, inter-disciplinary facility and not simply a medical institution.

3.2. Discussion

With pharmacy practice shifting from dispensing to providing patient-centered care, pharmacists can play a pivotal role in preventing drug-related health disparities [42]. However, to realize this, pharmacists will need to achieve greater cultural competence, and the transformation needs to start in

colleges and schools of pharmacy. An in-depth analysis of the student reflections from this project confirmed that a cross-cultural, international, service-learning experience for pharmacy students can be an effective educational intervention to meet these objectives. Student reflections revealed meaningful experiences in the domains of knowledge, multidisciplinary, community and individual patient engagement, society and culture and personal growth.

The first aspect noted by the students was the reality of living with an illness on a day-to-day basis. In their reflections, students acknowledged that their awareness about HIV/AIDs prior to the ICL had been restricted to coursework focusing on didactic lectures and learning in healthcare settings that were ethnocentric and biased towards health practices, standards and guidelines based on Caucasians as the referent population. Accordingly, their attitudes about those living with HIV/AIDS were primarily informed by prevailing assumptions about the disease. These disclosures were not surprising given that research on racial and ethnic diversity has found similar trends among university students with limited exposure to people unlike themselves during their formative years [43]. Social stereotyping of persons or groups—whether conscious or unconscious—has been shown in the clinical literature to shape behaviors and decision-making patterns of health professionals in clinical settings [1]. For pharmacists, stereotyping by unconsciously imputing cultural characteristics to all patients can lead to inappropriate, incorrect or non-patient-specific decisions, thereby impeding pharmaceutical care and leading to drug-related problems [18,42]. Achieving cultural competence begins with a careful self-assessment and awareness of one's own current culture and exploration of areas for future growth. The ICL proved to be a successful educational strategy with pre-sessions providing students opportunities to self-assess. The immersion within the international community then allowed them to step outside of their cultural comfort zones and into “real life settings” to explore and confront their personal attitudes and perceptions. Students noted how this approach greatly assisted them in transforming previously held beliefs and attitudes into new and more accurate knowledge.

Students also found their professional cultures to be challenged. By interacting with local recipients of TASO care, students encountered people who attributed spiritual causes to the source of their illness and others who favored the use of traditional/herbal medicines. These belief systems about health, illness and treatment were clearly different from their previous training—a Western professional culture of biomedicine that valued the use of drugs, procedures and surgery to treat diseases, which are defined solely in terms of pathophysiology. With this exposure came the recognition of the complexity of the interplay between different cultural approaches to healing and the need for health practitioners to acknowledge and accommodate alternative perspectives when developing treatment plans with patients, especially when such practices are foreign to Western pharmacy curricula.

Other benefits deriving from the ICL experience included introducing students to a participatory healthcare delivery model, which engaged patients, their community and a multidisciplinary group of staff and health providers. The impetus for patient/community engagement comes from the recognition that patients' responsiveness to care increases when delivery models are compatible with individual patients' values and preferences [6]. With mounting evidence that engagement and collaboration achieves better adherence to treatment plans and health outcomes, healthcare systems internationally have endorsed these changes in the relationships between patients and their health provider [2,44]. However, such changes require paradigm shifts in the training programs for health professionals. In this course, students experienced collaborative contributions of widely differing providers in caring for

HIV/AIDS patients, ranging from physicians, nurses, pharmacy technicians, patient and community advocacy groups and social workers. With no access to pharmacist, collaborative community team-based care demonstrated to students how multidisciplinary teams with relevant healthcare services can still address the physical and social needs of patients in resource-limited settings. With the growing call for inter-professional education to promote multidisciplinary collaborative and team-based care in North America, this ICL provided students with a reverse transfer opportunity to apply insights and skill sets gained in a low-income country to their home-country professional settings.

Students also contributed to the communities where their placements were located through their exposure to multi-lingual and multi-ethnic situations, which challenged them to contribute to TASO's services by developing an educational workshop for locals. Students used innovative methods to overcome linguistic barriers by employing pictures, body language, demonstrations and integrating local translators' skills. Through ICL, students identified that despite language barriers, they could find ways to deliver practical pharmaceutical care.

3.2.1. Lessons Learned and Application to Other Settings

While this ICL was facilitated by TASO, student learning applies to other service-learning contexts, as well as to practice [7–9,23]. Because the ICL was based on a collaborative university-community partnership, the needs of everyone involved were assessed and addressed prior to course confirmation. Deeper learning about social issues and cultural interplay may be restricted in environments that lack intentional efforts from both the Go Global staff and the international community staff [7–9]. Although there are many models of service learning and community engagement, all have three things in common: (1) they must meet real community needs, (2) they must grow out of intentional learning outcomes and (3) they must offer structured opportunities for reflection [45,46]. Building on others' experiences, this ICL reified all three components. In addition, the pre-ICL sessions, discussions and workshops in Uganda ensured that the students were well prepared before and during their travel abroad. Their living and working arrangements had been carefully pre-planned, and the pre-sessions provided them with sufficient knowledge of the history, socioeconomic and political situation of their host country, as well as awareness about ethical and cultural dilemmas, which can influence collaborative team work and health delivery. The post-ICL critical reflections offered students further opportunity to help link, consolidate and transfer lessons learned to new contexts, where students were likely to practice in the future. There are of course cost implications to both the university and to students when organizing ICL. Through UBC's Go Global office, resources already existed to develop and facilitate international learning opportunities, to develop and deliver pre-and post-travel sessions and to support students. To cover local and international administrative costs and living expenses (room and board), student tuitions ranged around \$2,500 CAD. Direct costs to the School of Pharmacy were minimal, since the course was self-initiated by an existing faculty member.

3.2.2. Future Directions

Service learning and community engagement are intended to benefit not only the student, but to serve the needs of the host community. Although this project evaluation did not focus on community benefits, there were clear reciprocal benefits. Feedback from TASO indicated that their staff members

were energized by student inputs and that the local community benefited from enhanced care. The medical and nursing literature proposes that International Service Learning might also benefit the home country, since students who have participated in International Service Learning more often elect to obtain public health degrees, to serve as patient advocates, to engage in community service and to work in resource-poor settings [47]. Future research might focus on understanding the benefits to the host community, as well as follow graduates longitudinally to determine the impact of such experiences on their career path.

3.2.3. Limitations

The study was limited to a small sample of students who may not be typical of students elsewhere, and certain threats to validity and generalizability across student populations undoubtedly exist. The selection process may have selected for students who had a committed mindset and an interest in ICL, thus predisposing them to a positive uptake of program benefits. Since their journal entries and written essays were also read and graded by faculty members, there is a possibility that information may have been exaggerated, edited or filtered to conform to course objectives. Further, journal entries and essays may have been insufficiently detailed for in-depth analysis of all possible participant benefits of ICL. Students were hosts of TASO, a well-organized and long-established AIDS service organization in Uganda delivering health-related services to many clients in both central and remote locations. Thus, students had the benefit of participating in well-organized care-delivery programs developed by Ugandans for Ugandans. Millions of other people with HIV/AIDS enjoy no such benefits or programs and would have provided students with a strikingly different view of life with HIV in sub-Saharan Africa or elsewhere.

4. Conclusions

The authors share one school's experience with the development and implementation of a cross-cultural, international, service-learning experience. Based on students' reflections, this program was well received after the first year of implementation. By regularly interacting with people in a community in ways only an immersion experience can provide, the international perspective allowed students to examine healthcare and related social issues in a global and cross-cultural context, as they gained appreciation of how the health and health practices of people can be influenced by cultural factors. The students' reflections suggest that experiences during the ICL had life-changing influences, both on a personal level and a professional level. They report gaining valuable insights into how to promote multidisciplinary collaboration, cultural competence and an understanding of their own cultural awareness—all of which have led to a better understanding of delivering care and a sense of responsibility to advocate for those who are vulnerable and socially marginalized. Central to ICL outcomes was an enhanced student capacity to reflect on, cultivate and articulate their roles as health advocates, while documentation of changed personal competencies or improved care delivery practices must await further evidence.

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Conflict of Interest

The authors declare no conflict of interest.

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