

Merging athletic training and nursing clinical education: An interdisciplinary, international service-learning model

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Abstract: *Combining nursing and athletic training clinical experiences can serve to better prepare the health care student for future team work with other disciplines and a diverse patient population. International service-learning courses can enhance the undergraduate student experience while also serving those most in need. Athletic Training and Nursing students at the University of Southern Maine blend together as an interdisciplinary group to participate in a community based health care initiative to rural citizens in the Dominican Republic. This unique experience assists students to better understand their role as global citizens, introduces cultural competency, and affords the student the opportunity to better identify both the background of the patients they treat, and the differing health care providers they work alongside. A review of literature suggests that incorporating both cultural competency and service learning into existing educational programs increases affective learning and personal development. Service-learning via groupwork benefits students, faculty and the communities involved, enabling students to gain insight into other populations and/or cultures with which they lack familiarity. There are both advantages and disadvantages to integrating cultural competency and service learning into undergraduate programs.*

Keywords: *international service-learning; athletic training; nursing; cultural competency; interdisciplinary; groupwork.*

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Introduction

Similarities abound for both athletic training and nursing students. Both majors will treat pain and/or injuries. While nursing students are focused on assisting individuals and families to prevent, identify and adapt to health problems, athletic training students are focused on injury evaluation, treatment and rehabilitation of physically active individuals. These primarily include musculoskeletal evaluations. Future athletic training and nursing graduates will encounter patients from increasingly diverse cultural backgrounds. It is predicted that by 2050 the Hispanic minority in the United States will become the majority (U.S. Census Bureau, 2010). Therefore, it is critical that these undergraduate programs prepare students to work with people in multicultural settings. A specific way to address this is to create an International Service-Learning (ISL) course. ISL courses combine both traditional lecture and clinical components along with meaningful, interactive community service, while embedding the student within a less familiar, and less resource rich culture. ISL courses differ from other international projects in that the student participates in direct patient care to underserved citizens. In this specific case, nursing students can perform general health evaluations alongside athletic training students, who provide musculoskeletal or orthopedic evaluations. Participation in an ISL project affords the nursing/athletic training student the opportunity to work in a multidisciplinary setting while engaged with local partners, which requires that clinical skills be performed in order to benefit the population. ISL projects are designed to benefit both the community served and student learning. While nursing student participation in ISL's have been well established, (International Service Learning, 2011), service learning in athletic training is still in its infancy in this relatively newer allied health care profession. As both clinical education and competencies evolve within both disciplines, our professions should examine ways in which undergraduate programs can both fulfill objectives and enhance overall student progression. Since both disciplines utilize a competency based approach, cross educational integration amongst students can be optimized. For instance, a patient may present with arm pain, a nursing student may evaluate for a number of possible risks (heart attack, and so on.) while an athletic training student will then evaluate for orthopedic causes (such as disc herniation, medial epicondylitis, carpal tunnel).

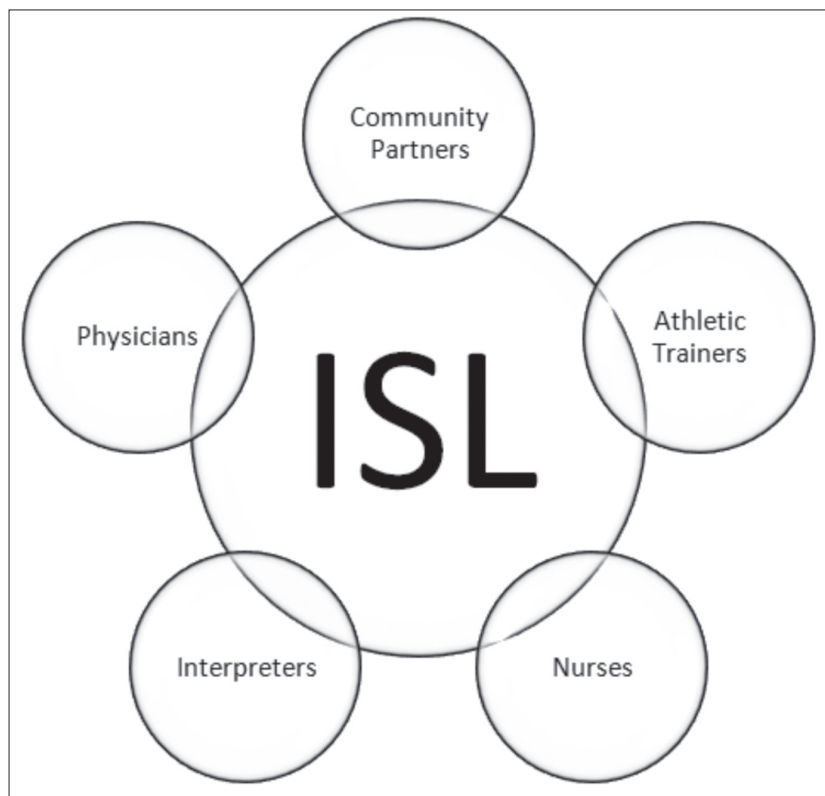
Bringle and Hatcher (1996) have identified service learning as 'credit bearing experience in which students participate in an organized service activity in such a way that meets identified community needs, and reflect on the service activity in such a way to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility' (Bringle, 1996, p.222). Learning to provide effective service requires overcoming cultural barriers between the care provider and the recipient, because service provision is culturally bound. In interdisciplinary ISL these differences can be magnified, and thus the opportunity for growth is also magnified. Cultural Competence can be defined 'as a set of skills that allow individuals to increase their understanding of cultural differences and similarities within, among, and between groups' (Nunez, 2000, p.1071). If not introduced to cultural competency, the clinician may simply make a decision they believe to be correct, without taking into consideration the traditions, beliefs and health care practices of the specific patient and his/her culture. As Ford reminds us, 'Health care practitioners have a responsibility to respect all cultural groups, and to ask individuals how they refer to themselves' (Ford, 2003, p.63). By incorporating cultural competency, undergraduate students will gain skills and confidence to work with members of varied disciplinary and cultural groups prior to entering the workforce. In 1994 the American Association of Health Education (AAHE) released their publication *Cultural Awareness and Sensitivity: Guidelines for Health Educators*. 'However, [it is unknown] how widely these guidelines were adopted by health educators.' (Luquis, 2006, p.234). It has been suggested, however, that 'educational institutions have a professional responsibility to provide learning opportunities related to cultural competence to the students they prepare.' (Luquis, 2006, p.234).

Current undergraduate health care programs are built on the belief that it is through live, practical experience that students are able to bridge the gap between didactic fundamentals and theories and subsequent clinical practice. Athletic training and nursing education programs have long stressed the significance of a dynamic, interactive clinical experience in order to best prepare students for entry level work within the discipline.

In 2008, an athletic training education program (ATEP) partnered with a long-standing nursing program, a non-profit agency and in-

country partners to offer a comprehensive ISL experience in the Dominican Republic. Nursing and Athletic Training students participate with faculty and a variety of health care professionals (see Figure 1) to provide a unique, interdisciplinary approach to health care. The course itself relies heavily on groupwork, as teams of professionals, volunteers and students must work together to solve actual clinical cases. The group travels twice a year, for two weeks at a time, to a group of remote mountain villages. Students work side by side with Dominican partners, interpreters, faculty and health care professionals to provide direct care to an underserved population. During each trip, care is administered directly to fifteen villages and many homes, serving approximately two thousand patients per trip.

Figure 1



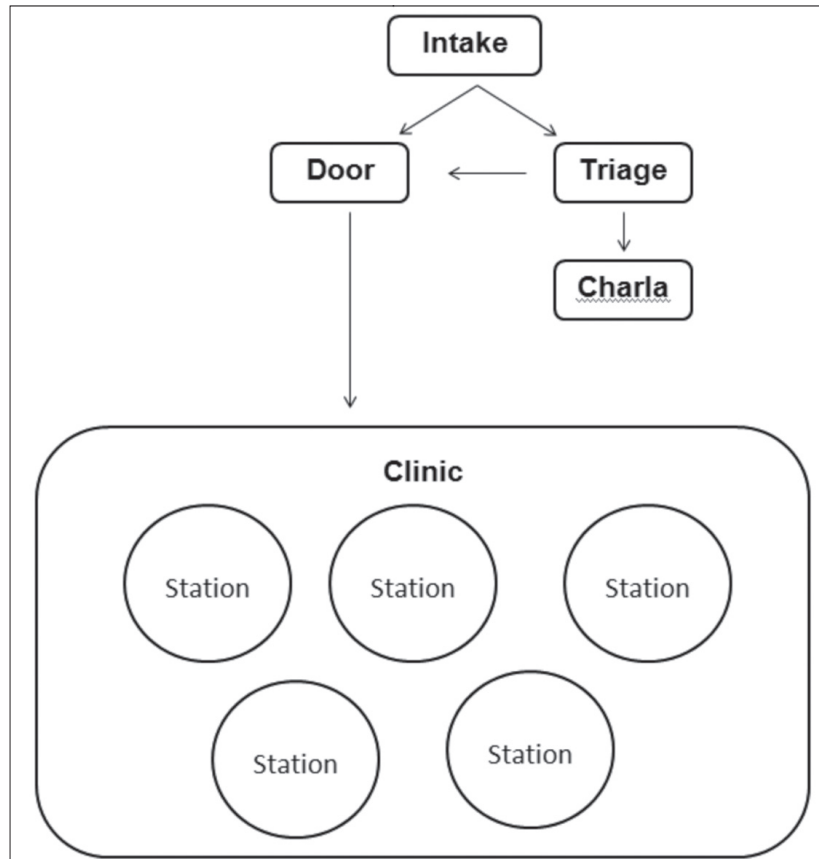
Faculty and group leaders meet frequently throughout the semester prior to each trip to ensure proper preparations are being made. Additionally, students are enrolled in semester long preparatory courses in order to adequately prepare them for their clinical and cultural experiences. It is during this stage that groupwork begins. Students, faculty and volunteers from differing disciplines work together to fundraise for supplies, and also during packing days, in which donations are organized and packed for the ensuing project. Students also practise group skills while assisting the non-profit partner agency to raise funds to purchase health supplies, organize and pack for travel.

Once the group arrives in country, pre-clinic meetings are scheduled with groups of leaders from each village to both assess individual community needs and learn of positive or negative outcomes from previous group visits. Groupwork is continued and emphasized in this stage. This affords the student the opportunity to meet village representatives and allows for ample opportunity to prepare for potential issues with the groups for that specific village. For instance, one village may be populated by tobacco farmers who both smoke and swing machetes constantly. The nursing student may prepare to discuss the health impact of smoking tobacco, and the athletic training student may prepare for a musculoskeletal shoulder or low back evaluation. After meeting with the village leader group, students and volunteer professionals and organizers can then begin a dialogue within their interdisciplinary group to best prepare everyone for the coming clinical visits.

The group is then split into two medical teams and a separate home visit team. Each team travels to a different village for the day to set up a clinic in a village structure chosen by the community themselves. Each clinic follows a model for design (see Figure 2 overleaf) to promote proper patient flow and to avoid overcrowding.

Intake (2 people)

This serves as the entry point to the clinic. Patients may register here and are given both a number and a medical form. Any patient who has been seen at prior clinics (from past trips) has a medical form with data from their previous visits. This helps the medical staff monitor both patient history and effectiveness of treatment. The patient is asked for



the reason for their visit, and it is determined if they will be seen in the clinic, or in triage.

Door (1 person)

This serves as the main entry point to the clinic. Patients have their height and weight measurements recorded and are systematically processed into the clinic. The door person works closely with the village leader and health promoter to ensure an orderly flow.

Clinic

This typically has anywhere from five to ten stations (highly dependent on the number of rooms available and size of the group to be treated) in the room. Typically, each station is a wooden bench with a nursing student, an athletic training student, an interpreter and a provider. A provider is defined, for the purposes of this trip, as a physician, nurse practitioner, registered nurse, or athletic trainer, physical therapist or occupational therapist. It is each provider's responsibility to oversee the student-patient interaction and provide guidance when needed. Each student can consult with any of these allied health care professionals throughout the clinical visit to serve each patient optimally. Each patient is then escorted to a specific station and evaluated. Nursing students perform a general health evaluation as the athletic training student observes. Consultation is then made with the provider, which is typically a physician or nurse practitioner who then recommends a current plan of care. Should a musculoskeletal issue be uncovered during the general health evaluation, the athletic training student then begins their evaluation, and consults with their provider, usually an athletic trainer, physical therapist or occupational therapist. Common examples at this stage are low back pain or shoulder pain, or chronic arthritis.

Triage (2-3 people)

This term takes on a different meaning within this ISL than in the traditional sense. These are patients who may only be in need of preventative health care basics, such as toothbrushes, toothpaste, or multivitamins. A physician or nurse practitioner will team up with a nursing student to provide evaluations to ensure the patient is only in need of a 'well visit'. Athletic training students may also assist at this station by assessing blood pressure, or perform an evaluation of someone with a musculoskeletal injury, such as an ankle sprain or muscular strain. Triage serves as a clearinghouse for those who need some care, but are not considered urgent or chronic by nature.

Charla (2-3 people)

Taken from the Spanish language, the term charla is roughly translated

as 'to talk or chat'. Essentially this is an informal but educational talk to a group of children or adults on a specific topic relevant to the village or population. During the pre-clinic meetings, large group needs are identified and can be best addressed in this manner. Topics included on past trips have been dental care, stretching, proper hydration, proper lifting techniques, and hygiene, to name a few. Since information has been collected at Intake and Triage, specific groups needing specific instruction on important health care topics can then be identified and subsequently addressed. It should be noted that this type of engagement requires well developed group skills for presenters and interpreters.

In order to successfully create a service learning project, three components are central: content, service, and reflection.

Content

Create a course syllabus which carefully details specific outcomes desired, and student expectations. Ideally, this should be distributed at least one semester prior to the service learning project. This will allow for the 'learning over time' concept to begin. It will provide students with specific parameters of what they will accomplish by the conclusion of the course. Biweekly meetings are important for the semester leading up to the experience. Faculty should require pre-departure readings about the region they will be traveling to; for instance, if traveling to the Dominican Republic, search for notable authors from the country itself, as well as histories and documentaries. Students should read, report, and then have a roundtable discussion of the book(s) they have read in order to foster a sense of understanding the culture they will be experiencing. Students who have never traveled, or have little experience with real poverty may need additional preparation.

Service

Carefully design, and define, exactly what service is expected of students: Depending on the course itself, service may be evaluative only; or it may extend beyond simply a discipline specific experience. Students can lead group presentations about such topics as universal precautions, stretching, basic injury treatment techniques, interaction of mental and physical health, and living with poor health where there

may be little access to care, to name a few. Several examples of service can include:

- Evaluation
- Treatment
- Rehabilitation
- Education
- Community Support & Resources

Reflection

Anecdotal feedback from students (see below) includes increased clinical confidence, increased communication, sense of global civic engagement, and greater life perspective, to name a few. Students should be offered several outlets to effectively reflect on their experiences both clinical and cultural. While this can be done in a variety of ways, this specific course requires students to maintain a journal while in country and submit a reflection paper upon return.

Cultural Observations

I've learned more about the importance of the human connection from the Dominican population.

There are so many things that the Dominicans can teach us. I met many sick people who, though in poor health, were so happy and surrounded by their whole family who was taking care of them.

If you have to stay in the hospital your family must provide all your basic needs clothing, food, bedding, etc... I could not believe this.

They were always so full of smiles and laughter, even though many of them were in a lot of serious pain. They seem to deal with adversity a lot better than we do as a society.

Clinical Observations

I realized that everything that I have learned throughout my education was going

to have to be modified and adapted in order to be practical and effective.

I saw more orthopedic injuries in two weeks than in an entire semester in the U.S.

It made me fully appreciate the meaning of health care especially when considering the role of an athletic trainer. I would say this has given me a great amount of confidence when examining my weak spots, especially the spine. I was able to see a few positive evaluation findings that I had never seen before.

I never thought that trying to explain how to contract the transverse abdominis was going to be as hard as it was!

General Responses

I would definitely recommend this trip to any student (WHO) wanted to not only enhance their clinical skills, but more importantly broaden their views as a person.

I realized that I did not just come back with educational teaching moments but also life-long relationships and improved cultural knowledge. This trip has allowed me to broaden my personal view and prospective about life.

This was an experience like no other for me and every moment was a new opportunity to grow in many ways.

Working alongside so many different professions and minds, I was forced to grow. Not only grow professionally, but grow as a person, mentally and spiritually.

This experience that I gain through cultural immersion, interdisciplinary approach, and applying practical skills for evaluation has allowed me to be more confident as a clinician.

It's hard to decide if the trip impacted me more educationally or personally and emotionally.

This was the single most amazing experience of my life thus far.

I no longer live my life obsessing over or desiring the things I don't have, rather I feel thankful for the things I do have.

Certainly, the previous examples speak to the potential impact when incorporating service learning into an undergraduate student's curriculum. As evidenced by the above comments, this form of interdisciplinary groupwork can serve to augment the student's growth and respect for other related disciplines. When returning from such an experience, students often feel overwhelmed, even depressed. It is critical that they be provided with an outlet through which to convey their emotions upon their return. A reflection paper can be a very useful tool in this educational process. In addition, allowing the students to present their own experience utilizing pictures and items from their trip to a larger, university based audience can be very therapeutic in terms of re-acclimatization. Faculty may also meet individually with students in addition to a collective group meeting upon return to discuss thoughts, feelings and general impressions. Program leaders have identified one source of this depression as the loss of a unified sense of group purpose under pressure, and it is helpful to express this to returnees so they can learn and apply this important group skill in their daily life 'back home'.

Advantages

A distinct advantage to implementing an ISL course into an undergraduate curriculum is the opportunity to utilize skills directly with patients while sharing across cultural differences. Students come to recognize a shared sense of purpose even with a patient who does not even speak their language. Faculty can directly view and interact with students in a true, less predictable clinical setting, allowing for a more accurate faculty assessment of clinical performance. An added advantage can be adding an interdisciplinary component to the course. For instance, working with a variety of other academic majors and/or health care professionals can serve to augment the overall experience and better prepare the student for their emerging workplace. This can be an integral component of overcoming barriers to referral. Athletic training and nursing students can learn from each other. Professionals model interdisciplinary health care by frequently consulting one another, directly in front of students, thus promoting a team approach to healthcare. Furthermore, it can also allow for an excellent cross

educational benefit, as students demonstrate their specific knowledge base to each other. For example, an athletic training student may teach a nursing student a specific orthopedic special test for the knee, or a nursing student may teach a specific general health condition symptom previously unknown to the athletic training student. In this setting, everyone is part of a dynamic, integrative learning and reinforcing group. This is a unique characteristic of the benefits of groupwork in this particular ISL course.

Challenges

Of course, no educational component is without problems to overcome (Suchdev, 2007). There can be many barriers to providing an interdisciplinary course, especially with students and professionals from differing backgrounds and educational preparation who all have different ideas on how to best treat a patient, and who may lack knowledge of each other's profession. One in particular associated with short term travel programs is that when compared to semester long clinical experiences, the duration of time to resolve conflicts with students and other health care professionals is drastically reduced. This may actually be beneficial as well, teaching the student how to resolve disagreements quickly and professionally ranging from treatment to personality conflicts.

Language barriers and cultural differences must also be taken into consideration. Learning to communicate through an interpreter is often a work in progress. For instance, students must be reminded to speak directly to the patient and not the interpreter, maintaining eye contact and perhaps, in some cultures, constant physical contact (hand on knee, for example), which will reinforce the patient's confidence in them. If a student looks at the interpreter, rather than directly at the patient, it can cause degradation of the clinician-to-patient bond. The student who succeeds at this may subsequently find that the next patient is an older, more traditional person who chooses politely not to look directly into a respected person's eyes.

Lastly, there can be dangers inherent with travel, including illness, injury and accidents. Often when traveling, emergency care is not readily available, and group members may also need to become donors

or care providers in the event of severe injuries. Those traveling with the group are also at risk of contracting infectious diseases or being caught in the midst of a natural disaster. Also, medical care often will not meet the standards set forth in the United States. It is highly recommended (or in most cases, mandatory) that students be covered by international health insurance should the need for medical evacuation become necessary. Students and faculty should all be properly vaccinated for any disease inherent to the region they are traveling to or through endemic areas. It is highly recommended that faculty considering devising an ISL course systematically review common travel websites to allow for the greatest level of informational matters as they relate to the region they are considering. The US State Department may post travel advisories for a country to which many institutions will then deny subsequent travel. Finally, the ISL course should partner with organizations which share accountability for the quality of the service delivered.

Discussion

A key benefit of this unique group experience is that students and health care professionals from differing disciplines are afforded the opportunity to both teach and treat side by side, while sharing a group sense of purpose with each other, with local partners and with patients. This allows for instantaneous feedback from within the group as well as from teacher to student, and can help bridge the gap from traditional didactic delivery to real world application. Even faculty benefit as it can also serve to update clinical experience and group facilitator skills, which can be a challenge amongst faculty who conduct clinical supervision, and who may be at risk of losing credibility within the clinical setting of their discipline (Weidner, 2006).

This unique form of groupwork can serve to foster and encourage student autonomy, while also promoting collaboration between academic programs, disciplines, and professionals. By utilizing groupwork prior, during, and after the course, students learn to work collaboratively

By integrating ISL into a curriculum, students and faculty can learn to be more open and empathetic to a broader patient base, thereby enhancing future delivery of health care. Offering an ISL course to undergraduate students can help to address health care disparities

(Mitchell, 2006). If the program functions consistently with a specific population over time and works to improve the quality, then the communities also benefit and help to shape their resources.

The incorporation of service learning into existing curricula has been reported by other disciplines (Peters, 2006) Allied health care professions have long integrated service learning into producing more qualified, well rounded health care professionals, and adopting these practices can serve to augment the current state of clinical education and overall progression of athletic training and nursing students. By adding an interdisciplinary and intercultural approach to groupwork, students, practitioners and faculty can both teach and learn from one another, ideally raising the level of care they provide when they return to the United States, or perhaps elsewhere in the globe that they may practice their particular profession.

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