

Changes in Students' Knowledge, Attitudes, and Skills in a Service Learning Community Health Course

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Introduction

Service learning is a pedagogical approach that promotes students' civic engagement and intellectual growth (Furco, 1996), and is based on the principles of experiential learning (Stewart, 1990). A study by Saddington (2000) indicated that students' development takes place in an experiential learning environment through the process of promoting change in higher education, supporting societal change, and stimulating students' personal growth and development by allowing them to confront the reality of their worlds. The importance of service learning in educational settings has been documented by Hatcher, Bringle, and Muthiah (2004), who conducted a study to determine the quality of the learning experience in service learning courses. In this study, course quality was co-related to the students' opportunities to clarify personal values and the provision of clear guidelines and directions for service learning courses. Brody and Wright (2004) added that self-expansion is an underlying motivation for students involved in service learning interactions.

The value of service learning in community health and health education has been addressed by Greenberg (2000). Service learning methodologies in health have proven to be effective in health education, community partnerships, and program evaluation (Dean & Lee, 1995; Greene, 1997).

Health practitioners are in need of additional research to document the impact of service learning in community health education. This article describes a research initiative involving a study with 48 students enrolled in a Hispanic-serving state university during the fall, 2004. This research attempted to evaluate the impact of using a service learning methodology in the training of students in a Health Science class. The purpose of this study was to identify the changes in knowledge, attitudes, and skills of students in a community health course under the modality of service learning.

Methodology

Quantitative and qualitative data were collected in this study through a 20-item pre-test completed by students on October 1, 2004 and a 22-item post-test, completed by students on November 29, 2004. The latter assessment was given after the students had completed their service learning experience (a minimum of 15 hours), had submitted their final written report, and had conducted an oral presentation of their experience.

Likert scale and open-ended questions were elicited to determine students' knowledge about service learning; students' attitudes towards community work and service learning opportunities; and students' professional skills related to the practice of community health. Students were also asked about the opportunities and challenges they faced in their service learning experience.

At the end of the academic semester, a focus group was conducted with representatives from the participating organizations to identify the changes in knowledge, attitudes, and skills they observed among students enrolled in the selected course. Approval from the University's Committee for the Protection of Human Subjects was granted prior to collection of data.

Quantitative data were analyzed through the Statistical Package for Social Sciences (SPSS). Frequency counts and non-parametric assessments for related samples (Wilcoxon Test) were used in the analysis of data. Qualitative data were analyzed using a grounded theory approach.

Results

A total of 38 students completed the pre-test, and 48 students completed the post-test. The demographics of the sample are presented in Table 1. (See Table 1)

Changes in Knowledge: The comparison between the quantitative results from the pre-test and the post-test revealed an improvement in the knowledge levels of

participants regarding service- learning (definition and key characteristics of service learning courses). Although a positive difference is noted between the pre-test and the post-test quantitative data, no statistical significant differences were documented by the Wilcoxon Test for Dependent samples, as presented in Table 2. (See Table 2)

The qualitative data for the pre-test indicated that from the 38 participants who answered the pre-test, 15 participants (39.5%) provided no answer in the open-ended section of the question related to knowing the definition of service learning and 29 (76.3%) provided no answer to the open-ended section of the question related to knowing the key characteristic of service learning courses. The qualitative responses indicated that among those students who provided answers to the pre-test, the understanding of service learning was very limited and vague.

In the post-test, from the 48 participants who answered the survey, 37 (77.1%) provided accurate answers to the questions related to knowledge about service learning and key characteristics of service learning courses. The qualitative responses from those who answered these questions indicate a very important improvement in the understanding of service learning. These responses incorporate substantial elements of service learning such as integration of community service into the learning process, inclusion of real-world life experiences, and commitment to community work.

Changes in Attitudes: The comparison between the quantitative results from the pre-test and the post-test revealed an improvement in the development of new attitudes among participating students as a result of this service learning experience. Although a positive change in the development of new attitudes was noted in the frequency counts, no statistical significant difference was documented between the responses of the pre-test and the post test as measured by the Wilcoxon test. (See Table 3)

The qualitative responses between the pre-test and the post-test indicated a positive development of new attitudes among participants. Some of the new attitudes described by participants as being developed as a result of this service learning

experience included professionalism, professional commitment, development of a positive outlook and sense of hope, as well as a more positive attitude towards community work, awareness of the needs of the community, time management, leadership skills, knowledge, cooperation, cultural diversity and conflict management.

Changes in Skills: The comparison between the quantitative results from the pre-test and the post-test revealed an important improvement in the development of new skills among participants as a result of their service learning experience. No statistical significance between the results of the pre-test and the post-test were documented by the Wilcoxon test for five of the questions in this section but a statistical significance was found in question # 20 which asked students about their perception of developing new professional skills as a result of their service learning experience. (See Table 4)

The qualitative data verified the quantitative results. Most participants indicated a development of professional skills such as problem solving, communication skills, integrating theory into practice, needs assessment skills, and group work skills.

Other Results: The post-test had two additional questions (21 and 22) to determine the students' perceptions of their general experience. In question # 21, which asked if students had positive experiences in this service learning class, 29 participants (60.4%) indicated they had positive experiences. Some of those experiences, as documented by the qualitative responses, were the opportunity to get a professional certification, the opportunity to know the reality of the community, learning to work with peers, having a positive impact in the community, and learning to recognize the needs of the community.

Question # 22 asked for the negative experiences perceived by participants. A total of 27 participants (56.3%) indicated they had no negative experiences and 10 students (20.8%) reported having negative experiences. The negative experiences presented in the qualitative data are schedule conflicts, lack of time to dedicate to this

experience, difficulties in working with groups, and lack of organization of the program itself.

Focus Group Results: The focus group with representatives from participating organizations revealed a positive experience in general. The focus group participants identified positive changes in knowledge levels of students (importance of community involvement and personal behavior change), attitudes (responsibility, professional commitment, motivation and interest for community work), and skills (time management skills and community work skills). Time conflicts, transportation limitations, trust, and immaturity were described by focus group participants as challenging elements in this experience. Diversity, new audiences, and a larger coverage of services were described as benefits for the participating organizations. Suggestions for improvement were related to starting the service learning experience as early in the semester as possible, simplifying the information provided to students, achieving more effective time management, re-considering the value of working in groups from a student perspective, and selecting one specific project in each organization.

Conclusions and Recommendations

This experience provided interesting ideas on which to reflect. The first one is that there is potential for the survey instrument to be modified to suit other audiences different from college students. An analysis of reliability and validity of each of the items in the questionnaire would be an important step towards determining the questions that can be used with other research samples.

Although, planning meetings were held with the participating organizations prior to the implementation of the service learning component, some negative experiences were documented by the students. In the planning meetings, the organizing team made their best effort to design a very positive service learning experience for students, but in the implementation of this service learning effort, multiple difficulties appeared.

An issue perceived as negative by some of the students in this research project was the time commitment of this experience. Certainly, service-learning requires a time commitment that goes beyond the classroom. Although the limitations in the students' time are understandable, it is also important to recognize the relevance of emphasizing to the students that this time commitment is essential for the development of professional attitudes and skills that only service learning classes can offer.

Working in groups was also mentioned as another limiting issue from the perspective of some students. Group working skills are essential in community work and need to be kept in the service learning experience. Perhaps, finding alternative ways to offer a group work experience could be a relevant element for future planning sessions in service learning courses for community health.

In general, the results of this service learning experience were very positive for students and participating organizations. Changes in knowledge, attitudes, and skills among students were documented by the frequency counts but these changes were not statistically significant for all the items, except for the question related to the development of new skills. The qualitative responses clearly indicated an improvement in students' knowledge, attitudes, and skills related to service learning and community health.

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Table 1. Demographics of the Sample

Variable	Pre-Test	Post-Test
Gender	Most are females (66.7% n=32)	Most females (60.4% n= 29)
Age	Ages between 17 and 38. Most participants were between 20 and 22 years old (43.8% n= 21)	Ages between 18 and 38. Most participants were between 20 and 22 years old (48% n=23)
Class Standing	Most participants were Juniors (37.5% n= 18)	Most participants were Juniors (41.7% n=20)
Major	Most participants were Health Science majors (64.6% n= 31)	Most participants were Health Science majors (66.7% n=32)
Ethnicity	-----	Most students who answered the survey were Asian/Pacific Islanders (31.3% n=15), followed by Hispanic Latinos (22.9% n=11), White/European (12.5% n=6), and Black/African American (4.2% n=2)
GPA	-----	GPA ranged between 1.00 and 4.0 with 41.7% of the students having a GPA below 3.0.

Table 2. Changes in Knowledge

Question	Pre-Test	Post-Test	Result
6. Know definition of service learning	Don't Know (45.8%) Yes, Know (27.1%)	Don't Know (22.9%) Yes, know (54.2%)	Positive Improvement but $p = .068$ No statistical significant difference
7. Know the key characteristics of service learning	Don't Know (56.3%) Yes, know (12.5%)	Don't know (47.9%) Yes, know (27.1%)	Positive and Improvement but $p = 0.863$ No statistical significant difference

Table 3. Changes in Attitudes

Question	Pre-test	Post-Test	Result
8. I like SL classes	Don't know (45.8%) Disagree (10.4%) Agree (22.9%)	Don't Know(10.4%) Disagree (22.9%) Agree (43.8%)	Positive improvement but p=0.650 No statistical significant difference
9. I would recommend SL class to friends	Don't know (39.6%) Disagree (8.3%) Agree (31.3%)	Don't know(16.7%) Disagree (22.9%) Agree (37.5%)	Positive improvement but p=0.967 No statistical significant difference
10. Will take another SL class in the future	Don't know (43.8%) Disagree (14.6%) Agree (20.8%)	Don't know (22.9%) Disagree (20.8%) Agree (33.3%)	Positive change but no statistical significant difference p=0.732
11. Service Learning is just a waste of time	Don't know (27.1%) Disagree (47.9%) Agree (4.2%)	Don't know (12.5%) Disagree (56.3%) Agree (8.3%)	Positive change but no statistical significant difference p= .980
12. I like working with the community	Don't know (12.5%) Disagree (2.1%) Agree (64.6%)	Don't know (10.4%) Disagree (0%) Agree (64.6%)	Some change (students who disagree with the statement changed from 2.1% to 0% in the post-test) but no statistical significant difference p= 0.617
13. Like to see HS 100 converted to a SL class permanently	Don't know (37.5%) Disagree (14.6%) Agree (27.1%)	Don't know (27.1%) Disagree (16.7%) Agree (33.3%)	Ambivalent results. No statistical significant difference p=0.829
14. Had the opportunity to develop new attitudes	No previous SL experience (64.6%) No new attitudes (2.1%) Yes, new attitudes (8.3%)	No previous SL experience (0%) No new attitudes (22.9%) Yes, new attitudes (54.2%)	Positive change. Most students (54.2%) indicated they developed new attitudes as a result of their SL experience

			No statistical significant difference p= 0.068
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Table 4. Changes in Skills

Question	Pre-test	Post-Test	Result
15. During this semester, I have had opportunity to develop professional skills in working with the community	Don't know (45.8%) Disagree (14.6%) Agree (22.9%)	Don't Know(4.2%) Disagree (22.9%) Agree (50%)	Positive change but no statistical significant difference p=0.430
16. I have had the opportunity in HS 100 to develop communication skills in working with the community	Don't know (39.6%) Disagree (12.5%) Agree (27.1%)	Don't know (12.5%) Disagree (18.8%) Agree (45.8%)	Positive change but no statistical significant difference p= 0.624
17. In HS 100 I have had opportunity to work or volunteer for non-for-profit community organizations	Don't know (16.7%) Disagree (8.3%) Agree (52.1%)	Don't know (4.2%) Disagree (0%) Agree (72.9%) Missing data (22.9%)	Important positive change but no statistical significant difference p=0.396
18. Development of professional skills in determining the needs of the community	Don't know (39.6%) Disagree (6.3%) Agree (31.3%)	Don't know (14.6%) Disagree (18.8%) Agree (43.8%)	Some improvement but no statistical significant difference p= 0.981
19. Opportunity to Integrate theory into practice	Don't know (43.8%) Disagree (8.3%) Agree (25%)	Don't know (14.6%) Disagree (12.5%) Agree (50%)	Substantial positive change but no statistical significant difference p= .514
20. I have had the opportunity to develop new professional skills as a result of SL	No previous SL experience (68.8%) No new skills developed (4.2%) Yes, new skills developed (4.2%)	No previous SL experience (4.2%) No new skills developed (25%) Yes, new skills developed (45.8%)	Substantial change and improvement. Statistical significant difference p= 0.023

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