SoTL Research Grant Proposal – 2010

Submitted by:
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I. Background & Research Question:
Athletic training students complete a three-year progressive sequence of didactic coursework in addition to intensive experiential education which expose students to a variety of different philosophies and clinical skills as pre-service allied health care professionals through clinical education. Clinical education is provided through a series of field based educational experiences. One such clinical experience is a general medical rotation. This rotation is a national requirement for present day athletic training student education and is provided to broaden the students’ understanding of comprehensive health care to extend beyond understanding primarily orthopedic problems to also appreciating coexisting conditions or comorbidities. Prior to 2009 our second year students spent one week observing the nurse practitioner and team physician within the IU Department of Athletics in a general medical rotation. While we appreciated this opportunity for our students, it included a limited patient population of Division I student athletes. We were looking for a way to broaden the students’ knowledge, experiences, and skill set to prepare them for a changing job market. Thus, beginning spring semester 2009 our first year cohort (20 students) became clinically involved at Volunteers in Medicine (VIM) a free community based medical clinic working with a diverse patient population. Nurses at VIM served as clinical instructors for our students and students were involved with patient intakes, including taking patient histories and assessing vital signs for five weeks. While we were very excited and hopeful about this new partnership we learned a lot during the initial pilot year and were committed to developing the experience further in order to meet the needs of both parties (IU ATEP students and VIM) more fully. During this initial pilot period in the spring of 2009 the ATEP Program Director, Dr. Katie Grove, and I became aware of the Office of Service Learning and more specifically Project Engage.

During the summer of 2009 we were selected to participate as Project Engage Fellows. Through this program we revised a course titled, A283 General Medical Issues in Athletic Training, presently taught annually to athletic training students to include a focus on service learning. Since our Project Engage experience we have developed a greater understanding of how to design a service learning class in order for students and our community partner to mutually benefit. According to Bringle and Hatcher’s (1999) service learning is a partnership between the institution (via a class) and the community agent in which students participate in organized service in order to meet a community need and then reflect on such experiences to gain further understanding of the course and discipline as well as gain a sense of civic responsibility.

Specifically for our spring 2010 class we wanted to make sure our students were more prepared to enter and carry out their responsibilities at VIM. In addition, we wanted to close the gap between the didactic and service experiences so students understood how their service was benefiting their development and growth personally and professionally. Examples of specific classroom interventions added after the pilot period included, but are not limited to:

1) Focused instruction, hands-on practice and self, peer and instructor assessment of patient intake skills prior to service learning experience.

2) Problem-based case studies in which students identify, research and present a patient case including signs and symptoms of disease, patient and family history, diagnostic testing, differential diagnosis, treatment and prognosis in order to further facilitate connection of classroom with experiential/ service learning.

3) Self-reflection through journals and course portfolio.
In order to see if we are meeting our desired outcomes with the addition of the added course interventions, we are conducting research with the current class following a Scholarship of Teaching and Learning (SoTL) framework. According to O’Loughlin (2006), research questions for a Scholarship of Teaching and Learning project should be “concise”, avoid using “ambiguous” terminology, and should define specific, obtainable objectives. Thus based on these characteristics we have defined our research question as follows: In what ways are students’ values, knowledge and skill sets broadened through complementary direct service learning experiences and classroom activities within course A283 – General Medical Issues in Athletic Training. We have IRB approval for this project.

II. Advances in the Scholarship of Teaching and Learning:
Similar to other scholarly research, a primary emphasis within the Scholarship of Teaching and Learning is to publish or present teaching and learning research publicly and in peer-reviewed domains (Bass, 1999; Bernstein & Bass, 2005; O’Loughlin, 2006). According to Bass (Bernstein & Bass, 2005) public visibility of research related to the nature of student learning and the practices that effect student learning outcomes leads to improved teaching and learning for individual faculty. More importantly, perhaps, Bass suggests that collaborative inquiry efforts may foster a faculty culture within and across disciplines thus advancing teaching and learning even more holistically.

We believe our research has the potential to advance discourse within and across the disciplines among Scholarship of Teaching and Learning as well as Service Learning genres. While there has been increased educational research and dissemination of such research in athletic training for approximately the past twelve years, research specific to SoTL or Service Learning educational efforts is very limited. Our inquiry efforts, and plans to disseminate our results (see section VI below) will therefore strengthen the current foundation of scholarship in the athletic training field to include these relevant methods of pedagogy and inquiry. In addition, service learning and SoTL endeavors are relevant and embraced within and across many disciplines. Thus, our project has implications for those involved in pre-service education in professional fields such as medicine, nursing and other allied health professions. Such educators will benefit from research specific to pedagogical activities which broaden students’ values, knowledge and skill sets through direct medically-based service learning experiences. Such knowledge could ultimately strengthen professional education in a variety of pre-service programs and ultimately facilitate socialization of students into related professions. Service learning literature discusses the idea of civic professionalism and how adding a dimension of civic responsibility to professional preparation influences socialization into professional fields (Battistoni, 2002; Sullivan, 2005). Thus, not only will our project advance the literature on service learning and teaching and learning but it has the potential to contribute to scholarship related to professional socialization which has implications for many disciplines.

III. Methods / Justification of Methods:
Data Collection: Following IRB approval (IRB Study #0912000896) we recruited participants from the undergraduate students enrolled in A282 – General Medical Issues in Athletic Training (n=19) during the current spring 2010 semester and received informed consent (See Appendix 1). We are utilizing mixed methods for data collection and analysis. O’Loughlin (2006) asserts, “Both qualitative and quantitative data provide depth and richness to a Scholarship of Teaching project, as long as both types of data are used effectively and appropriately (p.85).” Based on this premise, our research question will be evaluated in several ways using both quantitative and qualitative methods.

We conducted an initial focus group reflective session (See Appendix 2) to gain a “benchmark understanding” (Bass, 1999) of students’ assumptions and ideas about service learning experiences in a community-based free clinic with diverse patient populations. In addition, a knowledge survey (Nuhfer & Knipp, 2003) was administered at the beginning of the course (see Appendix 3) in order to identify each student’s knowledge of course content, feelings toward identified personal and professional values, as well confidence in associated skill sets (for example, taking blood pressure).
A final focus group reflective session will be conducted and the knowledge survey will be administered again at the conclusion of the course. In addition, reflective journals will be collected from each participant prior to, during the middle and after the 5 week service experience.

Data Analysis: Descriptive statistics will be used to evaluate knowledge survey data. Inductive content analysis was used to analyze qualitative data from the focus group reflective sessions and reflective journals. Trustworthiness will be assured via methodological triangulation, member checks and peer debriefing.

IV. Anticipated Results and Expectations:
As previously mentioned our goal is to determine if students’ values, knowledge and skill sets are broadened through complementary direct service learning experiences and added classroom activities within course A283 – General Medical Issues in Athletic Training. We expect to see an increase in knowledge survey scores specific to the professional values section of the survey, as well as the skill portion. Due to prior skill instruction in other classes in the major, it is likely that we will see less of a change in perceived patient intake skills (as measured quantitatively with the knowledge survey), however we anticipate qualitative results will show rich improvement in both professional, civic-oriented values and patient intake skills as perceived by the students. We also anticipate students will describe a richer understanding of content knowledge based on directed efforts to connect classroom learning with the service based experience.

V. Impact on Undergraduate and Graduate Teaching and Learning
Data from this project will be used to strengthen course design, teaching practices and related service learning experience for future years. Thus, we feel students will grow personally and professionally from this experience gaining not only an appreciation of the athletic trainer’s role in recognition, assessment, differential diagnosis, referral and treatment of different patient populations, but also a sense of social responsibility. While we are not measuring this directly, we also feel our course improvements will also benefit our community partner as students are more prepared for and engaged in their service experience at Volunteers in Medicine.

In addition to the impact on athletic training students it is our plan to expand the course in the following years to include students in other pre-professional health care professions within the Department of Kinesiology (i.e. pre-physical therapy, pre-occupational therapy, pre- medicine and clinical exercise physiology) and students majoring in public health or public health administration through the Department of Applied Health Science and the School of Public and Environmental Affairs, respectively. The School of HPER is in a transition to a School of Public Health, thus we believe our service learning course and related service experience will embrace the changing goals and initiatives within a public health framework.

In addition to improved student learning outcomes at the local level, our research has national implications as well. Our intervention (in full or in part) may serve as a model for other athletic training programs wishing to incorporate service learning into their curricula as well as understand the role that teaching and learning research may play in the facilitating improvements in course design and ultimately student learning.

VI. Potential Contribution to the Scholarship of Teaching and Learning Program at IUB
As previously explained, our research has the potential to advance discourse within and across the disciplines among Service Learning and Scholarship of Teaching and Learning (SoTL) genres. Our plans to disseminate our research at IUB and beyond include the following (as accepted):

- Fall / Spring 2010-11: Presentation at School of HPER Dean’s Research Seminar Series
• 2010 International Research Conference on Service-Learning and Community Engagement (IRCSLCE); October 28 – 31, 2010; Indianapolis, IN (poster proposal submitted)
• 2011 National Athletic Trainers’ Association (NATA) – Educator’s Conference (depending on educational theme of conference) or Annual Symposium: Presentation specific to conducting successful SoTL research in Athletic Training
• 2011 SoTL Community Poster Session at IUB (other oral SoTL presentations on campus as invited)
• 2011 SoTL Writing Retreat for manuscript preparation

VII. Milestones and Timelines:
  • Spring 2009: Pilot experience with Volunteers in Medicine
  • Summer 2009: A283 Course Re-design / Participation in Project Engage
  • January 2010: IRB approval of A283 research project; Beginning data collection
  • Spring 2010: On-going data collection
  • May 2010: Proposal Submission – NATA Educator’s Conference* (or annual symposium if educational theme of conference* is unrelated)
  • Summer 2010: Data analysis begins after final grades submitted
  • Fall 2010: Complete data analysis / begin manuscript/ literature review
  • October 2010: Poster Presentation at IRCSLCE
  • Fall / Spring 2010-11: Presentation at HPER Dean’s Research Seminar Series
  • February 2011: Presentation at NATA Educator’s Conference (or June if annual symposium)
  • April 2011: SoTL Community Poster Session at IUB
  • May 2011: SoTL Writing Retreat for continued manuscript preparation
  • Summer 2011: Manuscript submission

VIII. Resources/ Budget:
We do not plan to seek additional funding from any internal or external sources for this project. The only projected costs of this project include potentially securing assistance from a graduate student to assist with literature search and entering annotated bibliography into a database such as Endnote. We estimate approximately $500 (45 hours of assistance at $15.00 / hour) for this help. We would only hire a graduate assistant if we could find a doctoral student who meets our qualifications with experience with conducting thorough educationally-related literature searches and using Endnote. We anticipate minimal poster reproduction costs as well as conference travel costs. The Department of Kinesiology offers financial support for faculty traveling to present scholarly work. Our dissemination plan is within the scope of this support, thus funds through the department as well as potentially through this grant would cover anticipated travel costs for conference presentation.

IX. Other Pertinent Documents
  • A recommendation from Department Chair, Dr. David Koceja is included.
  • Previous SoTL and university teaching related publications and grants
    ○ Klossner & Grove: Co-Fellows – Office of Service Learning “Project Engage”
  • Appendices:
    1) Participant Informed Consent
    2) Initial Focus Group Reflective Session Questions
    3) Knowledge Survey (Pre)
    4) Vitae: Klossner & Grove