A publication of the

University of Louisiana System

ISSN: 2162-6685

Vol 6 July 2017

Journal of Service-Learning in Higher Education

THE JOURNAL OF SERVICE-LEARNING IN HIGHER EDUCATION IS AN ONLINE, INTERNATIONAL, PEER-REVIEWED JOURNAL FOR THE DISSEMINATION OF ORIGINAL RESEARCH REGARDING EFFECTIVE INSTITUTIONAL-COMMUNITY PARTNERSHIPS. OUR PRIMARY EMPLASIS IS TO PROVIDE AN OUTLET FOR SHARING THE METHODOLOGIES AND PEDAGOGICAL APPROACHES THAT LEAD TO EFFECTIVE COMMUNITY-IDENTIFIED OUTCOMES. THE JOURNAL OF SERVICE-LEARNING IN HIGHER EDUCATION IS A SUBSCRIPTION-FREE JOURNAL WITH A REVIEW BOARD MADE UP OF VARIOUS ACADEMIC DISCIPLINES OF THE MEMBER INSTITUTIONS OF THE UNIVERSITY OF LOUISIANA SYSTEM AS WELL AS OTHER NATIONALLY AND INTERNATIONALLY ACCREDITED COLLEGES AND UNIVERSITIES AND AFFILIATED ORGANIZATIONS

JOURNAL OF SERVICE-LEARNING IN HIGHER EDUCATION
A publication of the University of Louisiana System

TABLE OF CONTENTS

Forward

By

David Yarbrough

Executive Editor

Welcome to the 2017 edition of the Journal of Service-Learning in Higher Education. It is always my pleasure to read and share the interesting work that is happening across our field. Like many of you, I have spent some time traveling this past year and often heard many interesting questions. I'll share two of them with you. I was in a city in Europe where scattered throughout the public spaces, there were open fountains of clean water constantly running for anyone's use. There were no signs or directions for filling your water bottles – no cautions presented. But at every location I observed, there were queues of people (and some pets) with water bottles taking advantage of the available, cool, water on a hot summer day. When I asked a resident their thoughts on the fountains, the reply was that everyone is entitled to clean drinking water. We can do that.

A question that I have is actually an observation. In another city I visited, I was told on hotel check-in that if I wanted to take advantage of the recycling efforts of their community, the recycle "bin" (a large dumpster-type container) was located on the street, just outside of the hotel entrance. What I observed in this city were multitudes of trash and recycle containers that were obvious, obtrusive, and very available. What I did not observe in this city was trash on the streets, sidewalks, and in public places. So my thought is which would I rather see in my community: A tiny unobtrusive container that is often overlooked and seldom used – along with lots of trash on the streets; or large trash and recycle containers that are obvious and encourage use? I pick the latter – and we can do that, too.

That brings me to my final point for this edition. What is often very important to remember in reaching our desired outcomes in service-learning initiatives is that we must be clear to articulate what those desired outcomes are and how we intend to get there. The collection of articles in this edition all address that singular point. What is our purpose, how is that implemented and assessed? From the classroom, to looking at models for successful engagement and how to empower our community partners, these authors, researchers, and educators will both challenge and inform you. Thank you for reading and my best to you for the upcoming academic year.

Assessing the Impact of Community-Based Learning on Students: The Community Based Learning Impact Scal (CBLIS)

Shauna K. Carlisle

Karen Gourd

Safaa Rajkhan

Keith Nitta

University of Washington, Bothell

ABSTRACT

Community-based learning integrates problem-based service-learning, volunteerism, and experiential learning across a variety of disciplines. The Community-Based Learning Impact Scale is an instrument developed to measure the impact on a liberal arts university campus. Scale items were generated from focus groups, literature, and existing scales. The goal of this pilot test was to refine wording and scale format while providing preliminary results for the utility of the scale.The instrument is a 43-item measure with 33 items representing proposed constructs civic engagement, institutional/community relations, academic learning, psychological wellbeing, and professional development. Results revealed that, overall; students reported that their CBL experience increased their capacities across multiple personal and professional indicators. Confirmatory and exploratory factor analysis suggested that a 3-factor model fit the data better than the proposed 5-factor model.

Introduction

The purpose of this study is to pilot the Community Based Learning Impact Scale (CBLIS) an instrument that tests the impact of community-based learning at one of three liberal arts campuses for a major University while assessing the impact of community-based learning experiences on students. A community-based impact survey was developed to measure CBL's influence on student learning on the University campus. The sample was composed of undergraduate and graduate students who participated in courses designated as community-based learning courses (CBL) in 2011 and 2012. On the campus, courses are designated community-based learning if they meet the Carnegie criterion, which requires the mutually beneficial exchange of knowledge and resources through collaboration in a context of partnership and reciprocity (2014, December 13). In this study, we used exploratory and confirmatory factor analysis to analyze the items contained on the CBLIS to determine whether it is a useful measurement that could be used as part of a scale or as individual indicators of community-based learning's impact on student learning.

Community-based learning (CBL) is a teaching practice that incorporates student volunteerism, experiential learning, and curriculum for academic credit (Mooney & Edwards, 2001). CBL models incorporate problem-based service-learning, direct service-learning, and community-based research (Mooney & Evans, 2001; Dallimore, Rochefort, & Simonelli, 2010). Though settings where these models take place vary, instructors implementing the models have stressed the importance

of such learning environments across a variety of disciplines such as dentistry (Gadbury-Amyot et al., 2006), public health (Cacari-Stone, Wallerstein, Garcia, & Minkler, 2014), the liberal arts (Barber & Battistoni, 1993), and non-profit management (Carlisle, Kruzich, 2013). Literature currently suggests that community-based learning is associated with increases in interpersonal skills (Durlak et al., 2011), leadership skills (Vogelgesang & Astin, 2000), volunteerism (Astin, Sax, & Avalos, 1999), and with improvements in academic development, civic responsibility, and life skills (Astin & Sax, 1998) with mixed findings for its impact on interpersonal skills (Moely, Miron, Mercer, & Illustre, 2002; Simons & Clearly, 2006; Vogelgesang & Astin, 2000).

The impact of CBL on learning has been reported to be positive for students (Reed-Bouley, Wernli, & Sather, 2012); however, less is known of its impact on community agencies with the exception of Clarke's (2003) process assessment that demonstrated CBL's positive impact on the community and agency. Community-based learning provides opportunities for integrating learning activities in a community environment, which enhances their personal and professional skills (Brownell & Swaner, 2010; Kuh, 2010). Additionally, community-based learning has been found to enhance self-awareness and confidence (Batchelder & Root, 1994) and civic engagement, leading to positive social change (Welch, 2009). For example, Mayhew and Engberg (2011) conducted a longitudinal study among undergraduate students enrolled in service-learning at a large academic institution. Their study examined pretest/posttest responses related to changes in charitable and social justice responsibility after engaging in a community-based learning course. Results revealed that students in service-learning courses were significantly more likely to report gains in charitable responsibility but not an increase in social justice as measured by understanding how to use their power and privilege to benefit society (Mayhew & Engberg, 2011). Crone (2013) examined the role of service-learning on attitudes, civic participation, and sensitivity to social issues and self-efficacy and civic responsibility in relation to the theoretical underpinnings in a social psychology course. In comparison to non-service-learning classes students in a service-learning centered social psychology class had far greater improvements across civic engagement and improvements in academic abilities (Crone, 2013). A positive relationship between civic engagement and service-learning classes has also been found among nursing students (Nokes, Nickitas, & Keida, 2005). Service-learning has also been connected to student's experiences with professional development including understanding themselves better and improvements in communication among pharmacy students (Piper, DeYoung, & Lamsam, 2000). Although assessment tools are in early stages of development, they indicate high potential for improved relationships between institutions and communities when they collaboratively develop and explore community-based learning options that benefit both the university and the community partners (Maurrasse, 2001; 2002). Given the empirical support for including civic engagement, institutional/community relations, academic learning, psychological wellbeing and professional development in the literature these constructs were developed and tested within this study.

In addition to the theoretical and empirical literature informing this work, the setting, institutional goals, and a Theory to Practice grant received by the research team from the Association of American Colleges and Universities informed the decision to focus on five themes: civic engagement, institutional/community relations, academic

learning, psychological well-being, and professional development. Psychological well-being absent from much of the early service-learning scholarship has been included as a main focus of the grant. Descriptions of each of these themes as primary features of the CBLIS are included in the next section.

Method

Survey Instrument

The survey instrument developed for this study is a 43-item online survey designed to generate responses on students' community-based learning experiences. After reviewing the existing literature on service-learning and student outcomes, 33 of the 43 items were identified as representing CBL learning. This collaborative process resulted in the development of 5 core themes (civic engagement, academic learning, psychological well-being, professional development, and institutional relationships). Items were subject to inter-rater reliability where items were consolidated, dropped, or reworded until full consensus was reached by each member of the research team. This collaborative process resulted in the inclusion of 33 of the 43 items in a CBL scale related to the themes: Civic Engagement (5 items), Institutional/Community Relationships (3 items) Academic Learning (8 items), Psychological Well Being (6 items), and Professional Development (11 items). The assignment of the items into these 5 general themes was found to be consistent with the literature on community-based learning and student learning.

Twenty-two of the main items were measured on a 4-point ordinal scale with the following response categories (strongly agree, agree, neutral, disagree, and strongly disagree). Three items were measured on a 3-point ordinal scale (yes definitely, somewhat, no not at all). Seven items were measured on a different 3-point scale (very likely, likely, not likely). In addition, 5 background questions were added to the survey to assess the variations in experiences across a diverse student population. The researchers then reviewed the list and determined that the constructs had face validity as guided by the campus learning goals and objectives. Face validity, refers to judgments about a measurement instrument after it has been constructed to operationalize a theoretical construct (Nunnally, 1967).

Background questions included questions related to gender, race, and educational level (first and second year, third year, fourth year, graduate student, other). Additionally, students were asked whether they had any commitments outside of class that would make it difficult to participate in CBL, ranging from I don't have commitments to 41+ hours per week and the number of hours per week that they worked on their CBL project (0 hours per week, 1-10 hours, 11-15 hours, 16-20 hours, or 21+ hours). Finally, students were asked whether they felt the number of hours on the CBL project was adequate time for completing their work. Response items included "did not have enough time," "it was hard to complete hours," and "I did not worry about time."

Survey questions were subject to inter-rater reliability and another test of face validity resulting in a total of 5 study constructs and 33 items. *Civic Engagement* which measured the extent to which students felt part of a larger collective and collaborative activity aimed to contribute to the larger society (as cited in Adler, 2005) was measured using 5 items ranging from strongly agree to strongly disagree. Students were assessed on whether their CBL experience influenced their sense of connectedness to

their community and to other communities. These items also assessed the impact of their CBL experience on their ability to understand other cultures and global issues. The goal of these items is to determine whether CBL increased a sense of civic engagement among students.

Three items measuring the construct *Institutional/Community Relationships* were included in this survey for the purpose of understanding student perception of the partnership with the community organization they worked with. The first item seeks to measure the likelihood that the respondent would pursue more CBL classes (very likely, somewhat likely, not likely, don't know). The second and third items attempt to understand their perceptions of CBL as beneficial to the respondent and community organization (strongly agrees, agree, disagree, strongly disagree). The final three items attempt to understand whether respondents felt they had enough time to complete their CBL work.

The construct *Academic Learning* contained 8 items that were designed to measure whether students acquired skills needed to be successful in class. Students were asked whether CBL made it more likely that they would be open to new ideas, apply subject-specific knowledge to resolving problems, be creative and collaborative when solving problems, understand consequences to an action, systematically consider competing theories, revise approaches to solving problems, and better understand course material. All items were measured on a 4-point scale from strongly agree to strongly disagree.

Psychological Well Being we defined as a measure of student satisfaction with themselves in the world and whether they find purpose and meaning in life. Under this 6-item construct, students were asked whether their CBL increased the likelihood that they would help and encourage others, volunteer, participate in public affairs (very likely, somewhat likely, not likely). Additionally, psychological wellbeing measured whether respondents had a better understanding of themselves, sense of purpose, and greater satisfaction with life (yes definitely, somewhat, no not at all).

Finally, *Professional Development* measured the extent to which CBL had an impact on professional skills needed in the workforce. This 11-item construct asked respondents whether their skills increased and whether they are more likely to use specific skill sets across a range of indicators, including problem solving, analyzing social issues, justifying their position through communication, considering multiple interpretations, reflecting on how they do their job (strongly agree, agree, disagree, strongly disagree, don't know). Additionally, this construct asked respondents to reflect on whether their career opportunities have expanded, whether they take greater initiative, and whether they have developed greater dependability (yes, definitely, somewhat, no not at all).

We hypothesize that the survey questions can be aggregated to reflect any of the 5 constructs under study or can be used as single-item scores. For example, each person's rating of the 8 items under academic learning ("Due to my community-based learning experience, in the future I am more likely to...") can be averaged to reflect an individual's average score on the construct "academic learning," resulting in an estimate of that respondents' rating of their academic development. This score would then be used to investigate a hypothesis that tests its association with remaining items on the survey.

Focus Groups

Concurrently, while piloting the survey, focus groups were held to collect qualitative information on the community-based learning experiences of students, staff, faculty, and community partners. The intent of the focus groups was to enlist the participants in the creation of the surveys, while also bringing members from all the constituents together to share their views on what makes a strong community-based learning experience. The research plan was to create three distinct surveys—one for students, one for faculty and staff, and one for community partners. As the work progressed, the need for inclusion of the community for the development of *all* of the surveys became obvious for two reasons. First, the research literature on community-based learning rarely addressed the experiences of community partners. Second, effective collaboration between universities and community partners means collaboration in all parts of the process (Clarke, 2003; Maurrasse, 2001; 2002). Three focus groups were held for 1.5 hours each and each focus group included community partners, staff, faculty, and students.

Questions asked in the focus groups concentrated on (a) meaningful outcomes, (b) criteria for determining success, (c) recommendations for improving evaluation of the CBL experiences, (d) indicators of a good match between the community-based organization, the university, and students, (e) indicators that volunteers have been changed, (f) indicators of professional life having been affected by CBL, (g) indicators of meaningful relationship between the university and the community organization, (h) suggestions for improving partnerships between university and community partners, and (i) questions that should be asked on a survey about community-based learning?

Constructs and variables identified in the focus groups were compared to the items identified by the research team and informed further development of the survey. The richness of the qualitative data from the focus groups influenced the process of revising the survey as the research team regularly asked “How can we collect data with qualitative depth through a large-scale quantitative process?”

Participants

End-of-quarter, online survey responses were collected from a sample of 195 graduate and undergraduate students registered in community-based learning courses through the Office of Community-Based Learning and Research (OCBLR). These students ranged in level of participation in community-based learning classes from classes that provide full immersion into a community-based setting to others where students engaged in 1-2 hours of community-based learning per week. Students who were not registered for a course with a community-based learning component did not receive the survey or the invitation. Study approval was granted by the University's Internal Review Board for Human Subjects and data were collected in 2011 and 2012.

Procedure

Participants were informed of the purpose of the survey, their rights as research participants, their participation in the survey was voluntary, and their responses were confidential. Informed consent was obtained through a consent statement at the beginning of the survey. The survey was administered online to students who completed a CBL course regardless of the discipline focus of the course. An end-of-quarter email invitation to complete the survey containing information on the nature of

the study, as well as an explanation of its purpose and explanation of voluntary consent and confidentiality. Students were then invited to complete the confidential survey.

Analysis Strategy

Survey items were reviewed by investigators to loosely determine the content validity of each item. Content validity refers to "the degree to which elements of an assessment instrument are relevant to and representative of the targeted construct for a particular assessment" (Haynes et al., 1995, pp. 238). The responses represented the targeted constructs under study and were relevant to the assessment of community-based experiences in the general student population and, as a result, we proceeded to test the factor model for this instrument.

To analyze univariate descriptive statistics respondents' data was transferred to SPSS 18.0 (2009), which was used to run frequencies on the background information related to the participants' gender, class level, and racial background. Chi-square analysis provided further exploration through bivariate statistics to determine the association between class level and commitments; gender and commitments; gender and likelihood to participate in community-based learning activities; and gender with community-based learning knowledge and experiences.

Confirmatory factor analysis (CFA) was conducted in M-Plus version 7.3 (Muthen & Muthen, 1998-2011) to determine whether survey items reveal a common variance measure and support the theoretical rationale for the 5 constructs in our study (Civic Engagement, Institutional/Community Relationships, Academic Learning, Psychological Well Being, and Professional Development). Missing items were coded as -99 and the weighted least squares means and variances estimation (WLSMV) was used for the categorical data in this model because it does not require the normality assumption (Brown, 2006). Two items were dropped because of administrative error. There were a total of 195 participants in this study and 33 scale items yielding a ratio of approximately 5 items to 1 participant. This data analysis was assessed to be appropriate based on Tabachnick and Fidell's (2007) method, which indicated a sample size of 150 is considered sufficient when item loadings are above .3. In addition, a general guideline of 5:1 ratio between sample size and free parameters is consistent with Bentler and Chou (1987). Given this criteria, our examination indicated this dataset is suitable for factor analysis. Chi square as a model fit indices is highly influenced by sample size (Brown, 2006); therefore, to assess model fit, this study uses RMSEA, CFI (Suhr, 2006), eigenvalues, and a scree plot (Mertler & Vannatta, 2002). Consistent with Comrey and Lee (1992) factors were then assessed to determine whether items contained factor loadings greater than .63 interpreted as "very good" or .71 interpreted as "excellent."

Results

Descriptives

Sixty-two percent of respondents who completed the survey instrument were female (see Table 1). The majority of respondents (61%) identified as White (Non-Hispanic), 13% were Asian American, 11.4% other races, 5.7% Bi-racial or Multi-racial. A small number of respondents identified as black (4%) or Native American or Alaskan Native or Native Hawaiian or Pacific Islander (1.5%). Fourteen percent of respondents were first and second year students, 27% third year students, 32% fourth year students,

and 24% where graduate students. When asked whether students had time commitments outside of their class commitments, the majority of responses indicated they had 41 or more hours per week of commitments outside of class (28%) while 20.5% indicated having approximately 21% hours per week of commitments outside of class. The majority of students indicated that they needed approximately 1-10 hours per week (80.3%) of hours per week to work on their CBL project. Interestingly, when asked whether students felt the time provided to complete the community-based work was adequate 62% indicated they did not worry about time it took to conduct the CBL work and 26% indicated it was hard to complete the community-based project hours. Only 12% indicated they did not have enough time. This suggests that 1-10 hours per week on a community-based project for many students may be at their capacity for a project of this magnitude.

Table 1. Sample Characteristics of Student Respondents.

	Total Sample	n	%
Total Sample	N=194		
Gender			
Female		121	62.7
Male		71	36.8
Race	193		
White (Non-Hispanic)		118	61.1
Black/African American		8	4.1
Native American or Alaskan Native		1	0.5
Native Hawaiian or Pacific Islander		2	1
Asian American		25	13
Hispanic/Latino American		6	3.1
Bi-racial or Multi-racial		11	5.7
Other		22	11.4
Educational Level	194		
First and second year		28	14.4
Third year		53	27.3
Fourth year		63	32.5
Graduate student		45	23.2
Other		5	2.6

Commitment outside class	195		
I don't have commitments		18	9.2
1-10 hours per week		23	11.8
11-20 hours per week		36	18.5
21-30 hours per week		40	20.5
31-40 hours per week		23	11.8
41+ hours per week		55	28.2
Numbers of hours worked on CBL	193		
0 hours per week		2	1
1-10 hours per week		155	80.3
11-15 hours per week		25	13
16-20 hours per week		4	2.1
21 or more hours per week		7	3.6
Number of hours was adequate time	193		
I did not worry about time		23	11.9
It was hard to complete hours		51	26.4
I did not worry about time		119	61.7

Chi square analysis revealed no significant differences between class level and hours of commitment outside of class and class level and gender. However, there is a significant association between genders: women were more likely to help and encourage others c^2 (6, N=192) =13.270, p<0.04). On the other hand there is no significant association between gender and the likelihood to volunteer c^2 (6, N=191=19510.76, p>0.096), participate in organizations and or public affairs c^2 (6, N=191)=8.074, p>0.233), and pursue more classes that have a community-based partnership c^2 (6, N=190)=6.405, p>0.379. Compared to males (13.5%) more female students (25.4%) agreed and 31% of female students versus 13.5% of male students strongly agreed that the community-based learning knowledge and experiences had mutual benefit to the community organization and themselves (c^2 (10, N=190)=36.081, p<0.001).

Table 2 contains the results of the CBL survey grouped according to proposed factors and general themes identified by the researchers. Overwhelmingly, most students agreed or strongly agreed that CBL was beneficial to both the organization and community and in fact, most students strongly agreed that CBL was beneficial to the students, the university, and the community partners. Further, most students indicated

that they were very likely to volunteer (49.2%) help encourage others (55.8%), and participate in organizations and public affairs (48.3%) indicating that CBL did in fact improve potential for community engagement in the future. Data indicated that personal growth emerged from the CBL experience, since students indicated they definitely understand themselves better after participating in CBL (41.6%). Finally, there was a moderate response to the question "would be more likely to pursue more classes that have a community-based partnership (strongly agree 38.1% and agree 34%)." Understandably this could be related to the amount of work that is required of a CBL or that perhaps one CBL course is enough to have an impact on civic engagement, institutional/community relationships, academic learning, psychological wellbeing and professional development. Should the CFA result in an unsupported factor structure an exploratory factor analysis will be used to determine a new factor structure to identify a better fitting model.

Table 2: Summary Results of Individual Items from the Community Based Learning Impact Scale.

N=195	Strongly Agree %	Agree %	Disagree %	Strongly Disagree %
I am more connected to MY community[a]	28.0	41.6	15.7	3.0
I am more connected to communities OTHER THAN my own[a]	25.0	39.1	21.8	2.5
I am able to meet SOME of the needs of the community[a]	28.0	49.2	11.2	2.0
I have realized there are different perspectives on (global) international issues[a]	26.4	39.1	11.2	1.5
I have developed a better understanding of cultures other than my own[a]	30.0	42.6	8.6	2.6
Had mutual benefit to the community organization and me[b]	48.7	38.1	6.1	1.5
Had adequate communication between the community organization and me[b]	42.6	36.0	9.1	7.1
Be open to new Ideas[c]	40.1	40.1	10.2	0.5
Apply subject-specific knowledge to resolve a problem[c]	36.5	41.6	9.6	0.5
Be creative when problem solving[c]	35.5	42.5	12.2	1.5
Collaborate with others when solving problems[c]	39.6	43.1	8.1	2.0
Understand the consequences to an action[c]	33.0	43.7	8.6	1.5
Systematically consider competing theories[c]	30.0	42.1	11.2	1.5
Try a solution, assess its effects, and revise my approach to solving the problem[c]	37.6	41.6	9.1	1.5
Better understand course readings, lectures, and discussions[c]	32.0	43.1	10.7	2.5
Problem solving[d]	24.4	47.7	12.0	2.0
Identifying social issues[d]	31.0	50.8	8.0	1.0

Analyzing social issues[d]	31.5	47.2	10.2	1.0
Evaluating competing claims[d]	21.3	40.96	14.7	1.5
Justifying my position[d]	30.0	45.2	9.1	1.5
Communicating with others[d]	40.6	44.2	9.1	3.0
Considering multiple interpretations[d]	36.0	42.6	8.1	2.0
Reflect on how I do my job[d]	35.5	44.2	8.6	1.0

	Yes Definitely	**Somewhat**	**No Not at All**
My career opportunities expanded[d]	28.9	42.1	19.3
I have developed greater initiative[d]	39.1	44.7	12.2
I have developed greater dependability[d]	36.5	38.1	16.2

	Very Likely	**Somewhat Likely**	**Not Likely**
Pursue more classes that have a community-based partnership[e]	38.1	34.0	21.8
Help and/or encourage others[e]	55.8	33.0	7.1
Volunteer[e]	49.2	38.1	8.6
Participate in organizations and/or public affairs[e]	48.25	35.5	12.2
I better understand myself[e]	41.6	39.1	13.2
My satisfaction with life as a whole has increased[e]	33.0	42.1	16.8
My sense of purpose in life has increased[e]	41.6	39.1	13.2

a=Civic Engagement; b=Institutional/Community Relations; c=Academic Learning; d=Professional Development; e=Psychological Well-being.

Factor Analysis Results

Confirmatory factor analysis was performed to determine whether the 5 constructs developed in this study determined the shared variance of the items within each factor. The 33 items were included as indicators in a 5-factor measurement model. The analysis was performed in Mplus with a Weighted Least Squares Mean Variance (WLSMV) estimator for categorical variables (Brown, 2006). Fit was assessed using the chi-square, CFI and RMSEA indicators. Model fit indices were examined to determine how well the proposed model represented the data. For this analysis, model fit indices indicate a poor fit (χ^2=31794.7, df=561, p<.0001; CFI=.963; RMSEA = .106). As a result, we ran an exploratory factor analysis to determine the number of factors in this analysis that would more appropriately fit the data.

Thirty-three items were submitted to an exploratory factor analysis with GEOMIN rotation with eigenvalue criteria of greater than 1 to determine the common variance among survey items. The results of this analysis produced 3 factors with eigenvalues ranging from 25.38 - 1.3. Scree plot was used to assess the factor results. The results of this process led to the initial retention of 3 factors and their eigenvalues comprising 14 (λ=25.38), 15 (λ =2.195) and 5 (λ =1.31) items. An examination of the scree plot suggests that a 2-factor model as a more appropriate fit for the data, although a slight decline still existed between factor 2 and 3. However, there appeared to be some crossover between factor loadings, and therefore, authors retained 3 factors (See Table 3) consistent with the summary recommendation of Fabrigar and colleagues who suggested that for accuracy, over-factorization would reduce chances of substantial error with specifying too few factors (Fabrigar, Wegener, MacCallum, Strahan, & Erin, 1999).

Table 3. Summary of Exploratory Factor Analysis Results for the Community Based Learning Impact Scale Using Weighted Least Squares Means and Variances Estimation (N=195).

	Factor Loadings		
Item	**Civic Engagement**	**Critical Thinking**	**Self-Awareness**
Had adequate communication between the community organization and me	**0.908**	0.584	0.338
I have developed greater dependability	**0.905**	0.757	0.439
My career opportunities expanded	**0.867**	**0.831**	0.462
Skills increased in considering multiple interpretations	**0.863**	0.736	0.565
I will volunteer	**0.850**	0.565	0.560
Skills have increased in analyzing social issues	**0.849**	0.547	0.344
I have developed greater initiative	**0.849**	**0.864**	0.592
I believe my work had mutual benefit to the community partner and to me	**0.827**	0.757	0.460
I have realized there are different perspectives on (global) international issues	**0.811**	0.673	0.571
More likely to help and encourage others	**0.804**	0.709	0.591
More likely to participate in organizations and/or public affairs	**0.784**	0.552	0.596
I have developed a better understanding of cultures other than my own	**0.772**	0.603	0.482
More likely to pursue more classes that have a community based partnership	**0.757**	0.636	0.546
More likely to be open to new ideas	0.746	**0.879**	0.496
My sense of purpose in life has increased	0.742	0.634	**0.797**
Skills have increased in communicating with others	0.695	**0.914**	0.563
My satisfaction with life as a whole has increased	0.690	0.613	**0.831**
I can consider multiple interpretations of ideas or events	0.672	**0.907**	0.488
Skills have increased in analyzing social issues	0.667	**0.869**	0.602
More likely to collaborate with others when solving problems	0.667	**0.900**	**0.803**
I better understand myself	0.660	0.539	0.66
I am able to meet some of the needs of the community	0.647	0.787	0.684
Skills have increased in identifying my position	0.640	**0.965**	0.385
I am more likely to be creative when problem solving	0.640	**0.843**	**0.782**
More likely to apply subject specific knowledge to resolve a problem	0.639	**0.925**	0.501
I am more connected to communities other than my own	0.637	**0.875**	**0.759**
More likely to reflect on how I do my job	0.623	**0.962**	0.378

I am more connected to my community	0.618	**0.890**	**0.743**
More likely to understand the consequences to an action	0.612	**0.880**	**0.717**
More likely to try a solution, assess its effects, and revise my approach to solving the problem	0.601	**0.854**	**0.728**
More likely to better understand course readings, lectures, and discussions	0.601	**0.887**	0.76
Skills have increased in evaluating competing claims	0.592	**0.968**	0.327
More likely to systematically consider competing theories	0.532	**0.848**	**0.721**

Discussion

The purpose of this study was to examine the impact of community-based learning on student outcomes while testing the proposed factor structure of a newly developed CBL outcomes measure. Using data from an end-of-quarter, online survey, we examined self-reports of the impact of student learning in their community-based learning courses. Overall, results indicate that community-based learning was extremely beneficial to students in multiple ways and that there was a sense of mutual benefit for both the student and organization, which we hope would be the experience of any partnership between an institution and community. Interestingly, females in this study were significantly more likely than males to agree that CBL was beneficial. It was also interesting to note that CBL seemed to enhance student desire to participate not only organizationally but also in volunteer efforts in general. This increased interest in volunteering after participating in a CBL course is consistent with the findings of Prentice (2007), whose study among community college students yielded an increase in civic engagement on a posttest assessment of civic engagement in which students described themselves as more "personally responsible citizens."

The majority of students in our study agreed or strongly agreed to feeling a sense of civic engagement or responsibility. Community-based learning also appeared to strongly improve learning outcomes, particularly in the important area of being able to work with others and being open to new ideas and solutions, intellectual skills that are highly sought by employers seeking to hire college graduates (Association of American Colleges and Universities, 2009). A large percentage of students felt that they would now be more likely to help and encourage others, which is consistent with findings in other studies on the impact of CBL on student learning (Astin & Sax, 1998; Vogelgesang & Alexander, 2000). In particular, female students were significantly more likely to report a mutual benefit of the community-based learning experience. Though we were unable to find a study to date that examined these gender differences in college-age students, these findings are consistent with Miller's study (1994) in which female students were more likely than male students to support a requirement that community service be mandatory in school programing. The level of schooling did not have a significant impact on any of the variables measured in this study.

Preliminary results of the confirmatory factor analysis of a CBL outcomes measure revealed little support for a 5-factor solution, as proposed by the developers, to assess the impact of community-based learning outcomes. This model specified that there were 5 factors captured in the measurement: Civic Engagement,

Institutional/Community Relationships, Academic Learning, Psychological Well Being, and Professional Development. Based on the model fit indices, our results indicate that the fit was not sufficient to warrant the proposed 5-factor solution. We attempted to adjust the model fit by dropping 2 items with low factor loadings to enhance model fit; however, the drop did not improve the 5-factor solution. From the results of the confirmatory factor analysis, we concluded that an exploratory factor analysis was needed to assess the common variance among the 33 items in the CBLIS scale.

We then conducted an exploratory factor analysis to determine an alternative factor structure. Results of this analysis were initially evaluated using a scree plot (Mertler & Vannatta, 2002), which indicated a 2-factor solution. Examination of the factor loadings indicated that the 2-factor solution produced a number of cross-loadings, and the developers assessed the results based on a 3-factor solution. When we considered a 3-factor solution, we found a more defined factor solution with fewer cross-loadings and a better fit for the data: Factor 1 ("Civic Engagement"), the extent to which students felt part of a larger collective and collaborative activity aimed to contribute to the larger society (as cited in Adler, 2005); Factor 2 ("Critical Thinking"), which suggests "skillful, responsible thinking that facilitates good judgment" (Lipman, 1988, pg. 39); Factor 3 ("Self-Awareness"), the ability to be self-reflective when "perceiving and processing" their experiences (Morin, 2011). Note, if we were to include cross-over items between factor 2 and 3, we would suggest "Social Capital," the sense of connectedness to their community to describe the clustering.

One area for continued research is to assess whether the 3-factor solution can be improved by dropping items that may be measuring similar concepts. For example, the 3 items "my career opportunities expanded" (cross-loaded with factors 1 and 2), "I believe my work had mutual benefit to the community partner and to me" (cross-loaded with factor 2), and "more likely to collaborate with others when solving problems" (cross-loaded with factors 2 and 3) are 3 items that, individually, could provide information on the unique experience and impact of the community partner collaboration on a short-form survey but may be dropped from the factor analysis. Interestingly, despite our preference for the 5 distinct categories the factor analysis in this study specified the 3 constructs Civic Engagement, Critical Thinking, and Self Awareness. This instrument needs to be refined and further tested to include a reliability and validity test, and though we believe a parallel analysis statistical procedure would be a logical next step (Ledesma & Valero-Mora, 2007), developers of the mplus analysis program reported that it performed poorly and was not included in final mplus program (Muthen, 2013). Further, this instrument needs to be tested to see if the factors are replicable across more diverse samples and across institutional settings. Unresolved is the question, "Would an alternative factor model produce a better characterization of the CBL data?" Therefore, caution is still necessary given that loadings may factor in unexpected ways especially when learning outcomes can be attributed to more than one factor or produce variations in impact (Celio, Durlak, & Dymnicki, 2011). However, in terms of the context of this analysis and the analytic procedure which seeks to maximize common variance and describe the variance in terms of a latent construct, the sample provides support for relatively perspicuous findings related to civic engagement, critical thinking, and self-awareness. Further, findings from single-item responses provide moderate support for the use of the CBL scale as both parts of larger constructs or items used singularly and

drawn from the 3 constructs for evaluation purposes in CBL program offices, and/or campuses with CBL course offerings. Eventual replication is assumed, in which case researchers should consider a 2-factor and 3-factor model as well as the inclusion of items guided by the consideration of cross-loadings, correlation, and similarly worded items. In addition to the quantitative analysis, other items to be considered when determining the appropriateness of a survey are the goals, specific setting, and values of the university and community partners (Clarke, 2003). Nonetheless, for the present study the 3-factor model of the CBL measure may be the optimum solution for characterizing this dataset.

ACKNOWLEDGEMENTS: The research was supported by an AAC&U Bringing Theory to Research Grant. The authors would also like to thank Kara Casey-Adams and Andrew Nguyen for their careful management of the ICBLR data.

AUTHORS: Shauna Carlisle is an Assistant Professor in the Law, Economics and Public Policy program and the Master of Arts in Policy Studies program at the University of Washington, Bothell. Karen Gourd is a Senior Lecturer in the School of Educational Studies at the University of Washington, Bothell. Safaa Rajkhan is a graduate of the Master of Arts in Policy Studies program at the University of Washington, Bothell. Keith Nitta is an Associate Professor in the Law Economics and Public Policy program and the Master of Arts in Policy Studies program at the University of Washington, Bothell. Correspondence regarding this article should be directed to Shauna Carlisle: email: ske9902@uw.edu.

References

Adler, R. (2005). What do we mean by “civic engagement”? *Journal of Transformative Education*, *3*(3), 236-253. doi: 10.1177/1541344605276792.

Association of American Colleges and Universities. (2009). *The leap vision for learning: Outcomes, practices, impact, and employers’ views*. Washington, DC: Association of American Colleges and Universities.

Astin, A., & Sax, L. (1998). How undergraduates are affected by service participation. *Journal of College Student Development*, *29*(3), 251-263. http://www.coastal.edu/media/academics/servicelearning/documents/How%20Undergraduates%20are%20Affected%20by%20Service%20Participation.pdf

Astin, A., Sax, L., & Avalos, J. (1999). The long-term effects of volunteerism during the undergraduate years. *The Review of Higher Education*, *21*(2), 187-202.

Barber, B., & Battistoni, R. (1993). A season of service: Introducing service learning into the liberal arts curriculum. *The American Political Science Association*, *26*(2), 235-240. doi: 10.2307/419837

Batchelder, T., & Root, S. (1994). Effects of an undergraduate program to integrate academic learning and service: Cognitive, prosocial cognitive, and identity outcomes. *Journal of Adolescence*, *17*, 341-355. doi:10.1006/jado.1994.1031 https://www.ydae.purdue.edu/lct/HBCU/documents/Effects_of_an_UG_Program_to_Integrate_Academic_Learning_and_Service.pdf

Bentler, P., & Chou, C. (1987). Practical issues in structural modeling. *Sociological Methods & Research*, *16*(1), 78-117. doi:10.1177/0049124187016001004 http://www.unt.edu/rss/class/Jon/MiscDocs/BentlerAndChou_1987.pdf

Brown, T. (2006). *Confirmatory factor analysis for applied research*. New York: Guildford.

Brownell, J., & Swaner, L. (2010). *Five high-impact practices: Research on learning outcomes, completion and quality*. Washington, DC: Association of American Colleges and Universities.

Cacarci-Stone, L. Wallerstein, N., Garcia, A., & Minkler, M., (2014). The promise of community-based participatory research for health equity: A conceptual model for bridging evidence with policy. *American Journal of Public Health*, *104*(9), 1615-1623. doi: 10.2105/AJPH.2014.301961

Carlisle, S., & Kruzich, J. (2013). Increasing student and organizational evaluation capacity through collaborative community-based program evaluation. *Journal of the Scholarship of Teaching and Learning*, 13(4), 85-102.

Celio, C., Durlak, J., & Dymnicki, A. (2011). A meta-analysis of the impact of service-learning on students. *Journal of Experiential Education*, *34*(2), 164-181. doi: 10.1177/105382591103400205 http://www.stjohns.edu/sites/default/files/documents/adminoffices/asl-meta-analysis-effects-asl-students.pdf

Clarke, M. (2003). Finding the community in service-learning research: The 3-"I" Model. In S. H. Billig & J. Eyler (Eds.), *Deconstructing service-learning: Research exploring context, participation, and impacts* (pp. 125–146). Greenwich, CT: Information Age Publishing.

Crone, T. (2013). The effects of service-learning in the social psychology classroom. *Journal of Service Learning in Higher Education*, *2*, 62-74.

Comrey, A., & Lee, H. (1992). *A first course in factor analysis* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.

Dallimore, E., Rochefort, D., & Simonelli, K. (2010). Community-based learning and research. In C Wehlburg (Eds.), *New Directions for Teaching and Learning* (pp. 15-22). San Francisco, CA: Wiley Publishers.

deVellis, R. (2003). *Scale development: Theory and applications* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, *82*(1), 405–432. doi: 10.1111/j.1467-8624.2010.01564.x

Fabrigar, L., Wegener, D., MacCallum, R., Strahan, R., & Erin, J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, *4*(3), 272-299. doi:10.1037/1082-989X.4.3.272 http://ww.w.statpower.net/Content/312/Handout/Fabrigar1999.pdf

Gadbury, C., Simmer-Beck, M., McCunniff, M., & Williams, K. (2006). Using a multifaceted approach including community-based service-learning to enrich formal ethics instruction in a dental school setting. *Journal of Dental Education*, *70*(6), 652-661.

Haynes, S., Richard, D., & Kubany, E. (1995). Content validity in psychological assessment: A functional approach to concepts and methods. *Psychological Assessment*, *7*(3), 238-247. doi:10.1037/1040-3590.7.3.238

IBM Corp. (2013). *IBM SPSS Statistics for Windows*, Version 22.0. Armonk, NY: IBM Corp.

Kuh, G. (2010). High-impact practices: Retrospective and prospective. In J. E. Brownell, & L. E. Swaner (2010), *Five high-impact practices: Research on learning outcomes, completion and quality* (pp. v-xiii). Washington, DC: Association of American Colleges and Universities.

Ledesma, R., & Valero-Mora, P. (2007). Determining the number of factors to retain in EFA: an easy-to-use computer program for carrying out parallel analysis. *Practical Assessment, Research & Evaluation*, *12*(2). Available online: http://pareonline.net/pdf/v12n2.pdf

Lipman, M. (1988). Critical Thinking-What can it be? *Educational Leadership*, *46*(1), 38-43.

Maurrasse, D. J. (2001). *Beyond the Campus*. New York: Routledge.

Maurrasse, D. J. (2002). Higher education-community partnerships: Assessing progress in the field. *Nonprofit and Voluntary Sector Quarterly*, *31*(1), 131–139. doi:10.1177/0899764002311006

Mayhew, M., & Engberg, M. (2011). Promoting the development of civic responsibility: Infusing service-learning practices in first-year "success" courses. *Journal of College Student Development*, *53*(1), 20-38. doi:10.1353/csd.2011.0007

Mertler, C., & Vannatta, R. (2002). *Advanced and multivariate statistical methods; Practical application and interpretation* (2nd Ed.). Los Angeles: Pyrczak Publishing.

Miller, F. (1994). Gender differences in adolescents' attitudes toward mandatory community service. *Journal of Adolescence*, *17*, 381-393.

Moely, B., McFarland, M., Miron, D., Mercer, S., & Ilustre, V. (2002). Changes in College Students' Attitudes and Intentions for Civic Involvement as a Function of Service-Learning Experiences. *Michigan Journal of Community Service Learning, 9*, 18-26.

Mooney, L., & Edwards, B. (2001). Experiential learning in sociology: Service learning and other community-based learning initiatives. *Teaching Sociology, 29* (2), 181-194.

Morin, A. (2011). Self-Awareness Part 1: Definition, measures, effects, functions, and antecedents. *Social and Personality Psychology Compass*, *5*(10), 807-823. doi:111/j.1751-9004.2011.00387.x

Muthen, B. (2013, June 04). Parallel analysis for categorical data [Weblog comment]. Retrieved from http://www.statmodel.com/discussion/messages/8/11966.html?1393952682.

Muthen, L., & Muthen, B. (1998-2011). *Mplus User's Guide*. Sixth Edition. Los Angeles, CA: Muthen & Muthen.

Nokes, K., Nickitas, D., Keida, R., & Neville, S. (2005). Does service-learning increase cultural competency, critical thinking, and civic engagement? *Journal of Nursing Education,* 44(2), 65-70.

Nunnally, J. (1967). *Psychometric Theory*. New York; McGraw Hill.

Simons, L., & Clearly, B. (2006). The influence of service learning on students' personal and social development. *College Teaching, 54*(4), 307-319. doi:10.3200/CTCH.54.4.307-319

Piper, B., DeYoung, M., & Lamsam, G. (2000). Student perceptions of a service-learning experience. *American Journal of Pharmaceutical Education, 64*, 153-165.

Prentice, M. (2007). Service learning and civic engagement. *Academic Quest*, *20*, 135-145.

Reed-Bouley, J., Wernli, M., & Sather, P. (2012). Student employment and perceptions of service-learning. *Journal of Service-Learning in Higher Education*, *1*, 1-29.

Suhr, D. (2006). Exploratory or confirmatory factor analysis? *Statistics and Data Analysis*, 31, Retrieved November 20, 2014 from http://www2.sas.com/proceedings/sugi31/200-31.pdf

Tabachnick, B., & Fidell, L. (2007). *Using Multivariate Statistics* (5th edn). Boston: Pearson Education.

University of Washington Bothell. (2014, December 13). **Community-based learning and research course designation.** Retrieved from https://www.uwb.edu/cblr/faculty-resources/cbl-course-designation

Vogelgesang, L., & Astin, A. (2000). Comparing the effects of community service and service-learning. *Michigan Journal of Community Service Learning*, *7*, 25-34.

Welch, M (2009). Moving from service-learning to civic engagement. In B. Jacoby & Associates (Eds.), *Civic Engagement in Higher Education: Concepts and Practices* (pp. 174-194). San Francisco: Jossey-Bass.

Empowering community partners: A case study motivating environmentally sustainable behavioral changes in Latino migrant agricultural families

J. Ivy Harvey Thomson

Roslynn Brain

Utah State University

ABSTRACT

Environmental sustainability outreach programs can benefit significantly by connecting to and fostering change within the Spanish speaking community. This article demonstrates a case study in which the authors partnered with a local Latino organization through an undergraduate service-learning project. The goals were to incorporate environmentally sustainable behaviors both with young Latino students in school and with their families at the household level.

Introduction

What influences Latino community interest in sustainability and motivates them to change their behavior?

What are the best methods to effectively educate and inspire the Latino community to make those changes?

These questions guided an undergraduate service-learning research project at Utah State University, which helped bridge a statewide environmental sustainability program with Latino families in Utah. The project goals were to 1) determine what influenced Latino interest in sustainability, 2) gauge what strategies should be used to positively produce behavioral changes, and 3) implement best strategies to change their interest and behavior.

To implement the project goals, the authors met with community members to find a partner with a large at-need Spanish-speaking audience to serve as a pilot. They then conducted a focus group to understand the needs and perspectives of their audience, and applied a service-learning model. The service-learning piece resulted in a partnership with the community partner in program development, in trial workshops with Latino children to initiate investment with parents, and culminated in a “family day” where parents and children shared knowledge and prepared their own home food production starting kits.

Literature Review

Institutions across the globe are educating people on the importance of sustainable living, from the International Human Dimensions Programme on Global Climate Change, to the American-born Earth Day Network among a myriad of others. Utah claims many of its own sustainability programs as well, ranging from the Utah Moms for Clean Air to the Utah Society of Environmental Education.

Utah State University (USU) Extension Sustainability, a leading university-affiliated environmental sustainability outreach program in Utah, defines sustainability as the "capacity to improve environmental, economic and social conditions (Utah State University Extension Sustainability, 2014). Environmental sustainability, the foundation of USU Extension Sustainability's initiative, is the ability to improve the environment in one or more areas of land, water, air, food, and energy. USU Extension Sustainability educates the public on how to incorporate behavioral principles of environmental sustainability into their lives to improve the environmental, economic and social conditions stated above.

While USU Extension Sustainability effectively publishes material and initiates programs for English speakers, programs and materials were lacking for speakers of other languages. The 2010 United States Census demonstrates that Latinos are the largest ethnic minority group in America, counting for 16.3% of the total U.S. population (Ennis, 2011). Latino demographics are also among the fastest growing ethnic groups in America, increasing by 43%, or more than half of the total population growth from 2000 to 2010 (Ennis, 2011), and is projected to more than double in size from 53.3 million in 2012 to 128.8 million in 2060. This means almost one in three U.S. residents would be Latino ("U.S. Census Bureau Projections Show a Slower Growing, Older, More Diverse Nation a Half Century from Now", 2012).

As a significant part of the United States population, the Latino community would benefit from being effectively educated and involved in the principles of environmental sustainability. This will provide avenues to increase understanding in the biophysical environment and its relevant challenges, increasing awareness of what they can do to remediate and solve environmental issues (Lewis & James, 1995), and, following USU Extension Sustainability's definition of sustainability, improve this demographics' economic and social conditions. Migrant Latino farmworkers are an especially vulnerable segment of the Latino demographic economically and socially, making only an average median annual income of $7,500, compared to Latino workers in other sectors making an average median annual income of $34,200 (Parra-Cardona, 2006, p. 362). Social challenges arise from a transitory lifestyle, as migrant agricultural workers work South during the winter and North during growing season (Hovey & Magaña, 2002), and is compounded by recent migrations consisting not of individuals but of whole families (Dalla & Christensen, 2005). Parra-Cardona et al. report that the challenges unique to agricultural migrant workers "also appear to have contributed

toward the systematic exclusion of Latinos from research, program design, and service delivery" (Parra-Cardona, 2006, p. 363).

This gap in extant literature includes addressing environmental sustainability programs for the United States Latino population. To better bridge this gap, researchers suggest that existing programs can be culturally adapted for ethnic minorities (Smith, Domenech Rodriguez & Bernal, 2011). Lau (2006) proposed that psychological treatments could be culturally adapted by anticipating the engagement needs of specific populations, suggesting that engagement depends on the degree that participants believe the treatment will be helpful. There is a majority consensus in literature that culturally adapted treatments should be delivered in the participant's primary language (Smith et al., 2011). Keidan (2008) outlines important strategies in Latino outreach efforts including personal recruitment and communication, and utilizing opinion leaders within the community to mobilize their followers.

Mendez and Westerberg (2012) formed a partnership with their local Head Start (a national program promoting school readiness by providing services to children and families) to develop and implement a parent involvement program adapted for the Latino community. Nationally, thirty-six percent of children enrolled in Head Start are Latino (Aikens et al., 2010), making this demographic one of the largest groups served by the program. This provides an avenue for connecting with the Latino community nationally. Mendez and Westerberg (2012) "endorse the importance of establishing a collaborative academic-community partnership before conducting research and intervention studies" (Mendez, 2012, pg. 370).

Service-learning has the potential to assist Extension in establishing the "collaborative academic-community partnerships" endorsed by Mendez and Westerberg. Service-learning is defined by Jacoby as "a form of experiential education in which students engage in activities that address human and community needs together with structured opportunities intentionally designed to promote student learning and development. Reflection and reciprocity are key concepts of service-learning" (Jacoby, 1996, p. 5). In this context, Extension providers can utilize service-learning to partner with community members to culturally adapt existing programs to the specific needs of a demographic. Ward and Wolf-Wendel (2000) warn that without a correct perspective, service-learning can result in charity projects for the community instead of equal partnerships creating solutions. They expound, "For service learning to be the solution to troubled times in the academy and its constituent communities, it must be focused on empathy and empowerment. Campuses need to work in concert with the community to mutually identify problems, cultivate solutions, and identify causes of these problems" (Ward, 2000, p.774). This empowerment comes because "people feel a commitment to a decision in proportion to the extent that they feel they have participated in making it" (Knowles, 2005, p. 258). While the authors of this study were specifically interested in educating the Latino community on environmentally sustainable principles, collaboration with the community necessitated understanding the specific needs of this demographic before adapting existing Extension programs to best fit their needs.

Studies report positive impacts from service-learning projects with communities, with most communities being generally satisfied with student service and report improved university relations (Billig, 2002, p. 154). This could mean that Extension services utilizing service-learning would increase community rapport sufficiently that additional community members would opt to participate in Extension programs. Mendez and Westerberg's community partnership was so successful that recent immigrants outside of the Latino culture felt welcome participating in their parent involvement program (2012, p. 370).

Service-learning provides an informal learning context for both partners. Authors of *Learning in Adulthood* explain that, "Certainly informal learning contexts, including social action and community-based learning, are where much of adult learning takes place." When partnering with adults, Extension representatives may utilize principles of adult education to increase service-learning program effectiveness and participant motivation. This is especially important as adult learner motivation is often more vulnerable than that of younger learners (Wlodkowski, 2008, p.43). Authors of *Learning in Adulthood* propose, "with regard to meaningfulness, perhaps because an adult's learning is so closely tied to his or her life situation, adults are not inclined to engage in learning unless it is meaningful" (Merriam, Caffarella & Baumgartner, 2007, pp. 431-432). This is supported biologically as networks of neurons are built in the brain to represent what a person has learned, and "when adults learn, they build on or modify networks that have been created through previous learning and experience (Wlodkowski, 2008, p.11). Wlodkowski explains that "for all learning, the most pragmatic approach to instruction is to find ways to connect and build on learners' prior knowledge, to begin with what they already know and biologically assemble with them the new knowledge or skill by connecting the established networks and the new networks" (2008, p. 13). This prior knowledge will be different for adults and children; "A child's life is bounded by home and school, whereas an adult's life situation is defined primarily by work, family, and community" (Merriam, Caffarella & Baumgartner, 2007, p. 428). When culturally adapting existing programs, connecting the program material to what is most meaningful for community partners and applying it to their past life experiences may increase their motivation and program effectiveness.

In summary, Extension services can apply service-learning as a means of expanding environmental sustainability outreach to a more diverse audience. Latinos are an important part of the population, and service-learning provides a personal collaboration which facilitates the cultural adaptation of existing Extension programs tailored to meet local needs. Because service-learning provides an informal learning context, principles of education can be applied to build on community partners' prior learning experiences and frame that learning within their meaningful contexts.

Research Design

To better bridge the gap between environmental sustainability outreach and the Spanish speaking community, the researchers partnered with Migrant Head Start in Utah, a Head Start center for children of Latino agricultural migrants. A focus group was

held to determine what influenced Latino interest in environmental sustainability, with Head Start's education specialist, one of their social workers, and three mothers of participant children. The interview was conducted primarily in Spanish with the aid of translation by the social worker, and was later transcribed. Themes were identified using inductive analysis, resulting in five main influential factors, and the identification of the most effective program delivery methods.

Those results influenced the implementation of a series of five themed workshops for the children dealing with the five principles of environmental sustainability as defined by USU Extension Sustainability (land, air, food, water, energy). A service-learning approach allowed for ongoing collaboration with Head Start, and a "family night" was held to engage parents in what their children had learned.

Migrant Head Start

Seeking a community partner in need of environmental sustainability education, the researchers attended a community coalition meeting focusing on Latino health and were referred to a local Migrant Head Start center. After meeting with the education specialist there, it was determined that many of the center's goals were in keeping with those of the researchers, and that a successful partnership could be formed.

Head Start is a national program promoting school readiness of children through providing educational, health, nutritional, social, and other services to participating children and their families, as well as seeking to involve parents in their children's learning and to encourage their own progress towards attaining goals (Aikens et al., 2010). This study was conducted at a specially designed Migrant Head Start school, meaning nearly all the parents were Latino migrant agricultural workers. In Utah the center runs from April through December according to the agricultural growing season. The families migrate to other parts of the United States to work when the center is out of session.

Head Start cares for children from six weeks to five years of age. Most are Latino, and the older children often have the ability to converse in both English and Spanish. Only about half of the parents are able to communicate in English verbally. To involve parents in the education program, Migrant Head Start hosts monthly adult meetings at the center. Teachers tend to stay on for years, teach using Montessori methods of personal self-discovery, and focus on using nature and the environment to facilitate that learning. At the time of this study, Migrant Head Start taught two classes of twenty children each, ages three to five, in their Montessori programs.

Findings

The focus group interview was transcribed verbatim, translated, and translations were confirmed with a native Spanish speaker. Five dominant domains of influence affecting interest in and behavior change pertaining to environmental sustainability were extracted from data using open, axial, and selective coding.

These domains include 1) convenience 2) economics 3) social 4) family and 5) educational influences. These are discussed below, with names of participants changed, and translations from Spanish italicized.

Several examples from the focus group reflected how convenience facilitated living an unsustainable behavior. In the migrants' countries of origin, water supply was often scarce and was therefore conserved. However, these participants noted that although they are told they live in a drought, they are not as concerned about rationing because water is readily available.

Claudia: It's because here, they tell you water is scarce. But we don't see it. In our home country it's very difficult because they run out of water all the time, and we have to carry water to drink and bathe with. For that reason people don't think about it here, because it's so easily accessed… Maybe in California it's [less accessible], but not here. It's easy [to access and use].

The following is an example of how economic concerns keep these families from living environmental behaviors they already understand:

Maria: "One needs to separate the trash from recycling but just doesn't do it."

Translator: "Do you think people don't know which things they can recycle and which they can't?"

Ana: "Yes, we know."

Claudia: "Everyone knows."

Ana: "Yes, but one thinks about the cost of recycling. Why are they charging us so much to recycle trash?" …

Maria: "One pays a lot."

Sociality influences these Latino families by engaging them in educational outreach. Participants agreed that internet-based outreach materials were ineffective and that printed fliers were left unread. Personal interaction through group activities motivates adult participation.

Translator: *" If they printed 200 pamphlets… where should they put them? Where can they reach out to the Latino community?"*

Claudia: *"In the washing center. In the market or library. That's where more people go… This is why I said pamphlets don't work. Because sometimes we don't take the time to read it. It would work better to have group talks once per month to hear it, because for some people, such as myself, too many pamphlets come and with cooking, washing, and chores, the pamphlets stay on a corner and are forgotten about. That's reality."*

The group was asked what they thought about teaching the children in Migrant Head Start about environmental sustainability through workshops. Ana's response exemplifies the influence family members have on each other to encourage living environmental principles.

Ana: *"Yes, it's good to start with the children because the children are the most open*

and quick to think of things after, and they can also lecture 'don't do this, Mommy'. My Jacob, when he finishes eating, takes his dirty dishes to the sink. And now he makes his dad do the same! Who didn't do it before! Now he makes his dad do it too!... My Jacob learned from here… And I tell my husband, 'How is it possible that your son will take his plate and cup and not you?' Now the table stays clean."

Both Ana and Maria shared how the education their children received, both at Head Start and at home, changed their willingness to engage in or accept sustainable behaviors.

Translator: *"They are going to teach the children in preschool. What kinds of things would be most helpful to learn?"…*

Ana: *"Nutrition is good. Nutrition, recycling, and how to care for water."*

Maria*: "I'd like everything. Because before [the Montessori learning program at Head Start], Natalie didn't care about water. Now she uses less water and tells me to use less. Now when she takes a bath she turns the water off."*

Ana: *"First I bathe Julian and then Jacob. Jacob says, 'This water is dirty, it has shampoo. Use clean water, this is dirty!' I tell him reusing the water uses less water than using fresh water. And he says, 'Okay'."*

The interview participants agreed that workshops taught to the children would be useful. After extracting the dominant domains of influence affecting Latino interest in environmental sustainability, the researchers implemented a service-learning contract to facilitate the workshops and ensure collaboration to meet Migrant Head Start needs.

Collaborative Planning Through Service Learning

During discussions with Migrant Head Start, the researchers learned that prior Migrant Head Start management had obtained materials with which to teach the children about food production: a rolling composter, a plant propagation light, and a worm composting system (vermicomposter). The equipment sat idle in storage because no staff members knew how to operate the systems. The researchers and Migrant Head Start determined that via service-learning, the needs of Migrant Head Start could be better met by providing training for their equipment, and the necessary supplementary supplies to use them. The researchers would teach the five environmental sustainability principles to the children in five themed workshops (land, water, air, food, and energy), and focus additional efforts in educating both children and their parents about local and home food production as a subset of the principle of environmentally sustainable food. This focus on home food production satisfied the five influential domains extracted from focus group data. Enabling home food production could reduce the economic stress of Migrant Head Start participants. Both students and parents would be taught through group activities, in the classroom and through a Migrant Head Start parent meeting. Familial relationships would be utilized by enabling the parents to bring their career skills into the home setting to share with their children. The migrant families would be

educated on what local resources they had to produce food at home, and would facilitate convenient home food production by demonstrating what could be done at home with limited resources.

To further develop the program, the researchers met with Migrant Head Start to analyze their internal strengths and weaknesses and external opportunities and threats (Houben, 1999) to help achieve full program potential. Perceived barriers and potential benefits to sustainable behaviors were also discussed to further identify challenges and maximize opportunities. During these meetings, Migrant Head Start and the researchers decided that community experts would be brought in to train staff in the use of their food production equipment, and that a binder of resources would be compiled to provide how-to manuals and educational resources to answer additional questions they would have.

Community-based marketing strategies (McKenzie-Mohr, 2011) were discussed and planned with Migrant Head Start, which would increase behavioral changes through engaging and motiving Migrant Head Start staff and participant families, extending the longevity of the program.

Impacts

Through service-learning, local experts trained Migrant Head Start staff in how to use their food production equipment and supplied them with the necessary supporting resources to begin using the equipment immediately after training. To assist Migrant Head Start with future questions and challenges, a binder was given to staff members to provide additional resources. The binder included contact information for local gardening centers and university Extension staff trained to help with food production, and additional resources for classroom lessons, activities, and mini labs to learn about environmental sustainability. This helped Migrant Head Start sustain their food production once the training was completed.

The environmental sustainability workshops were completed with the children, utilizing community-based social marketing strategies to encourage behavioral changes both in the students and their parents. Highlights included them planting their own pea starts to plant at the school, learning about vermicomposting from a local expert, and coloring “Be Idle Free” car hangers in Spanish for them to take to their parents (a subliminal social marketing tool).

Figure 1 This child was terrified of the composting worms before the workshop. After, he carried worms to show to all his teachers.

Migrant Head Start hosted a gardening parent night where instead of teaching the parents how they should garden, they approached the parents with an attitude of “You do this for a living, and we want to install a garden on Migrant Head Start property. You teach us how we should do this.” The parents were excited to share their skills with their children, and with Migrant Head Start planned a “family night” to install the garden.

The family night was the most successful family activity Migrant Head Start staff members could remember. Thirty-five parents attended, and the adults and children worked together to install a vegetable garden in the backyard of Migrant Head Start. Nineteen of the families built and took home their own vermicomposting system. Families were able to take home plant starts to start their own home food production, and were encouraged to come and participate further at the center.

Figure 2 Head Start staff said such active involvement by the fathers was rare.

Impact statements include the following:

"A lot of the dads were really excited and they were talking about the soil... in their own way they were teaching their kids and it was cool to see because you could tell that didn't happen at home."

"A lot of the dads were even talking to other parents... and they were teaching each other too. ... and they were all collaborating ideas."

"I've never done a garden or anything, and yesterday I just went to Home Depot and got me some tomatoes."

"There were full families that were so excited; these guys were so excited to take stuff home. Everyone was getting their hands dirty, their kids were out there...This little girl has spina bifida but she's still right there, hanging onto the bucket!"

Figure 3 Children helped their parents overcome reservations about taking home their own vermicomposting (worm composting) kits

"We're still not done planting. So the parents know this is a continuous process. I had one dad pull me aside and he's like "so can we come and watch the plants grow?" and I was like "Yeah, and you can also come while the kids are outside and weed, and then you'll probably have a whole bunch of kids weeding too! And he was really excited cause he was a really reserved dad. I don't see him participate a lot, and he was actually really excited too. And he was like, 'I want to come watch the plants grow'."

"The parents weren't too sure [about the vermicomposting], but once their kids started getting into it, [they said] 'oh, okay!'"

Conclusion

Environmental sustainability outreach programs may successfully be adapted for their respective Latino communities. This case study demonstrates how researchers collaborated with a local Latino community partner utilizing service-learning to effectively understand and meet their needs while achieving educational goals. Results suggest that environmentally sustainable behavioral changes can be encouraged in the Latino community by addressing economic, social, educational, family and convenience factors through effective group activities. Parents are excited to share knowledge with each other and with their children, and are motivated by the encouragement of their children. Service-learning provides an excellent tool for partnering with community members to meet needs and produce behavioral changes, and are most effective when utilizing educational principles to motivate and engage community partners.

References

Aikens, N., Tarullo, L., Hulsey, L., Ross, C., West, J., & Xue, Y. (2010). *ACF-OPRE Report: A year in Head Start: Children, families and programs*. Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families. Retrieved from Administration for Children and Families website: Http://www.acf.hhs.gov/programs/opre/hs/faces/reports/year_final/year_final.html

Billig, S., & Furco, A. (Eds.). (2002). *Service-learning through a multidisciplinary lens*. Greenwich, Conn.: Information Age.

Dalla, R. L., & Christensen, A. (2005). Latino immigrants describe residence in rural Midwestern meatpacking communities: A longitudinal assessment of social and economic change. Hispanic Journal of Behavioral Sciences, 27, 23–42.

Ennis, S., Ríos-Vargas, M., & Albert, N. (2011, May 1). The Hispanic Population: 2010. Retrieved January 10, 2015, from: http://www.census.gov/prod/cen2010/briefs/c2010br-4.pdf

Houben, G., Lenie, K., & Vanhoof, K. (1999). A Knowledge-based SWOT analysis System As An Instrument For Strategic Planning In Small And Medium Sized Enterprises. *Decision Support Systems,* 125-135.

Hovey, J. D., & Magaña, C. G. (2002). Psychosocial predictors of anxiety among immigrant Mexican migrant farmworkers: Implications for prevention and treatment. Cultural Diversity and Ethnic Minority Psychology, 8, 274–289.

Jacoby, B. (1996). Service-Learning in Today's Higher Education. In B. Jacoby (Ed.), *Service- Learning in Higher Education*, 3-15. San Francisco, CA: Jossey-Bass.

Jacoby, B. (2003). *Building partnerships for service-learning*. San Francisco, CA: Jossey-Bass.

Keidan, G. (2008). Latino outreach strategies for civic engagement. *National Civic Review*, *97*(4), 30-38. doi:10.1002/ncr.231

Knowles, M., Holton, E., & Swanson, R. (2005). Making things happen by releasing the energy of others. In *The adult learner: The definitive classic in adult education and human resource development* (6th ed., pp. 255 -264). Amsterdam: Elsevier.

Lau, A. S. (2006). Making the case for selective and directed cultural adaptations of evidence-based treatments: Examples from parent training. *Clinical Psychology: Science and Practice, 13*(4), 295–310. doi: 10.1111/j.1468-2850.2006.00042.x

Lewis, S., & James, K. (1995). Whose voice sets the agenda for environmental education? Misconceptions inhibiting racial and cultural diversity. *Journal of Environmental Education*, *26*(3), 5-12.

Mendez, J. L., & Westerberg, D. (2012). Implementation of a culturally adapted treatment to reduce barriers for Latino parents. *Cultural Diversity and Ethnic Minority Psychology, 18*(4), 363-372. doi:http://dx.doi.org/10.1037/a0029436

Merriam, S., Caffarella, R., & Baumgartner, L. (2007). *Learning in adulthood: Acomprehensive guide* (3rd ed.). San Francisco, CA: John Wiley & Sons, Inc.

McKenzie-Mohr, D. (2011). *Fostering Sustainable Behavior an Introduction to Community-Based Social Marketing.* New York: New Society.

Parra-Cardona, J. R., Bulock, L. A., Imig, D. R., Villarruel, F. A., & Gold, S. J. (2006). "Trabajando Duro Todos Los Días": Learning From the Life Experiences of Mexican-Origin Migrant Families. *Family Relations*, *55*(3), 361-375. doi:10.1111/j.1741-3729.2006.00409.x

Smith, T. B., Rodríguez, M. D., & Bernal, G. (2011). Culture. *Journal of Clinical Psychology, 67,* 166–175. doi:10.1002/jclp.20757

U.S. Census Bureau Projections Show a Slower Growing, Older, More Diverse Nation a Half Century from Now. (2012, December 12). Retrieved December 19, 2014, from http://www.census.gov/newsroom/releases/archives/population/cb12-243.html

Utah State University Extension Sustainability. (2014). *Welcome to Extension Sustainability.* Retrieved from: http://extension.usu.edu/sustainability

Ward, K., & Wolf-Wendel, L. (2000). Community-Centered Service Learning:Moving From Doing For To Doing With. *American Behavioral Scientist*, 43(5), 767-780.

Wlodkowski, R. (2008). *Enhancing adult motivation to learn: A comprehensive guide for teaching all adults* (3rd ed.). San Francisco: Jossey-Bass.

Author Note

This study was conducted with funding from a Utah State University Undergraduate Research and Creative Opportunity Grant and a Utah State University Service-Learning Mini-Grant. The authors are grateful for support from Blake Thomas and Head Start staff, most particularly Shareesa McMurdie, Lorena Perez, and Zach Carling.

Correspondence concerning this article should be addressed to Roslynn Brain, Utah State University Moab, 125 W 200 S, Moab, UT 84532. E-mail: Roslynn.Brain@usu.edu

Promoting Pre-service Teachers' Multimedia Design Skills through Collaborative Multimedia Service-Learning (CMSL)

Sanghoon Park
University of South Florida

Vickie Gentry
Northwestern State University

ABSTRACT

The Collaborative Multimedia Service-Learning (CMSL) model, based on the "learning by teaching" approach, was created in an effort to design a pedagogical intervention to promote pre-service teachers' multimedia design/development skills. This paper reports on the development of the CMSL and presents the findings of the implementation of the CMSL in a partnership between a pre-service teacher training program in a 4-year university and area elementary and middle schools. Sixteen pre-service teachers participated in a series of multimedia design trainings as a part of their undergraduate curriculum and completed the service-learning component of the CMSL by teaching nine sixth-grade classes in local schools using MacBook multimedia authoring tools. The findings show that the CMSL model was effective in improving pre-service teachers' multimedia design skills and attitudes toward the CMSL. Follow-up interviews indicated that participating in the service-learning component of the CMSL was beneficial and a satisfactory experience.

Introduction

Service-learning offers an opportunity for students to develop knowledge and skills through curriculum-based service activities (Brown, & Purmensky, 2014). Students can acquire content knowledge while being engaged in real-world, authentic learning experiences that support a reciprocal relationship with the community. Service-learning has been recognized as an important pedagogical approach that brings students meaningful learning that is otherwise not possible in a classroom setting (Conway, Amel, & Gerwien, 2009). A well-designed service-learning project in teacher education can help pre-service teachers gain positive learning experiences and outcomes, such as increased learning and satisfaction (Freeman & Swick, 2000).

In pre-service teacher education, the service component of a collaborative service-learning project can foster participating teachers' understanding of teaching practice in an authentic teaching setting. This notion is supported by several evidence-based learning strategies for improving learning (Fiorella, & Mayer, 2015). For example, by participating in service-learning activities, pre-service teachers can learn how to teach and how to interact with students in the classroom through the "learning by teaching" approach. While preparing and teaching instructional materials to K-12 students, pre-

service teachers follow the three stages of the learning by teaching process (Figure 1), i.e., preparing learning materials, being involved in teaching activities, and interacting with K-12 students in an authentic classroom setting (Fiorella, & Mayer, 2015).

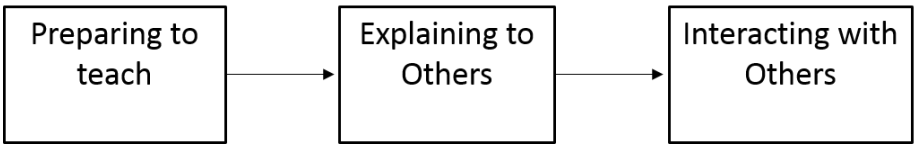


Figure 1. The three stages of learning by teaching (Fiorella, & Mayer, 2015, p.155)

Bringing technology-integrated lessons into the K-12 classroom as part of service-learning provides pre-service teachers with the opportunity to test technologies and to practice skills and knowledge that they learned in the classroom. Technology integration in the classroom is an essential skill for pre-service teachers to learn (Park & Son, 2008) because K-12 students are exposed to new technologies every day. Pre-service teachers are in need of continuous technology trainings to stay up to date on the new advancements in technology. Now more than ever, pre-service teachers are expected to be competent in integrating technology into the classroom to work with students. One of the technology integration competencies required for pre-service teachers is to know how to design and develop instructional multimedia materials to meet students' different learning styles and unique learning needs in the classroom. Many current teacher training programs require an educational technology course as an essential part of the training curriculum. However, unlike pedagogical content knowledge, multimedia design training requires a series of hands-on practices using multimedia tools and resources. Although classroom learning can afford these hands-on activities, pre-service teachers still remain passive learners primarily because of their lack of access to relevant technological tools and resources. Furthermore, classroom learning offers very limited opportunities for pre-service teachers to apply learned skills in a real classroom setting. The lack of relevant resources reduces pre-service teachers' motivation and learning outcomes.

In an effort to promote pre-service teachers' multimedia design skills, this paper introduces the collaborative multimedia service-learning (CMSL) model, which emphasizes two pedagogical approaches: learning by teaching and peer tutoring. The researchers then report the findings of the implementation of CMSL to improve pre-service teachers' multimedia design skills while being engaged in service-learning activities in area schools. This paper argues that incorporating service-learning activities into the teacher training curriculum promotes pre-service teachers' multimedia design skills and attitude.

Learning by Teaching

The concept of "learning by teaching" was first introduced by a German professor, J. Martin, in the early 1980s. Applying the learning by teaching approach in a French language class, he found that students' motivation and language speaking performance dramatically increased after asking his students to act as teachers (Skinner, 1994). Although it first started as an instructional method for language classes, a survey study from Barnbeck and Neumann (2006) reported that learning by teaching is an instructional strategy that can be used in all subjects and is not limited to certain learning fields. They also listed the pros and cons of the learning by teaching strategy as summarized in Table 1.

Table 1. Pros and cons of the learning by teaching strategy (Barnbeck, & Neumann, 2006)

Pros of implementing "Learning by teaching"	Cons of implementing "Learning by teaching"
• triggers students' need to communicate • creates an authentic learning environment • involves everyone in the classroom • supports equal participation of both weak and strong students • encourages fluency and self-evaluation. • can be transferred to "real life" • enables students to share responsibility and cooperate • encourages students to experiment and be creative	• cannot be applied in lower grades because of the lack of ability to work independently • cannot be applied in lower grades because of the lack of self-confidence • could be imitating teacher's behavior • could fail if students do not have enough background information

Barnbeck and Neumann (2006) reported that the basic purpose of the learning by teaching approach is to assign traditional functions of a teacher to the students so that they can teach new skills and knowledge to their classmates. They also suggested that students who are in charge of a lesson should think about appropriate instructional methods to teach the assigned topic. Consequently, students become responsible for the quality of a lesson (Skinner, 1994). For the learning by teaching strategy to be successfully implemented, the following conditions must be met (Shelfhout et al., 2006). First, pre-service teachers must possess content knowledge of the subject they plan to teach. Second, pre-service teachers need to be familiar with both pedagogical knowledge and teaching methods knowledge to properly teach. Third, pre-service teachers must have practical teaching experience in an authentic context within school classrooms. Fourth, pre-service teachers must acknowledge the shortcomings of their educational approaches and attempt to improve their teaching (Dochy, Segers, & Sluijsmans, 1999).

However, first year teachers often stress that teacher training is not enough to provide them with sufficient skills and knowledge for practical use (Sprinthall, Reiman, & Thies-Sprinthall, 1996). Moreover, pre-service teachers do not apply what they have learned from teacher training programs into their teaching practices (Rust, 1994). This is

because of the gap between teaching in authentic contexts and teaching in simulated contexts. To minimize the gap, it is critical to provide pre-service teachers with opportunities to practice teaching in authentic classroom contexts through service-learning activities.

Peer Tutoring

The concept of learning by teaching is closely related to peer tutoring (Katzlberger, 2005). According to Katzlberger (2005), tutoring can be defined in two different ways: peer tutoring and cross age tutoring. Peer tutoring takes place when the tutor and tutee are of the same age, while tutors in cross age tutoring are usually advanced and older students. There are many benefits of being tutors. A tutor takes the responsibility of preparing lessons to convey knowledge and skills to tutees. As Biswas and Schwartz et al. (2001) noted, this sense of responsibility has motivated individuals of all age groups. Additionally, a tutor needs to brainstorm effective instructional strategies to communicate the learning content, have time to reflect upon their own teaching practice, and find alternative ways of delivering knowledge and skills based on learning styles and individual differences. Cohen mentioned that “preparing to teach facilitates long-term retention, as well as aiding in the formation of a more comprehensive and integrated understanding" (As cited in Katzlberger, 2005). Gaustard also found that student tutors often benefit as much or more than their tutees (As cited in Katzlberger, 2005). Research on both the learning by teaching method and on peer tutoring provide a firm foundation for the collaborative service-learning model for pre-service teachers.

Design framework for the collaborative service-learning model

To develop the collaborative service-learning model in this paper, Howe et al. (2014)’s three-phased model for service-learning was used as a framework (Table 2).

Table 2. Three-Phased Model for Service-Learning design and considerations (Howe, Coleman, & Hamshaw, 2014)

Course Consideration	Phase 1: Exposure	Phase 2: Capacity Building	Phase 3: Responsibility
Instructor Role	*Primary Manager*	*Facilitator*	*Coach or Consultant*
Level of Responsibility	*Participation*	*Contribution*	*Full Responsibility*
Extent of Teamwork	*Class Project*	*Individual Project/Role*	*Small Group Project*
Intensity/Duration of S-L Project	*One-Time/Discrete*	*Course-basis*	*Long-Term Commitment*

Community Contact	*Hypothetical/ Non-Direct*	*Indirect*	*Direct*

According to Howe et al. (2014), the model for service-learning course design consists of three phases: exposure, capacity building, and responsibility. The goals of phase 1 include introducing students to service-learning, building initial skills, introducing the process of academic reflection, and beginning to build cultural and interpersonal competencies (2014). The second phase focuses on increasing expectations for students to take responsibility for outcomes, practicing professional skills, and becoming more adept reflective thinkers. Lastly, the goals of phase 3 are moving students toward high-level ownership of projects, mastering skills, and demonstrating high-level critically reflective thinking and expression. Howe et al. (2014) emphasized the flexibility of each phase so that the transition between each phase addresses the needs of the students, the instructor, and the institution. Using Howe et al.'s model as a service-learning design framework, the researchers incorporated two pedagogical approaches, learning by teaching and peer tutoring, to define pre-service teacher roles in service-learning tasks.

CMSL for pre-service teachers

Using the three-phased model for service-learning design, we developed the Collaborative Multimedia Service-learning (CMSL) model (as shown in Figure 2) to specifically address a service-learning activity that supports pre-service teachers' multimedia development skills. Conditions for the successful learning by teaching approach were also considered in the development of the CMSL (Shelfhout et al., 2006). The two pedagogical approaches of "learning by teaching" and "peer tutoring" were implemented in the CMSL process as described below.

- *Preparation (Multimedia design skill training):* Before being involved in service-learning activities, pre-service teachers must acquire the necessary content knowledge and skills they plan to teach. A series of "multimedia design skills" training needs to be provided to help equip pre-service teachers with skills such as basic multimedia design principles, design tools, and design processes.

- *Level 1 (Pre-service teachers teaching peer pre-service teachers)*: After completing the multimedia design skill trainings, pre-service teachers form small groups to complete several group projects in which they can practice the skills they learned during the training sessions. While working on the group project, pre-service teachers are encouraged to exchange ideas on instructional materials, to provide comments and feedback, and to complete a group project by teaching each other. Interactions among groups are facilitated by the instructor. Level 1 uses the peer tutoring strategy.

- *Level 2 (Pre-service teachers teaching students):* After completing the group project, pre-service teachers participate in collaborative service-learning to teach K-12 students in the area schools what they learned from the training sessions and the class projects. Area schools are contacted to develop a partnership between the university and the schools. The team of pre-service teachers works with the area schools to deliver multimedia design skills to K-12 students. Level 2 uses the cross age tutoring strategy.

- *Level 3 (Students teaching peer students):* After pre-service teachers complete the service-learning activities in the area schools, K-12 students collaborate with each other to develop an individual multimedia design project. As with level 2, design ideas, comments, and feedbacks are shared among students through verbal or visual interactions. Level 3 supports the peer tutoring strategy.

Figure 2 depicts the process and the scope of the Collaborative service-learning model for pre-service teachers.

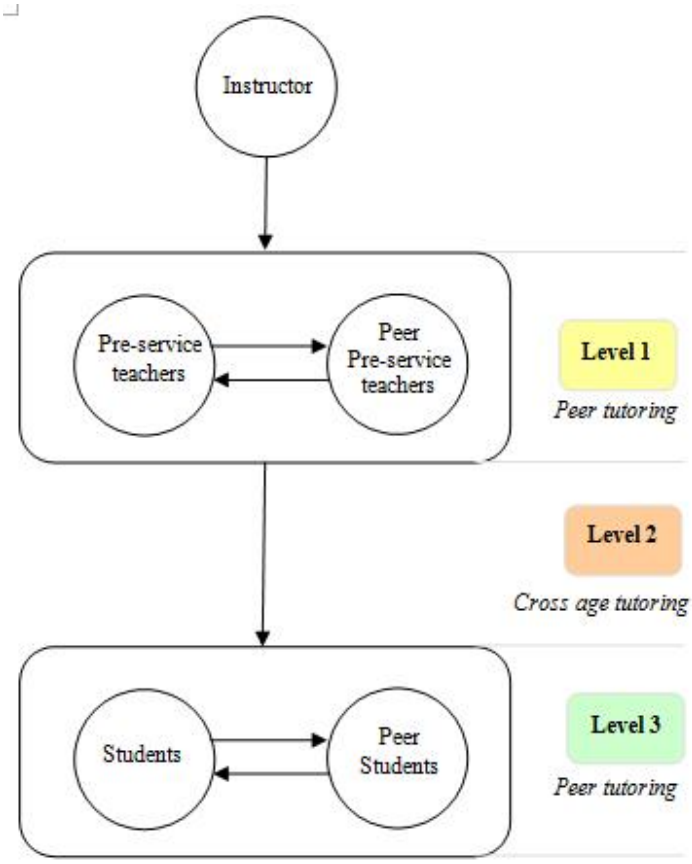


Figure 2. A collaborative multimedia service-learning for pre-service teachers

In the next section, the researchers describe a case study in which the CMSL was implemented in area schools that were in partnership with the university and report the findings of pre-service teachers' service-learning experiences, in particular their learning of multimedia design skills and motivation.

Method

Background

CMSL was designed to improve pre-service teachers' multimedia design skills in an authentic teaching environment based on an established partnership between three area schools and a university located in the southern United States. Specifically, pre-service teachers participated in the CMSL to improve their understanding of basic MacBook operation skills and instructional multimedia design skills across subject areas. "Instructional multimedia" was defined as a collection of digital artifacts designed to support pre-service teachers' critical thinking, problem solving, and decision-making skills on a certain topic in science, social studies, or mathematics. Creating multimedia artifacts in the form of images, movies, music, spoken word, and text, pre-service teachers were able to share his/her instructional multimedia project with other teachers by sharing it on a website. A suite of digital multimedia programs was presented to participating pre-service teachers as part of the MacBook laptop program that would allow them to create and share their digital project. Pre-service teachers were trained on how to use the multimedia authoring programs, including the photo editing, movie editing, and Web design tools to create their own instructional multimedia projects. The pre-service teachers then visited three area schools to teach sixth grade students how to create a sharable instructional multimedia project in science, social studies, or mathematics.

Participants

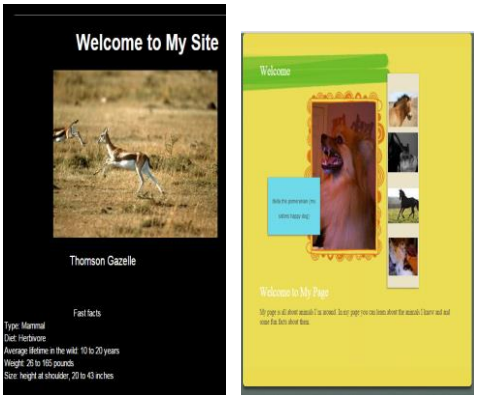
The participants of the CMSL were 16 pre-service teachers enrolled in two sections of an "instructional methods" class in a four-year public university located in the southern United States. As this course was one of the required courses for study participants, participating in the "multimedia design" training was mandatory. At the end of the training, pre-service teachers were given completion certificates and attendance points as compensation. Only participants who agreed to participate in the study were included in the data analysis. All of the 16 participants were undergraduate students. Their ages ranged from 19 to 22. Among the 16 participants, 11 were Caucasian and five were African American. There was one male student and 15 female students. The majority of the participants were juniors and seniors. To separate the effects of the collaborative service-learning model from other confounding factors such as prior knowledge or prior teaching experience, this study only included participants who were new to multimedia design tools on MacBook computers and had very little experience in teaching others.

CMSL training

The following three levels describe the implementation of the CMSL process.

• Level 1: The 16 pre-service teachers were trained to use multimedia authoring programs to design and develop an instructional multimedia project. Four groups were formed to encourage peer tutoring within and between groups. Each pre-service teacher group produced its own instructional multimedia project to meet instructional goals and enhance learning in a content area (as shown in Figure 3).

Pre-service teachers work together to learn how to create an instructional multimedia Web site



Sixth grade students' final outcomes

Figure 3. Students participating in the project.

• Level 2: The 16 pre-service teachers visited three area schools to teach nine classes how to produce instructional multimedia projects. Four pre-service teachers taught classes as lead instructors and 12 pre-service teachers taught classes as facilitators.

• Level 3: The students in area schools collaborated to help each other create his/her own instructional multimedia project (as shown in Figure 3). Students were allowed to share their ideas and skills to help other students.

Outcomes of the CMSL service-learning

The two outcomes of interest of the CMSL were pre-service teachers' multimedia design skill acquisition and their attitude toward the overall training and service-learning experience. "Multimedia design skills" in this study was defined as the earned score on the pre-selected performance assessment checklist of three multimedia authoring tools:

the photo editing program, movie editing program, and Web design program. Performance assessment measures a student's knowledge and skill based on observing their completion of different tasks, such as activities, exercises, or problems that require them to show what they can do (Popham, 2008). The checklist items were selected from the three multimedia authoring program tutorials. The number of items on each performance assessment checklist was 13, 9, and 7 for the photo editing, movie editing, and Web design programs, respectively. The participants were asked to demonstrate given tasks, and the trainer checked "yes" if the participants completed the given tasks successfully or "no" if the participants failed to complete the given tasks. Tasks in the iPhoto performance assessment included "importing photos," "cropping a photo," and "creating a slideshow." Examples of tasks for the iMovie performance assessment included "Importing from a camcorder," "Adding music," and "Adding voice over." Tasks for the Web design performance assessment were "Adding hyperlinks and navigation," "Creating a photo album page," and "Publishing your site." Prior to beginning the training, one hour of orientation session was provided. During the orientation, study participants were asked if they had used a MacBook before the training. No participants reported prior experiences using MacBook computers or MacBook multimedia authoring tools. The training session was the participants' first exposure to MacBook multimedia authoring tools. After completing the training, from level 1 through level 3, performance assessment on the three multimedia authoring tools was conducted to measure participants' multimedia design skills acquisition. These skills were not measured before the training because none of the participants reported prior experience using MacBook multimedia authoring tools.

The pre-service teachers' attitudes toward the CMSL were measured using Keller's Instructional Material Motivational Survey (IMMS) (Keller, 1993). The IMMS includes 36 items and is intended to be a situational measure of students' motivational reaction to instructional materials and was designed with the theoretical foundation represented by the ARCS model (Keller, 1987). The four components of the ARCS model, which are Attention, Relevance, Confidence, and Satisfaction, were measured. The original statements were changed based on the context. For example, an original item, "There was something interesting at the beginning of this lesson that got my attention" was revised to "I found something interesting at the beginning of the project that got my attention". The responses ranged from one to five on a Likert scale with 12 attention component items, nine relevance component items, nine confidence component items, and six satisfaction component items. The reliability of the IMMS based on Cronbach's alpha was .89 for the Attention subscale, .81 for Relevance, .90 for Confidence, and .92 for Satisfaction.

Results

Multimedia design skill acquisition

Of the 16 pre-service teachers who participated in the "Multimedia design," 15 (93.75%) demonstrated all of the 29 performance assessment skills, successfully showing multimedia design skill acquisition. One participant completed 25 out of the 29 performance assessments, although she had not attended the training sessions (preparation). However, she did work in a group to create a group project by collaborating with other participants and participated in the service-learning activities (levels 1-3).

Attitude

The mean score for overall attitude using the IMMS was 3.50 / 5.0. Specifically, the mean score for the Attention subscale was 3.47 (*SD* = .55), Relevance was 3.27 (*SD* = .82), Confidence was 3.67 (*SD* = .49), and Satisfaction was 3.48 (*SD* = .96). The overall motivation level was fairly moderate to high. The results indicated that confidence was the highest of the four motivation components. This shows that students were able to acquire a higher level of confidence after participating in the CMSL.

Interview findings

Follow-up interviews were conducted with individual pre-service teachers after the CMSL was completed. Overall, participants had positive comments about the opportunity to visit area schools and work with sixth grade students as part of the service-learning activities. In their reflective responses, many pre-service teachers reported somewhat negative experiences while participating in the classroom training sessions prior to the service-learning activities, yet shared the benefits of having the teaching experiences in area schools and working with sixth grade students directly through the service-learning activities.

With regard to training experiences, many students expressed that their learning experience was meaningful once they proceeded to level 2 and level 3 of the CMSL. Initial training sessions were often viewed as not satisfactory; however, students reported that participating in the service-learning component of the CMSL was both beneficial and satisfactory:

- *"Training was time consuming, but overall it definitely helped me by offering opportunities to participate in different classroom experiences with students. I felt like I learned more from the classroom experience than I did in training."*
- *"I wasn't thrilled about the TOTL program being deemed mandatory. However, once we visited the schools, it really was an awesome experience. The information used on multimedia design training was broad, but it all fell into place once we were in the classrooms. Overall, I was satisfied with the outcome of the program.*
- *"I felt like this training was important. It is likely that we will be working with this program in the future. I liked the hands-on teaching with the students"*

- "*I felt like I learned more from the classroom experience, than I did in training."*
- *"Some of the training was pointless and wasted my time but I really enjoyed going into the classroom and working with the kids"*
- " *I felt like this multimedia design training was important. It is likely that we will be working with this program in the future"*

Several students further elaborated that participant awareness and sharing expected goals were factors that made the overall CMSL experiences successful:

- *"It allows for total control from all aspects of learning and development for the people involved with it, as well as the people who get the shared information"*
- *“I liked the openness of the whole group involvement for the purpose of instruction and learning"*

However, other students noted three areas of improvement for further implementation of the CMSL: time, supporting tools and resources, and an individualized training option.

- "*The time it took to dedicate to the training sessions."*
- *"We could have prepared for that in just a few hours on one Wednesday not 3 weeks of Wednesdays"*
- "*Using one computer for group project was hard for us all to learn the program as well as we needed to."*
- *"I liked the hands-on teaching with the students, but I felt like the training would have been more effective if we would have had more computers and supporting centers available"*
- "*The information is definitely worth knowing. Still, I think that a more hands on, exploratory learning environment would work better by allowing us to work at our own pace."*

Discussion

The findings from using the CMSL with local schools show that pre-service teachers acquired all of the necessary competencies in designing and developing multimedia materials using Macbook applications. Additionally, all participants showed a positive attitude and motivation to participate in future service-learning projects. Furthermore, all participants reported that the strengths of participating in service-learning activities were building reciprocal benefits and obtaining positive performance outcomes. After completing the CMSL, the following five critical success factors were suggested to further design and implement a successful CMSL service-learning program.

First, all stakeholders and parties involved in the CMSL, such as university faculty, staff, and pre-service teachers, need to understand and further agree upon the value of service-learning activities for all participating groups. If there were clear goals in mind for each phase, pre-service teachers would show higher interest in learning technology integration skills for classroom learning and consequently acquire essential knowledge and skills to teach sixth grade students.

Second, the appropriate infrastructure has to be established. For example, university-wide optical networks, a multimedia resource center, and technical support for pre-service teachers and faculty are necessary to provide high quality training.

Third, professional development training sessions need to be designed in a systematic way to address pre-service teachers' learning needs and motivation. Fourth, to support individual learning, online resources have to be available to support pre-service teachers' learning progress as they continue to work on producing sharable digital projects. Online tutorials can serve as a resource to scaffold the process of each participant's individualized learning.

Lastly, ongoing technical and instructional support have to be ensured to continuously support service learning. For example, pre-service teachers should have access to multimedia programs and devices as well as uninterrupted access to networks and the Internet.

Conclusion

Considering the lack of motivation and the difficulty in providing an authentic learning context in the classroom, the findings of this paper show a systematic approach to design and conduct multimedia service-learning for pre-service teachers. The CMSL model can be applied to different levels of teaching and subject areas. By providing an authentic “learning by teaching” environment through collaborating with area schools, pre-service teachers can be trained with a high level of contextual information and motivation.

References

Bambeck, A. K., & Neumann, T. (2005/2006). *Lernen durch Lehren (Learning by teaching) in theory and practice,* Paper presented at the 2005- 2006 Seminar on Learner centred approaches, Westfälische Wilhelms-Universität Münster.

Biswas, G., Schwartz, D. L., Bransford, J. D., & TAG-V. (2001). Technology support for complex problem solving: From SAD Environments to AI. In K. Forbus & P. Feltovich (Eds.), *Smart machines in education* (pp. 71-98). Menlo Park, CA: AAAI/MIT Press.

Brown, A. V., & Purmensky, K. (2014). Spanish L2 students’ perceptions of service-learning: A case study from Ecuador. *International Journal of Research on Service-Learning and Community Engagement, 2*(1), 78-94.

Dochy, F., Segers, M., & Sluijsmans, D. M. A. (1999). The use of self-, peer and co-assessment in higher education: A review. *Studies in Higher Education, 24*(3), 331-350.

Fiorella, L., & Mayer, R. E. (2015). *Learning as a generative activity: Eight learning Strategies that promote understanding.* Cambridge press; UK.

Freeman, N., & Swick, K. (2000). Serving and learning at a university laboratory school: Students from birth through adult- hood benefit when service-learning is integrated into the preservice curriculum. *Journal of Early Childhood Teacher Education, 21*(1), 93–105.

Howe, C. W., Coleman, K., Hamshaw, K., & Westdijk, K. (2014). Student development and service-learning: A three-phased model for course design, *International Journal of Research on Service-Learning and Community Engagement, 2*(1), 44-62.

Katzlberger, T. (2005). *Learning by teaching agents*. Unpublished doctoral dissertation, Vanderbilt University, Nashville, TN.

Keller, J. M. (1987). Strategies for stimulating the motivation to learn. *Performance & Instruction, 26*(8), 1-7.

Keller, J. M. (1993). *Manual for the Instructional Materials Motivational Survey (IMMS)*. Unpublished manuscript, Tallahassee, FL.

Park, S., & Son, C. H. (2008, Fall). The functional analysis of handheld computers use in K-12 classrooms, *Journal of Computing Teachers*.

Popham, W. J. (2008). *Classroom assessment: What teachers need to know* (5th ed.). New York: Pearson.

Richardson, W. (2006). *Blogs, Wikis, Podcasts, and Other Powerful Web Tools for Classrooms*, Corwin Press

Rust, F. O'C. (1994). The first year of teaching: It's not what they expected. *Teaching and Teacher Education, 10*(2), 205-217.

Schelfhout, W., Dochy, F., Janssens, S., Struyven, K., Gielen, S., & Sierens, E. (2006). Educating for learning-focused teaching in teacher training: The need to link learning content with practice experiences within an inductive approach. *Teaching and Teacher Education, 22*(7), 874-897.

Skinner, J.(1994). Learning by teaching. *Zielsprache Englisch, 2*, 38-39.

Sprinthall, N. A., Reiman, A. J., & Thies-Sprinthall, L. (1996). Teacher professional development. In J. Sikula (Ed.), *Handbook of research on teacher education* (2nd ed., pp. 666-703). New York: Macmillan.

About the Authors

Sanghoon Park is an assistant professor in the Instructional Technology program at the University of South Florida in Tampa, Florida. He specializes in emerging instructional technology, learning motivation, and technology integration in the classroom and online learning settings.

Vickie Gentry is a professor and dean of the Gallaspy Family College of Education and Human Development at Northwestern State University in Natchitoches, Louisiana. Her research areas include technology integration in service-learning and higher education.

Involuntary Volunteerism: What Happens When You Require People to "Do Good?"

Susan M. Henney
University of Houston-Downtown

Justin D. Hackett
California University of Pennsylvania

Marie Rose Porreca
University of Houston-Downtown

ABSTRACT

The voluntary nature of volunteerism has increasingly been called into question, particularly in situations where people are required to volunteer as part of a class or activity. This study questioned 357 students at a diverse urban university about their experiences with volunteerism, both as part of a class and not part of a class. Results suggest a disconnect between what participants "think" when asked about their hypothetical views about involuntary volunteering, versus their actual attitudes after having engaged in mandated service for a class. Although negative perceptions existed when participants thought about being forced to volunteer, after actually volunteering, the vast majority were very supportive of the experience. Overall, taken together the results suggest that the experience of forced volunteerism did not have a negative impact on future volunteer intentions.

Introduction

Volunteering is most commonly perceived as a purely voluntary and optional act. However, the act of requiring service is nothing new; it occurs in schools at all levels (i.e., service-learning), as a consequence of misbehavior (i.e., "court-ordered" community service), as part of the requirements for advancement in social organizations (i.e., Scouting), or as part of workplace expectations (i.e., service at an employer-backed charity). The voluntary nature of volunteerism is motivationally and socially complex; it can be clear that a person is following a mandate (course requirement or court order), but others may appear to be freely giving their time, when in reality they feel pressured to serve by others. If volunteerism is on a continuum between intrinsic, strongly encouraged, and required behavior, it becomes difficult to definitively separate required and non-required service (Beehr, LeGro, Porter, Bowling, & Swader, 2010).

Prior research defines volunteering and volunteerism in a variety of ways, often because they are focusing on certain aspects of behavior. Participation in long-term prosocial behavior (behavior that benefits others and/or the community) is the predominant definition of volunteering found in the current research (Barber, Mueller, & Ogata, 2013; Batson, Ahmad, & Tsang, 2002; Beehr, LeGro, Porter, Bowling, & Swader, 2010; Bekkers, 2005; Finkelstein & Brannick, 2007; Finkelstein, Penner & Brannick, 2005; Helms, 2013; Matsuba, Hart, & Atkins, 2007; Omoto, Snyder, & Hackett, 2010;Van Vianen, Nijstad, & Voskuijl, 2008), with *others* being defined as strangers and not friends or family (Finkelstein, Penner & Brannick, 2005; Finkelstein & Brannick, 2007).

It is important in some definitions that the behavior be non-obligatory and unselfish (Beehr, LeGro, Porter, Bowling, & Swader, 2010; Omoto, Snyder, & Hackett, 2010; Van Vianen, Nijstad, & Voskuijl, 2008) and/or performed without pay or external rewards (Bekkers, 2005; Finkelstein & Brannick, 2007; Helms, 2013; Omoto, Snyder, & Hackett, 2010; Van Vianen, Nijstad, & Voskuijl, 2008). Some authors define volunteerism as a planned behavior within an organizational context in order to differentiate volunteer activities from spontaneous acts of kindness (Barraza, 2011; Finkelstein, Penner, & Brannick, 2005; Matsuba, Hart, & Atkins, 2007; Omoto, Snyder, & Hackett, 2010). Other definitions include unstructured informal volunteer activities that are not within an organizational context, such as donations of money and providing informal assistance to others (Helms, 2013; Finkelstein, & Brannick, 2007).

In contrast to the many definitions of volunteerism, little work describes what involuntary volunteering is. Beehr, LeGro, Porter, Bowling, and Swader (2010) defined required volunteerism as service being performed for external reward. It has also been defined as an individual's involvement in volunteering activities that is not done by choice but rather mandated by an outside organization (Volunteer Canada, 2006). Barber, Mueller, and Ogata (2013) specified that this type of service is not performed for the greater good or personal satisfaction, but rather because school, church, parents or a personal goal required the behavior. The State of Maryland's volunteer service requirement for high school graduation is a good example of this (Helms, 2013). However, does this mean that the student who seeks out volunteer opportunities to increase the chance of getting into college is not freely volunteering, since the act is not only performed for the greater good? What about the stay-at-home mom who volunteers to broaden her social contacts? Or the employee who joins the March of Dimes Walk with his colleagues in order to avoid being labeled 'not a team player' at work--is he not contributing to the cause? We suggest a definition of involuntary volunteerism stating that it is prosocial behavior, perceived by the individual as *predominantly* performed for external reward or to avoid negative consequences. We can therefore acknowledge that one can still 'freely volunteer' even if some of their motives for volunteering are not unselfish and internal.

Females, those with higher education levels, and students with parents involved in volunteer activities have consistently been found to volunteer more (Barber, Mueller, & Ogata, 2013; Bekkers, 2005; Matsuba, Hart, & Atkins, 2007; Helms, 2013), as do people who regularly attend and participate in religious services (Barber, Mueller, & Ogata, 2013; Helms, 2013). Researchers have examined how motivations affect one's propensity towards future volunteerism. Clary et al. (1998) proposed six categories of motivations and how they affect volunteering: Value (altruistic); understanding (to learn new or use skills); Social (enhance interpersonal relationships); Career (career enhancement or resume building); Protective (build up low self-esteem); and Enhancement (psychological growth). Social, understanding, and career motivations could all be factors leading to "required" volunteerism. Social pressures have been linked to long term volunteering, but also to decreased satisfaction (VanVianen, Nijstad, & Voskuijl, 2008), which can decrease one's commitment to volunteer (Finkelstein, Penner & Brannick, 2005). These same pressures may play a positive role, with other people's expectations that one will volunteer linked to increased volunteer activity and integration of the volunteer role identity (Finkelstein, Penner & Brannick, 2005).

Frequency of participation and increased identification with the volunteer role also increases future volunteerism (Barraza, 2011; Finkelstein, & Brannick, 2007). This makes sense because participation increases activity in the community and builds relationships with other people, such as networking and creating professional opportunities, which in turn create more opportunities to volunteer. Thus, it is possible that the decrease in satisfaction and subsequent decreased future intentions to volunteer caused by social motivations are offset by the positive effects of increased volunteer activity and role identification. It must be noted that other studies have found that self-focused (understanding, protective or career motivations), instrumental, and extrinsic motives all decrease the likelihood of future volunteerism (Finkelstein, 2010; Omoto, Snyder, & Hackett, 2010; Beehr, LeGro, Porter, Bowling, & Swader, 2010).

A strong relationship has been found between future volunteerism and student participation in both voluntary and required prosocial behaviors (Barber, Mueller, & Ogata, 2013; Hart, Donnelly, Youniss, & Atkins, 2007). An early study on mandated volunteerism and future intentions to volunteer found that students' intentions were marginally affected by the mandated requirement, if they were initially more likely to freely volunteer (Stukas, Synder, & Clary, 1999). All of these studies noted the detrimental effects on future intentions to volunteer when the initial exposure was *solely* required volunteerism. Since volunteers' motives are often mixed with internal and externally required reasons to participate, it is hard to claim that only freely chosen prosocial behaviors will reap benefits. Rather, consideration should be given to which motive is most salient for the individual at the time of volunteering. Ryan and Deci (2000) explain how external factors contribute to self-motivation, which seems to be related to ongoing volunteer engagement. They also suggest that, according to self-determination theory, individuals who get a sense of competence and independence while being able to relate within the community experience an increase in self-motivation. Therefore, school engagement, by providing a structure that fosters experience and opportunities to build competencies may be beneficial to ensuring future volunteerism (Barber, Mueller, & Ogata, 2013). Batson, Ahmad, and Tsang (2002) found that four factors of motivation are related to successful volunteerism: egoism, altruism, collectivism, and principalism. Enhancing personal welfare (egoism), concern for the welfare of others (altruism) or a group (collectivism), and the maintenance of moral principles (principalism) are all factors that require a careful balance between strengths and weaknesses that may be facilitated by organizational efforts. If the motives are more internal than external, or if participants have some control over their choice, then involuntary volunteering can still be beneficial to the volunteer, the organization and the recipients.

The relationship between the variety of human motivations that may be present when one "involuntarily" volunteers and the desire to continue volunteering is complex and not well understood. The current study seeks to explore factors associated with "involuntary volunteering." That is, are there positive, prosocial benefits associated with experiencing "forced volunteerism," or are there drawbacks to not being able to freely choose volunteer experiences? For instance, are there negative consequences that result from requiring individuals already motivated to "give back" to volunteer in specific domains? What are the implications of involuntary volunteerism for future volunteerism intentions? Finally, we had a unique opportunity to use the present data to develop

typologies of volunteers based on their beliefs about being forced to volunteer and other relevant factors identified in the literature. Specifically, we were interested in whether meaningful typologies could be developed that classify volunteers based on their beliefs about the importance of being free to choose their own volunteer activities, their volunteerism intentions, and their overall enjoyment of volunteering. The ability to identify students who might persist in and maintain enjoyment of volunteer activities under conditions of mandatory volunteerism will be a benefit to those who design classes or programs with this component.

Method

Participants

Three hundred fifty-seven students were recruited from the Psychology Research Pool of an urban, Hispanic- and Minority-serving institution. The university is atypical of four-year universities, in that it is ethnically diverse (Hispanic=38.9%, Black/African American=28.8%, White=20%, other=12.3%) and enrolls older-than-average students (average undergraduate age= 26.8; average age at first admission=24.3). As one would expect from this population, the current sample is equally diverse. Participants' ages ranged from 18 to 62 (Median age=23), and 15.7% were freshman, 17.6% were sophomores, 31.9% were juniors, and 33.6% were seniors in academic standing. Two hundred and thirty were women (65.7% of 350 responding), and the ethnic identification of the participants was 33.9% Hispanic, 28% African American, 22.7% White, non-Hispanic, 7.3% Asian, and 7% with other ethnic identifications, such as biracial and Native American. Most participants were employed at least part-time (67%), and the average personal income was about $15,000. All participants reported that they had volunteered at least once in their lifetime. While a majority of respondents indicated that they had only volunteered once, on isolated occasions, or sporadically (73.1%), the remainder indicated that they volunteered whenever they could fit it into their schedules (12%) or on a regular basis (14.8%). Most participants reported that the time spent during each incidence of volunteerism was one to three hours (62.4%), although some spent less than one hour (9%), four to six hours (20.8%), all day (5.9%), or overnight (2%).

Procedure

Participants completed a survey that included a short demographic survey, a series of questions about their volunteerism while in college, and a standardized questionnaire. Within the volunteerism section, participants were first asked to respond to general questions about their attitudes and behaviors regarding volunteerism on a 5-point scale (strongly disagree ("1") to strongly agree ("5")). Examples of this type of question include: "I enjoy volunteering in general;" "It is important to me to be free to choose volunteer activities as I see fit;" and "I will participate in volunteer activities in the future."

Participants were then asked to report on up to three specific volunteer activities that they participated in while attending college as part of a class. Items included the nature of the activity, hours spent per week on the activity, and the extent to which they perceived the activity to be mandatory or optional. The same questions were then asked regarding volunteer activities they engaged in that were not part of a class. We were initially concerned about a self-selection bias. Specifically, that students may have

selected these courses based on the volunteer requirements involved with the class. However, at the time the study was conducted the course descriptions in the university catalogue did not list volunteer requirements for any course. As a result, students would not have been aware that volunteering was an aspect of any course that they chose, nor would it have been a way to choose between courses. Moreover, among the participants who had volunteered as part of a college class, exactly half had a high level of previous volunteer experience (often or regularly) and half had a low level of previous volunteer experience (sporadically or less). Finally, there was no difference between those who had volunteered as part of a college class and those who had not on their enjoyment of volunteer activities prior to college, $t(125)= -.55$, p=ns.

A standardized questionnaire measuring Social Responsibility (SR) was included. This measure was included to assess a specific internal motivation for volunteerism, specifically, the belief that one is obligated to contribute to the greater good of society through one's actions. This addresses the "principalism" and "collectivism" motivations for volunteerism (Batson, Ahmad, & Tsang, 2002), and provides a way to relate the internal motivations of social responsibility to the externally mandated situation of involuntary volunteerism. The SR questionnaire (Nedwek, 1987; additional items developed by Flewelling, Paschall, & Ringwalt, 1993) provides a measure of civic responsibility and awareness. The mean score on the SR was 43.25 (SD=6.08), which translates to an average scale score of 3.93, indicating a "good" awareness of their social responsibility. For the current study, the eleven items, aggregated to form a composite measure of social responsibility, showed acceptable internal consistency (α = .73).

Results

Consistent with previous work, women enjoyed volunteering (M =4.17, SD=.83) more than men (M =3.84, SD =.82), $t(348) = -3.49$, $p < .001$. Age and income (rs < -.04, ps = ns), and marital status, employment, and ethnicity were not related to enjoyment of volunteerism, Fs < 1.52, ps = ns). Overall, the frequency with which participants engaged in volunteer activities was significantly related to enjoyment of these activities, $F(4,352)=17.21$, p<.001. People who volunteer more are more likely to enjoy volunteering.

Males' scores (M =41.25, SD =6.24) were significantly lower than females' scores on SR (M = 44.43, SD =5.68), $t(338) = -4.76$, p<.001. SR was significantly related to age (r =.26, $p < .001$) and income (r =.12, $p < .05$); as age and income increased, so did social responsibility. In addition, SR was significantly related to enjoyment of volunteering, being free to choose the volunteer activity, belief that you can make a meaningful contribution, participation in the future, and participation in the next year ($rs > .12$, $ps < .05$). SR was not related to ethnicity, $F(3,314) = .54$, $p = ns$.

Involuntary Volunteerism

More than 90% of respondents agreed or strongly agreed that it is important to them to choose volunteer opportunities as they see fit. Being free to choose volunteer activities was related to greater enjoyment of volunteering (r =.27, p<.01), feeling that one is making a meaningful contribution (r =.43, p<.01), finding relevant volunteer

activities (r =.34, p<.01), willingness to participate in volunteer activities in the future (r=.34, p<.01), performance as a volunteer (r =.13, p<.05), and having friends in high school (r =.11, p<.05) and college (r =.12, p<.05) who volunteered. However, when asked about how they would feel if forced to volunteer, 51% disagreed or strongly disagreed that they would volunteer again if they felt forced to do the activity. These findings highlight that participants placed substantial emphasis on the importance of feeling free to select the types of volunteer activities that they choose to be involved in.

Seventy-six of the 351 participants had volunteered at least once as part of a class in college. This 'forced' volunteerism provides an opportunity to examine the influence of this experience. Of those who had volunteered in college as part of a class, the overwhelming majority enjoyed their volunteer experience(s) (86.8%). Participants who took part in a mandatory volunteer activity as part of a class (M = 3.75, SD =.53, n=24) were *more* likely than those who had non-mandatory activities (M =3.29, SD =.94, n=51) to say that they will volunteer again in the future, t(70)=2.67, p<.05. Although participants had indicated (without reference to actual behavior) that feeling forced to volunteer would attenuate future volunteer behaviors, actually engaging in 'forced' volunteer activities appears to encourage intentions to be more engaged in the future. Interestingly, engaging in involuntary volunteering is also related to participants' thoughts about others' responsibility to volunteer. Of 72 respondents who had engaged in volunteerism as part of a college class, 58 agree or strongly agree (80.6%) that they are in favor in general of having college students volunteer as part of a class.

Overall, there was no difference in enjoyment of these activities between those who participated voluntarily and those for whom it was mandatory, t(70) = -.61, p = ns. This indicates that being forced to volunteer does not appreciably change enjoyment of the activity. There was no difference between participants who engaged in a mandatory volunteer activity as part of a class and those who had not on whether they performed well on volunteerism tasks, t(69)=1.07, p=ns. Participants who were involved in a mandatory volunteer activity as part of a class were *less* likely than those who did non-mandatory activities to agree that being forced to volunteer would impact their performance on volunteer tasks, t(72)=-2.54, p<.05.

A hierarchical regression analysis examined whether the importance placed on feeling free to choose the types of volunteer activities one engages in can be predicted by greater volunteer behavior over time and enjoyment of volunteer experiences. As recommended by Baron and Kenney (1986), measures were centered and the multiplicative interaction term was created. Key demographic variables were entered in Step 1: age, gender, income, and ethnicity. However, none of these variables were significant predictors. The key predictors, lifetime volunteer activities and enjoyment of volunteer activities, were entered in Step 2. The addition of these variables significantly contributed to the prediction of importance to choose volunteer activities, ΔR^2 = .09, p < .001. Greater lifetime involvement in volunteer activities (β = .15, t = 2.52, p = .01) and enjoyment of volunteer activities (β = .21, t = 3.45, p = .001) predicted greater importance of choosing volunteer activities. The two-way interaction, entered in Step 3, was not significant. Overall, the regression equation was significant, R = .34, R^2 = .12, R^2_{adj} = .10, F(1, 305) = 5.71, p < .001.

Utilizing participants who had volunteered as part of a class, a second hierarchical regression was run examining whether social responsibility predicts feeling

forced to engage in specific volunteer activities. More specifically, does the perception that one has an obligation to act in ways that benefit society relate to feeling forced to engage in particular volunteer activities as a course requirement? That is, does the felt obligation to give back to society impact the perception that one was forced to volunteer? The internal desire to contribute to society may conflict with the requirement to volunteer and create the perception that one is forced to engage in these activities. As with the first analysis, demographic variables were entered in Step 1 and the regression equation was not significant, $R = .25$, $R^2 = .06$, $F(4, 60) = 99$, $p = ns$. Social responsibility was entered in Step 2 and significantly contributed to the prediction of feeling forced to volunteer, $\Delta R^2 = .10$, $F(1, 59) = 6.70$, $p = .01$. That is, feeling one has a responsibility to improve the lives of people around them was associated with feeling forced to engage in volunteer activities, $\beta = .34$, $t = 2.59$, $p = .01$. In other words, the more internally motivated people are to engage in volunteerism via their sense of social responsibility, the more they report feeling forced to engage in volunteer activities as part of a class. Paradoxically, perhaps, the internal factor that encourages people to volunteer their time for the benefit of society also is related to a heightened need to be able to be in control of that effort rather than mandated to comply with it.

Volunteering Typologies

We were interested in determining if there were ways to distinguish between student volunteers by creating classifications that would be useful to those developing classes or programming for them. In other words, do different characteristics of student volunteers, such as importance of being able to freely choose one's volunteer activities and enjoyment of volunteer activities, hang together in such a way as to form useful groupings of student volunteers? It would then be possible to ascertain how these different classifications of volunteers perceived being forced to volunteer as part of a class.

A hierarchical cluster analysis utilizing Ward's method was performed for the purpose of developing a "typology" of volunteers from the current data. A two-cluster solution was sought, with a Euclidean Distance measure. The standardized variables used for the clustering were age, enjoyment of volunteering, importance of freedom to choose volunteer activities, and willingness to participate in volunteer activities in the future. The analysis resolved into two similar-sized clusters (Cluster 1=196 and Cluster 2=154), which differed significantly on the main variables [age: $t(348)=4.49$, $p<.001$; enjoyment: $t(348)=-11.49$, $p<.001$; free to choose: $t(348)=-8.34$, $p<.001$; and future volunteerism: $t(348)=-19.47$, $p<.001$] and also distinguished significantly on other key variables that allowed us to form a "typology" for each cluster. We termed Cluster 1 the "Resolute Volunteers" and Cluster 2 the "Ambivalent Volunteers."

The Resolute Volunteers cluster consists of volunteers who are older ($M= 27$ years) than the Ambivalent Volunteers, strongly enjoy volunteering, find it more important than the Ambivalent Volunteers to be free to choose volunteer activities, and are very certain they will volunteer again in the future. The Resolute Volunteers are more likely to be female, married or divorced, have children, and have incomes over $70,000. The Resolute Volunteers also feature a significantly higher Social Responsibility score, and they consist of the greatest proportion of those who volunteer on a regular basis.

The Ambivalent Volunteer cluster consists of younger volunteers (*M*=23.5 years), more neutral-positive about volunteering in general, feel it is less important to be free to choose (although still important overall), and are less certain they will volunteer again in the future. The Ambivalent Volunteers contains a greater proportion of the male and Black respondents (although other ethnicities are represented), and all but two respondents had an income less than $70,000. Interestingly, one of the few variables that the Resolute versus Ambivalent Volunteers did not differ on was, "if you volunteered as part of a class, did you feel forced?" In other words, when they actually volunteered (instead of just thinking about it), they did not differ in the extent to which they "felt" forced to do it. It is instructive to note that important aspects of student volunteers, including age, experience with volunteerism, enjoyment of volunteerism, and future volunteer intentions did hang together in such a way as to present a useful profile of volunteerism categories in students.

Discussion

Volunteerism that is less than purely "voluntary" in nature is a growing aspect of American life; indeed, the prestigious Carnegie Community Engagement Classification seeks, in part, to institutionalize community engagement in the higher education curriculum, as it has already been integrated into many high schools' curriculum (New England Resource Center for Higher Education, n.d.). The result is to put more students in positions where they are engaged in community activities in order to meet learning objectives for individual courses or programs. Within this context, it is important to know the effects of such requirements, as one of the prosocial consequences of volunteerism requirements should be continued community engagement.

When respondents "think" about being forced to volunteer in general, they view it more negatively. Specifically, they think not being free to choose would result in less enjoyment, lower propensity to volunteer again, and less relevant volunteer activities. However, when they actually engage in mandatory volunteering behavior, they are more likely to say they will volunteer in the future. There appears to be a cognitive component at work in this instance in that there is a cognitive bias against being forced to do things. In the US, "freedom" in all aspects of life is a cultural theme that persists across situations. Cognitively, this is probably a reflection of a framing bias, wherein "freedom to choose" is more salient than other aspects of the question and the risk of being "forced" to do something outweighs the benefits. It could also be a form of the anchoring effect, whereby we ground our assumptions on a focal part of the issue (in this case, freedom to choose), and thereby the assessment of the rest of the matter is a foregone conclusion. Overall, the words "freedom to choose" and voluntary are probably seen synonymously and interchangeably, so to introduce a mandatory component violates the cognitive connection between the two.

Another key finding is that even though more than 50% said they would be less likely to volunteer again if they felt "forced" to do the activity, when students actually participated in 'forced' volunteerism as part of a class, they said they would perform the activity again. The mere exposure effect would assume that the act of participating in volunteerism could produce a preference, even if it was involuntary (Zajonc, 1980). Mere exposure negates the necessity for participants to cognitively process or consider the implications of voluntary versus involuntary action; the behavior and the preference

are concurrent. In other words, it doesn't really matter if it is truly voluntary as much as it is that they do it, which opens the door to future volunteerism intentions. This further implies that it is not wholly enjoyment—or the conscious understanding of enjoyment—that matters. In fact, in the present study enjoyment of the activity does not differ between mandatory and voluntary participants, which does imply that it is likely not just a "halo effect" around prosocial behavior that produces future volunteerism intentions; exposure produces the propensity to view future volunteerism favorably.

This study found that the higher the sense of social responsibility, the more respondents felt forced to do specific volunteer activities. Goal achievement may explain this finding. Those with a high level of social responsibility may volunteer with the goal of helping others and have a well-defined sense of what types of prosocial behaviors will bring about the most good. These feelings of responsibility may be strong enough for some to feel forced to volunteer or be engaged to meet the internal drive to give back to society. More specifically, the internal motivation to give back to society may drive people to be engaged. Not fulfilling these motivations, due to being forced into a specific activity, could bring about feelings of discomfort.

One concern regarding forced volunteerism, is that the experience may 'backfire' and cause less engagement in the future. As suggested by the overjustification effect, among those students highly motivated to be socially engaged, extrinsically rewarding them for volunteering may diminish this internal motivation. Prior research has found that intrinsic motivations can be attenuated if the behavior is needed to obtain some external reward (Lepper, Greene, & Nisbett, 1973). In the classroom setting, students volunteering as a course requirement are engaging in the behavior as a means to obtain an external reward – here, a good grade. Theoretically, concern regarding the negative impact of the over-justification effect on future intentions to volunteer seems warranted. The results, however, do not support this concern. Among those highly motivated to be social engaged, forced volunteerism did *not* negatively impact future intentions to be engaged. Furthermore, if we consider the Resolute Volunteers, they score higher on social responsibility, enjoy volunteering, find it important to choose the volunteer activities they are engage in, and are very certain they will volunteer again in the future. The experience of forced volunteerism did not have a negative impact on future volunteer intentions. This result in combination with the other positive findings from this study should alleviate concerns about the negative impact of forced volunteerism.

Of the respondents who had engaged in volunteerism as part of a college class, most agree or strongly agree (80.6%) that they are in favor of having college students volunteer as part of a class. This finding suggests that although they were forced to engage in volunteerism for course credit, participants found the experience beneficial. So much so, in fact, that the majority of participants endorsed having students volunteer as part of the college experience. While social responsibility may serve as a strong antecedent for engaging in prosocial behaviors, it may be that actual engagement in these behaviors generates positive benefits as well. Certainly, the respondents seem to think that the benefits are strong enough that they would require *others* to do what they were required to do.

Finally, the results suggest that greater involvement in volunteerism and more enjoyment of it predicts that people will want to be free to choose their own volunteer

activities. It is clear from both regression and cluster analyses that those who are experienced volunteers place a high value on freedom to choose. This makes sense, as they have reality-based expectations and prior experience with what does and does not fit for them in terms of volunteering. Previous research into person-environment fit and volunteerism supports the conclusion; a good match between volunteer activity and participant needs/personality increases enjoyment and future participation (Clary et al., 1998; VanVianen, Nijstad, & Voskuijl, 2008). Limiting one's freedom to choose reduces the chances, in the participant's perception, that the volunteer activity will be as personally compatible as previous experiences and thus yield fewer benefits and less enjoyment. The current results could also be related to the functional value of volunteerism in the participants' lives. That is, volunteers engage in specific behaviors that satisfy important goals. These goals can include anything from career enhancement to obtaining a sense of competency. When thinking about the freedom to choose, the view is that it is unlikely that the forced volunteer behavior will aide them in reaching these goals. For Resolute Volunteers performing an act that has been chosen for them takes time and resources away from volunteer behavior they view as more important. This could be a critical reason why these experienced volunteers place a high premium on the freedom to choose their behavior. Moreover, freedom to choose may be key to sustaining volunteer behaviors by allowing volunteers to "match" their motivations and reasons for volunteering with specific volunteer activities (Clary et al., 1998).

Limitations and Future Directions

There are limitations to the study that should be mentioned. The data were collected through cross-sectional and self-report surveys, and as a result, the causal direction between variables and the possible influences of self-presentational concerns are unclear. The data utilized in this sample focused on involuntary volunteerism experienced by college students. As such, the pattern of results may be limited to this type of experience. A different series of results could be found amongst other types of forced volunteerism (i.e., Boy and Girl Scout activities, court-ordered community service, etc.). These limitations notwithstanding, the strengths of this study and the results obtained are noteworthy.

This study provides insight into the benefits of 'forced' volunteerism. Participants found the experiences important enough to endorse the belief that others should volunteer as part of college courses. Future research could examine the long-term impact of forced college-based volunteerism. There could be meaningful effects that extend further into adulthood. There may be interesting effects for forced volunteerism on future civic engagement for individuals high in social responsibility. It may be that creating dissonance encourages future behavior corresponding to the internal motivations to be involved. As a result, there may be greater engagement after forced volunteerism. Longitudinal research projects may begin to uncover how volunteering as part of a course could generate greater civic and social engagement.

References

Barber, C., Mueller, C. T., & Ogata, S. (2013). Volunteerism as purpose: Examining the long-term predictors of continued community engagement. *Education Psychology: An International Journal of Experimental Educational Psychology, 33(3),* 314-333. doi:10.1080/01443410.2013.772775

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51(6)*, 1173-1182. doi:10.1037/0022-3514.51.6.1173

Barraza, J. A. (2011). Positive emotional expectations predict volunteer outcomes for new volunteers. *Motivation and Emotion*, 35(2), 211-219. doi:10.1007/s11031-011-9210-4

Batson, C., Ahmad, N., & Tsang, J. (2002). Four motives for community involvement. *Journal of Social Issues, 58*(3), 429-445. doi:10.1111/1540-4560.00269

Beehr, T. A., LeGro, K., Porter, K., Bowling, N. A., & Swader, W. M. (2010). Required volunteers: Community volunteerism among students in college classes. *Teaching of Psychology, 37(4),* 276-280. doi:10.1080/00986283.2010.510965

Bekkers, R. (2005). Participation in voluntary associations: Relations with resources, personality, and political values. *Political Psychology*, 26(3), 439-454. doi:10.1111/j.1467-9221.2005.00425.x

Clary, E. G., Snyder, M., Ridge, R. D., Copeland, J., Stukas, A. A., Haugen, J., & Miene, P. (1998). Understanding and assessing the motivations to volunteer: A functional approach. *Journal of Personality and Social Psychology, 74(6),* 1516-1530. doi:10.1037/0022-3514.74.6.1516

Finkelstein, M. A., Penner, L. A., & Brannick, M. T. (2005). Motive, role identity, and prosocial personality as predictors of volunteer activity. *Social Behavior and Personality: An International Journal*, *33(4)*, 403-418. doi:10.2224/sbp.2005.33.4.403

Finkelstein, M. A., & Brannick, M. T. (2007). Applying theories of institutional helping to informal volunteering: Motives, role identity, and prosocial personality. *Social Behavior and Personality: An International Journal*, *35*(1), 101-114. doi:10.2224/sbp.2007.35.1.101

Finkelstein, M. A. (2010). Individualism/collectivism: Implications for the volunteer process. *Social Behavior and Personality: An International Journal*, *38(4)*, 445-452. doi:10.2224/sbp.2010.38.4.445

Flewelling, R. L., Paschall, M. J., & Ringwalt, C. L. (1993). *Supporting adolescents with guidance and employment (SAGE) baseline survey*. Research Triangle Institute, Research Triangle Park, NC.

Hart, D., Donnelly, T. M., Youniss, J., & Atkins, R. (2007). High school community service as a predictor of adult voting and volunteering. *American EducationResearch Journal, 44(1)*, 197-219. doi:10.3102/002831206298173

Helms, S. (2013). Involuntary Volunteering: The impact of mandated service in public schools. *Economics of Education Review, 36,* 295-310. doi:10.1016/j.econedurev.2013.06.003

Matsuba, K., Hart, D., & Atkins, R. (2007). Psychological and social-structural influences on commitment to volunteering. *Journal of Research in Personality, 41(4)*, 889-907. doi:10.1016/j.jrp.2006.11.001

Nedwek, B. P. (1987). Political socialization and policy evaluation: The case of youth employment and training program. *Evaluation and Program Planning*, 1035-42. doi:10.1016/0149-7189(87)90020-6

New England Resource Center for Higher Education (n.d.). Community Engagement Classification. Retrieved from http://nerche.org/index.php?option=com_content&view=article&id=341&Itemid=92

Omoto, A., Snyder, M., & Hackett, J. D. (2010). Personality and motivational antecedents of activism and civic engagement. *Journal of Personality, 78(6)*, 1703-1734. doi:10.1111/j.1467-6494.2010.00667.x

Ryan, R. M. & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology, 25(1),* 54-67. doi:10.1006/ceps.1999.1020

Sukas, A. A., Synder, M., & Clary, E. G. (1999). The effects of 'Mandatory Volunteerism' on intentions to volunteer. *Psychological Science, 10(1),* 59-64. doi:10.1111/1467-9280.00107

Van Vianen, A. M., Nijstad, B. A., & Voskuijl, O. F. (2008). A person-environment fit approach to volunteerism: Volunteer personality fit and culture fit as predictors of affective outcomes. *Basic and Applied Social Psychology*, *30(2)*, 153-166. doi:10.1080/01973530802209194

Volunteer Canada (2006). *Volunteering and mandatory community service: Choice-Incentive-Coercion-Obligation: A discussion paper*. Retrieved from http://volunteer.ca/content/volunteering-and-mandatory-community-service-discussion-paper

Zajonc, R.B. (1980). Feeling and thinking: Preferences need no inferences. *American Psychologist, 35*(2), 151–175. doi:10.1037/0003-066x.35.2.151

Corresponding author: Susan M. Henney, PhD, University of Houston-Downtown, Department of Social Sciences, Houston, TX 77002; henneys@uhd.edu

Creating a Formal Service-Oriented Curriculum in Pre-Medical Education – the QuARMS Experience

Theresa Nowlan Suart
Queen's University School of Medicine, Kingston, ON

Amber Hastings-Truelove
Queen's Faculty of Health Sciences, Kingston, ON

Eleni Katsoulas
Queen's University School of Medicine, Kingston, ON

Denise Stockley
Queen's Faculty of Health Sciences, Kingston, ON

Jennifer MacKenzie
McMaster University and Queen's University, Ontario, Canada

ABSTRACT

In September 2013, the Queen's University Accelerated Route to Medical School (QuARMS), an innovative 2-year pre-medical curriculum which combines coursework, seminars, fieldwork, and faculty mentorship, was developed. After successful completion of the program, students are eligible to enter medical school. A key aspect of this learning stream is the integrated service-learning aspect which is scaffolded across both years of study and includes in class sessions, community projects, mentoring, and assessment. This paper provides the results of a mixed-methods program evaluation designed to examine students' QuARMS service-learning experiences. Overall, students were happy with the service-learning component of the program, and indicated that the in-class and experiential service-learning sessions were beneficial. However, students also indicated that they wanted more structure and feedback while working on their projects.

Introduction:

In September 2013, Queen's University launched the Queen's University Accelerated Route to Medical School (QuARMS), an innovative curriculum which combines coursework and experiential learning, while providing students with faculty and peer mentorship. The QuARMS curriculum was designed based on four "pillars": role of physician, communication, critical thinking, and scientific foundations. After successful completion of the program students are eligible to enter medical school.

In recent years, many undergraduate medical programs have made efforts to incorporate service-learning into their curricula, in line with changes recommended by the Association of Faculties of Medicine of Canada (AFMC) publication, "The Future of Medical Education in Canada (FMEC)". The first recommendation in the report calls for medical schools to "Address Individual and Community Needs," pointing to social responsibility and accountability as core values of physicians and medical faculties, and emphasizing the need to train physicians to be responsive to "the diverse needs of individuals and communities throughout Canada, as well as meet international responsibilities to the global community" (p 12). McGill, for example, provides a "Partnering for Healthier Communities" course for all of its students, while the University

of Toronto is introducing its revised pre-clerkship curriculum – now called the Foundations Curriculum – for students entering in August 2016 which will include a more integrated approach to service-learning. Queen's Medical School has created a Service-learning Advisory Panel to understand students' current service-learning activities, and to assess what resources the School can provide to support these students.

Educating students about the social aspects of medicine in traditional hospital settings has challenges, ones that Meili, Fuller, and Lydiate (2011) suggest can be mitigated through service-learning by allowing students to "(1) gain educational experience in multiple contexts, (2) gain exposure to concepts of international, rural and urban health, and community development, (3) experience service-learning, (4) gain language skills and multi-cultural understanding, (5) improve communication skills, and (6) gain exposure to health systems and health teams" (660). Service activities of any kind may also help to promote and protect empathy during medical school (Brazeau, Schroeder, Rovi, & Boyd, 2011). Cashman and Seifer (2008) suggest that "with its emphasis on reciprocal learning and reflective practice, service-learning can help ensure that students who pursue public health studies as undergraduates enter their adult lives prepared to make positive contributions to the nation's health" (273). It is not only students who can experience positive gains through service-learning, but also faculty. Since service-learning promotes self-learning, faculty can become "mentors and guides, rather than enforcers and didacts" (Smith et. al, 2013, 1146).

While Canadian universities, with the exception of the QuARMS learning stream, do not have formalized pre-medical curricula, the majority of students intending to apply to medical school follow similar trajectories: an undergraduate degree, usually in health sciences, a high grade point average, preparation for the MCAT to achieve high scores, and multiple extra-curricular activities. For students in this more traditional route to medical school, the environment is often competitive, as they aim to make themselves the most desirable candidates for limited positions. Lin et al. define the 'premedical experience' as encompassing all the things students do inside and outside the classroom – strategizing, competing, and collaborating – to successfully master challenging academic material and satisfactorily meet requirements with the intent to construct a successful medical school application (2013). The focus on attainment, however, can come at the cost of actual development. Gross, Mommaerts, Earl, and De Vries (2008) suggest that "by the time a student reaches medical school, he or she has already learned how to learn and how to succeed, often by demonstrating character as a shortcut to developing it" (519). Students in the QuARMS learning stream must maintain a 3.5 grade point average to be considered for medical school, although the majority have significantly higher marks. The students are not required to write the MCAT, and other than five required courses, (year 1 biology, chemistry, math, English and year 2 physiology) they can select courses based on individual interest and what they feel will provide benefit to their anticipated future careers rather than selecting those that will look best on an application.

Methodology

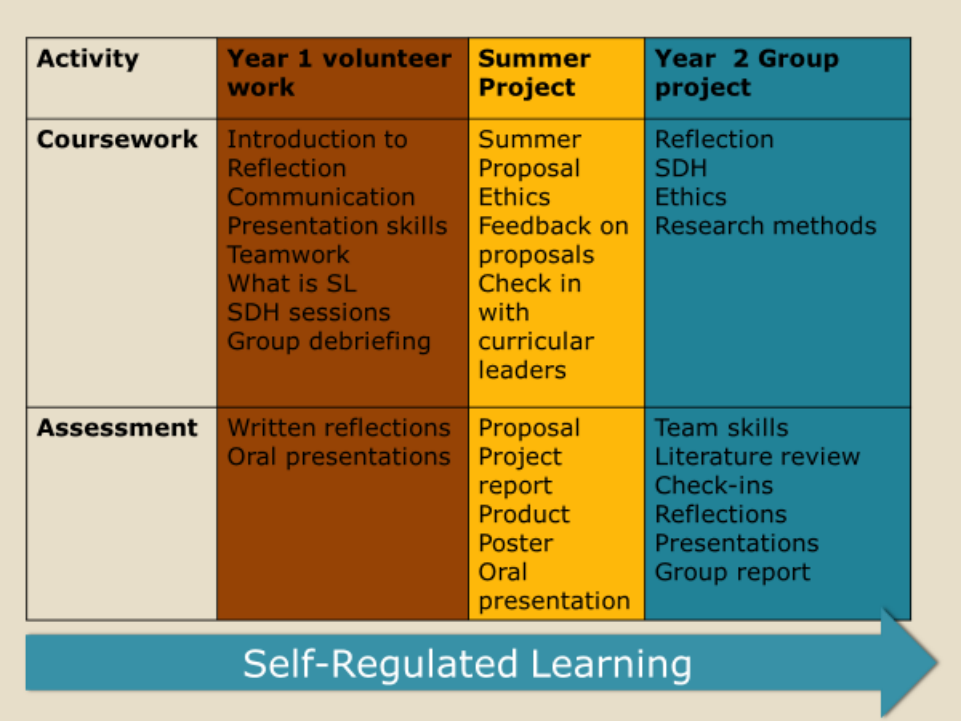
While there are many different definitions of service-learning, Queen's Undergraduate Medical Education (UGME) curricular committee and the QuARMS learning stream, have adopted the one provided by the Liaison Committee on Medical Education (LCME). LCME defines service-learning as

> a structured learning experience that combines community service with preparation and reflection. Medical students engaged in service-learning provide community service in response to community-identified concerns and learn about the context in which service is provided, the connection between their service and their academic coursework, and their roles as citizens and professionals. (LCME Standards)

For QuARMS, service-learning is a structured experience that must meet the goals of the program, as well as the goals of the community partner. For the university curriculum, service-learning projects are intended to provide students with opportunities to develop many aspects of the roles expected of a physician including communication, collaboration, professionalism, and advocate, enhancing our existing classroom and hospital-based curriculum in the community. To ensure that the needs of faculty, students, and community partners are being met, the program creates a clear link between course objectives, reflection, progress reports, and assessment. Education and support is provided to allow students to develop skills in self-regulated learning. Students, faculty, and community partners share the responsibility for planning and leadership, assessment, and accountability for their projects. The group decides on roles, and maintains consistent communication with the stakeholders for each project.

A key component of the QuARMS learning experience is its scaffolded approach to Community Service-learning (CSL). Students move from individual volunteer service in their first year, to an individual summer project they complete and present in their second year, and finally to a group service-learning project in their second year (Figure 1).

Figure 1: Service-learning in the QuARMS Program



In their first year (terms 1 and 2), QuARMS students volunteer on a regular basis with a campus or community based organization that must include face-to-face contact. This means that students must interact with members of the organization, the volunteers, and/or clients on a regular, ongoing basis. The first phase of their service is undertaken on an individual basis, although it is possible for more than one student to volunteer with the same organization. Each student is expected to volunteer on a regular basis from October to April (excluding December because of academic exam period regulations), an average of 1-2 hours per week. The cumulative total for each student is required to be 24-30 hours.

Over the summer between the first and second year, students undertake a project in their home communities. The project is designed during the "social determinants of health" and the "critical thinking" sessions in the first year QuARMS curriculum. These projects can take place in a myriad of organizations, from community centres to summer camps, to hospitals or family medical practices. In tandem with faculty and community partners, the students identify a specific need in the organization, and work with the community partner to ensure that a deliverable is provided to the organization. Examples include staging an event, developing a social media tool, or producing brochures or videos. Early in their second year, students submit a report and give a presentation about their summer experiences.

In the second and final year of the program, students undertake a more extensive CSL project that includes working as part of a group. Students are required to work collaboratively with faculty, community partners, and with their peers. While students' second year projects could produce a specific deliverable within the time

frame provided by the school term, the QuARMS learning stream is also working on developing community partnerships that will have multiple phases over multiple years with interim deliverables. This structure is intended to provide consistency for the community partners, while supporting meaningful work for students.
The data collection for our program evaluation was based on a mixed methods approach (both qualitative and quantitative) as described by Leech and Onwuegbuzie (2010) to triangulate the data, which Cohen and Manion (2000) define as an "attempt to map out, or explain more fully, the richness and complexity of human behavior by studying it from more than one standpoint" (p. 254).

In 2015 and 2016, as part of a program evaluation, second-year QuARMS students were invited to participate in a questionnaire and focus groups in their final month of the program (n=20). The questionnaire was administered online using the University's learning management system. The questionnaire included 26 questions that investigated the students' experiences in the program and their opinions about what aspects of the program were the most useful. The questionnaire responses were used to develop the questions for the focus group. In 2015, 9/10 students completed the online questionnaire and 8/10 students participated in the focus group. One student withdrew consent for research use of data for the focus group. In 2016, all ten students responded to the online questionnaire and participated in the focus group, but only 9 agreed to have their responses used for research purposes. Thus, consent was obtained to disseminate results from 18/20 survey respondents and 16/20 focus group participants. All data pertaining to participants who withdrew consent to disseminate results of the focus group was removed from the transcripts prior to analysis.

Results

Questionnaire

In the questionnaire distributed at the end of their second year, students were asked to rate their level of learning in their service-learning sessions. In both years, 2015 and 2016, students' opinions were evenly divided between strongly agree and agree, with only a few students saying that they disagreed (table 1).

Table 1: I learned a great deal in the sessions on Service-learning

	Frequency		Percent	
	2015	2016	2015	2016
Strongly agree	4	4	44.44%	40%
Agree	4	4	44.44%	40%
Disagree	1	2	11.11%	20%
Strongly Disagree	0	0	0%	0%

For the 2016 survey, a qualitative option was added to this question, which allowed students to provide additional information about their response. Those who strongly agreed that they had learned a great deal in these sessions often focused on what they learned about collaborative working relationships.

> *I think we all learned lots about working with organizations, taking initiative, and working both independently and in teams through our two service-learning projects.*

Although one student was concerned that what while she or he "learned a lot about collaboration, management and teamwork," this learning occurred "potentially at the cost of other skills."
Those who agreed that they learned a lot in these sessions were excited to have service-learning included in the curriculum, although one indicated that these sessions were more productively applied to some community projects than others.

> *I found the Service-learning projects to be a great addition to the curriculum. Much more so for the first summer project!*

One student indicated that the sessions seemed "redundant and already understood given our previous (and current) service-learning experiences." One of the students who said that they did not learn a lot during their service-learning sessions indicated that he or she wanted to see higher outcomes and delivery of service for the community projects, with less emphasis on the "learning process." Another student identified some redundancy in the sessions, since "a lot of the information we discussed was already known."

While students in both cohorts thought that they learned a great deal through the service-learning sessions, there was a larger discrepancy when we asked them to rank the amount of time allocated to these learning experiences. While all of the students in 2015 indicated that the amount of service-learning sessions was "just enough," one 2016 student said that there were "not enough" sessions, five said that there were too many, while only four said that the number was "just right" (table 2).

Table 2: Please rank the amount of each type of session

	Frequency		Percent	
	2015	2016	2015	2016
Not enough	0	1	0%	10%
Too much	0	5	0%	50%
Just right	9	4	100%	40%

Focus Groups

During both the 2015 and 2016 focus groups, students were asked what contribution if any, did participating in the service-learning project have in shaping the learning they acquired during the QuARMS curriculum. Overall, the students in 2015 thought that they learned a lot from their service-learning experiences over the summer, and their group projects during their second year. Students often mentioned learning a lot about communication as a result of their service-learning experiences, but also indicated that they would have liked more feedback from faculty, especially for their summer projects when they were not on campus. While most students enjoyed their first-year volunteer experiences, some suggested that they did not feel that they had really ventured outside of their comfort zone when choosing their organization. A few did not see the point of the first-year volunteer experience being a part of the curriculum, since they felt that they would be volunteering even if it was not required.

One of the biggest differences between focus groups, was that the 2016 students expressed a stronger desire for clear expectations from their community partners, and a clearer understanding of how to balance the commitment to their community project with their academic requirements. They also indicated that they felt "uncertain" during their summer projects.

Communication and collaboration

One student articulated that this experience has helped to shape his/her view of his/herself, as well as helping to strengthen his/her communication and collaboration skills.

> *I've learned a lot more about myself and how I work as an individual in a team so I think that has shaped, maybe not any of the pillars we were looking for but has more shaped myself as an individual and how I work in a group. (P7 2015)*

Another student, speaking about the way that his/her service-learning experience shaped his/her learning, identified the outcomes anticipated by the QuARMS instructional team.

> *The challenges that we faced in my group personally with communication, not among the group but just between us and the cooperating organization; … we definitely learned something in that aspect and it was still a great project full of very great learning but I don't know if it matched the curriculum that QuARMS had originally set. (P5 2015)*

Feedback

Some students expressed a desire to have more feedback, or additional guidance throughout their service-learning projects.

> *I think one of the greatest challenges not only with the summer project but also more noticeable with the group service-learning project was sort of the lack of*

follow up and feedback during the course of the project itself. … before we left for the summer about regular check ins with all the students to see how the project was going and that ended up not happening. (P4 2015).

Volunteer experiences

Some of the students indicated that they did not get as much as they would have liked out of their first-year volunteer experiences. For the first stage of their service-learning curriculum, students are expected to volunteer with an organization described as outside of their comfort zones that would not be an organization with which they would normally volunteer. This stipulation was mandated because all of the students had several hours of volunteer work in multiple organizations listed on their initial applications. Although faculty discussed and reviewed student choices, some of the students in the focus group said that they did not really go outside of their comfort zones. One student said that

I think it was definitely a discussion of we should be trying to go outside our comfort zone when we were choosing different organizations to volunteer with in first year… personally I did something different that I hadn't done before, but I wouldn't say it was outside my comfort zone, so if that was one of the goals I wouldn't say it was too successful (P6 2015).

For another student, doing something different, or unfamiliar, was not the same as being taken outside of his/her comfort zone, and that making this a requirement altered his/her relationship with volunteerism.

restrictions with the time line actually forced me into something that was less outside of my comfort zone than I might have gone into normally because . . . there is this mentality of 'oh you have to do this, instead of letting us find something in our own niche . . . It actually felt really restricting because what used to be a passion and something that I did out of a genuine self-interest was now something that I was doing to fulfill a requirement and that became less meaningful for me. (P4 2015)

Expectations

As with the 2015 students, the 2016 focus group participants enjoyed their service-learning experiences, but wanted to have a stronger sense of what the expectations were.

One of the things for me that was confusing was how important it was to the program that we complete the project. It felt like a lot of the time the emphasis was on reflection and the learning process but if you had a test or if something was happening you should focus on you and academics and maybe the project does not matter as much. And I think that maybe that diluted the importance of the project in and of itself and instead of teaching us how to balance commitments and be dedicated to more than one thing, it was just well this is

something that we want you to do and we want you to get something out of it but if it does not work then that is okay. (P1 2016)

Were given a very broad outline of what was expected. I understand that is the way we were suppose to learn and to navigate through things but I think to some extent there was a little more clarification required because it took away from our outcomes. (R5 2016)

Much of the time was spent understanding roles and expectations and a lot of the time passed that way instead of actively working on the project. (R5 2016)

When discussing the service-learning projects, some students felt that what they learned from their experiences did not line up with their perceptions of the intentions of the learning stream. One suggestion for this component of the program was to integrate some professional development workshops for the students:

So I think that one of the things that could have helped with that process of, finding the way of integrating what QuARMS has in mind in how we learn, is having workshops that facilitate our learning. […]So that's how I see it, is that there could be, I guess, programs set in place to direct or focus on what we want to be learning out of this experience. (P7 2015)

These workshops could even be chosen or planned by the students to help tailor their learning experiences. The same student mentioned that the self-reflexivity of the service-learning project she/he experienced in first year was lost in the following year:

Personally I felt in first year a lot of what I got out of the service-learning project was to really think about sort of why I do what I do and what I do while I am volunteering or while I am trying to provide a service and how I can make that better, and I feel that I don't know if that was the intended focus of the initial service-learning project, but that sort of feeling was lost both over the summer service-learning project and in the group one in second year. (P7 2015)

Additionally, the students felt "uncertain" at times during the summer learning projects:

I found personally I did not quite know what I was supposed to do. I don't think guidelines were as clear as they could have been as others have mentioned. And I think that was probably my own fault. It was 1st year and I was kind of intimated to approach ...we were told, if you have questions come and talk to us over the summer. I had some problems with my project and I didn't know who to talk to about it. I think maybe if there was more structure in place so that we know that we have someone to advice with if we don't quite know what we are doing. That would be helpful. (P5 2016)

P4, in 2015, suggested that the check-ins would “have been quite valuable” and commented on the frustration of dealing with “scattered modules” geared towards approaching community organizations. One student pointed to the need to balance structure and flexibility for the summer project. He/she pointed out that

> *So like with your summer project, if you are in the summer and something goes wrong then please know that you can contact this person. And that would help. And that way it does not restrict from what you want to do in terms of your project but also allows you to have that support that you need to continue it. (R8 2016)*

Discussion

The service-learning stream in the QuARMS curriculum is designed to meet the learning objectives of the program by integrating multiple objectives with each “pillar” of the curriculum including the “role of physician”, “communication”, “critical thinking” and “scientific foundations”. Across the two years of the learning stream, service-learning is taught as a formal part of the curriculum, and is scaffolded from volunteerism in the first year, to an individual summer service-learning project and subsequently to a group project in the second year. At each phase, the community experience is aligned with course work and assessments that include sessions on social accountability, community development, and critical theory. This is in keeping with research from Astin, Vogelgesang, Ikeda, and Yee (2000) who found that “service-learning courses should be specifically designed to assist students in making connections between the service experience and the academic material” (6). These service-learning projects include sessions and feedback about self-regulated learning, a necessary skill for these students’ future careers. By using a progressive model, we build on students’ individual skills and interests, thereby keeping them engaged in their projects.

Implementing service-learning in the classroom has had unique challenges. The nature of university education includes specific timelines and competing priorities that are non-negotiable. In addition, the organization and support of students and community partners is time intensive for faculty, many of whom have little or no experience in CSL. The parameters of community-engaged learning are often outside of the frame of reference of traditional education, and have the potential to produce discomfort in students when the expectations of community partners place them in roles that they have had little experience with. Our students described a need for mentorship as they progressed through their experiences to ensure they had a robust learning experience. Students also need to be guided to maintain a focus on engagement and reflection. Many students are tempted to use their CSL experiences as research projects to strengthen their resumes which needs to be balanced with the needs of the stakeholders. Community partners also require faculty development to ensure that they understand the unique role of the service-learning student within their organization. In their review of the literature on service-learning and community-based medical education, Hunt, Bonham, and Jones (2011) suggest that community members can be integrated into academic medicine in a more cohesive way by giving them “formal roles

as mentors and teachers" (249). They suggest that "community mentors can give feedback to students regarding communication skills, partnership building, and cultural sensitivity" (249). A formal mentorship may be an important aspect to consider as the QuARMS learning stream matures. The feelings of isolation and uncertainty that some students experienced during their summer projects, might be lessened if their community partner is also recognized as a formal mentor. However, this discomfort also needs to be recognized as a part of the learning process, which can increase students' confidence (Deeley, 2010).

As part of our ongoing process of program evaluation, the feedback from the 2015 cohort was used to make adjustments to the 2016 curriculum, including having more direct discussion earlier in the learning stream about the uncertainty that students experience when undertaking a community service-learning project. We also provided more formal lines of communication for feedback and support from faculty as students worked with their community organizations. With the 2016 cohort, we ensured that we were explicit in telling students where they can access documents providing written instructions regarding expectations of students and community partners, processes for accessing support, and additional details that students should/need to know about their service-learning projects. Since some students in the 2016 cohort identified this as an area where additional support was still needed, especially during the summer project, we will continue to strengthen this aspect of the learning stream while acknowledging that community service-learning should be challenging, and should bring students out of their comfort zone. Because of this, what students may identify as a lack of clarity or structure may reflect their own anxieties at being in a dynamic, challenging, community environment.

Acknowledgements

The authors would like to thank their colleagues from Queen's University, particularly Dr. Richard Reznick the Dean of the Faculty of Health Sciences and Dr. Anthony Sanfilippo, the Associate Dean of the School of Medicine, for supporting the program. We would also like to thank community partners for working with us to develop the service learning curriculum, and the students for all of their hard work and feedback on the curriculum.

References

AAMC for Students, Applicants, and Residents. (n.d.). Retrieved June 28, 2016, from https://students-residents.aamc.org/

Astin, A., Vogelgesang, L., Ikeda, E., & Yee, J. (2000). How Service-learning Affects Students. *Higher Education*. Retrieved from http://digitalcommons.unomaha.edu/slcehighered/144

Brazeau, C. M. L. R., Schroeder, R., Rovi, S., & Boyd, L. (2011). Relationship Between Medical Student Service and Empathy. *Academic Medicine*, *86*(10). http://doi.org/10.1097/ACM.0b013e31822a6ae0

Cashman, S. B. (2008). Service-Learning. *American Journal of Preventive Medicine*, *35*(3), 273–278.

Cohen, L., Manion, L., & Morrison, K. (2000). Research methods in education (5th ed.). New York, NY: Routledge Falmer.

Deeley, S. J. (2010). Service-learning: Thinking outside the box. *Active Learning in Higher Education*, *11*(1), 43–53. https://doi.org/10.1177/1469787409355870

Future of Medical Education in Canada. FMEC-MD-2015.pdf. (n.d.). Retrieved from https://www.afmc.ca/pdf/fmec/FMEC-MD-2015.pdf

Future of Medical Education in Canada. FMEC_PG_Final-Report_EN.pdf. (n.d.). Retrieved from https://www.afmc.ca/future-of-medical-education-in-canada/postgraduate-project/pdf/FMEC_PG_Final-Report_EN.pdf

Foundations Curriculum. (n.d.). Retrieved July 8, 2016, from http://foundations.md.utoronto.ca/

Gross, J. P., Mommaerts, C. D., Earl, D., & De Vries, R. G. (2008). Perspective: After a Century of Criticizing Premedical Education, Are We Missing the Point?: *Academic Medicine*, *83*(5), 516–520. http://doi.org/10.1097/ACM.0b013e31816bdb58

Hunt, J. B., Bonham, C., & Jones, L. (2011). Understanding the Goals of Service-learning and Community-Based Medical Education: A Systematic Review: *Academic Medicine*, *86*(2), 246–251. https://doi.org/10.1097/ACM.0b013e3182046481

Liaison Committee on Medical Education LCME Standards | UC Davis Office of Student and Resident Diversity. (n.d.). Retrieved June 16, 2016, from http://www.ucdmc.ucdavis.edu/diversity/lcme.html

Leech, N. L., & Onwuegbuzie, A. J. (2010). Guidelines for conducting and reporting mixed research in the field of counseling and beyond. *Journal of Counseling and Development*, *88*(1), 61-70.

Lin, K. Y., Parnami, S., Fuhrel-Forbis, A., Anspach, R. R., Crawford, B., & De Vries, R. G. (2013). The undergraduate premedical experience in the United States: a critical review. *International Journal of Medical Education*, *4*, 26–37. http://doi.org/10.5116/ijme.5103.a8d3

Meili, R. (2011). Teaching social accountability by making the links: Qualitative evaluation of student experiences in a service-learning project. *Medical Teacher*, *33*(8), 659–666.

New Curricular Innovations | Undergraduate Medical Education - McGill University. (n.d.). Retrieved July 8, 2016, from https://www.mcgill.ca/ugme/curriculum/new-curriculum/new-curricular-innovations

Smith, K. L. (2013). Integrating service-learning into the curriculum: Lessons from the field. *Medical Teacher*, *35*(5), e1139–e1148.

University, M. E. T. U., Queen's. (2014, September 22). Balancing service and learning in service-learning. Retrieved from https://meds.queensu.ca/blog/undergraduate/?p=1602

What is EE. (n.d.). Retrieved July 8, 2016, from http://www.aee.org/what-is-ee

Author Contact Information:

Jennifer J. MacKenzie
MD, MEd, FRCPC, FCCMG, FAAP
Pediatrician and Clinical Geneticist
Professor, McMaster University
McMaster Children's Hospital
1280 Main St. West, 3N11-G
Hamilton, ON, L8S 4K1
905-521-2100 ext. 72904
mackej4@mcmaster.ca

International Trade Service-Learning Attitudes and Engagement in a Large Class Setting

Lauren (Reiter) Copeland
Kent State University

ABSTRACT

The purpose of this research is to better understand the attitudes towards service-learning and course engagement of students in a service-learning project based course in a larger class size.. This research incorporates a better understanding and exploration of how a larger class can affect the attitudes and engagement of students in service-learning. Qualitative and quantitative measures better help to understand the full impact of service-learning in such a large classroom setting (60 students).. Pre and posttest as well as qualitative analysis was conducted to understand the variances between the start and end of the semester with the treatment of service-learning between. The findings and dissemination of this research can help to aid educators and community partners on the benefits and challenges that occur during larger setting service-learning based projects.

Introduction and Background

In 1979, Robert Sigmon defined service-learning as an experiential education approach that is premised on "reciprocal learning" (Sigmon, 1979). Sigmon (1979) discussed the learning from service activities as both those who provide service and those who receive it or "learn" from the experience. Sigmon's (1979) concept of service-learning occurs only when both the providers and recipients of service benefit from the activities. Reflection and reciprocity are key concepts of service-learning (Sigmon, 1979). Service-learning can be used as an added tool in the classroom to promote engagement and further mastery of materials covered. Simons, Williams, and Russell (2011) discuss that service-learning can be not only a great tool to encourage attitudes and skills within community engagement but also within the classroom. The authors state, "students improve their diversity and social justice attitudes, acquire competence and leadership skills, and increase their desire to make a difference through participation" (Simons et al., 2011, p. 6). Additionally, Curran and Rosen (2006) found in their study looking at attitudes and behavioral intentions towards classes they take, that "factors related to the physical environment in which the course is conducted, the course topic, and the course execution, in addition to the instructor's personality, are significant influences on students' attitudes toward their classes. The evidence also indicates that emphasizing student participation in the class can have a positive effect on student commitment to excellence and appreciation of other students' contributions to the learning experience" (p. 135). If students have more favorable attitudes towards a subject they are more likely to be more engaged and have more positive feelings towards experiences in the classroom.

According to Moely, McFarland, Miron, Mercer, and Ilustre (2002) students who took part in service-learning ended the semester with more satisfaction regarding their courses. Based on this finding of 541 students in 26 courses leads to the assumption that just

because a course is larger doesn't mean that service-learning can be impactful. Additionally, the study resulted in "reporting higher levels of learning about the academic field and the community than did students not participating in service-learning" (Moely et al., 2002, p. 18). Additional researchers, Zhao and Kuh (2004) agree. In their study looking at the relationships of participants in learning communities and their engagement in first year activities the authors found that learning communities are specifically linked to engagement and positive student outcomes, as well as overall satisfaction with the college/university experience.

Bringle, Phillips, and Hudson (2004) state that "systematically collecting information positions educators to make informed decisions that can improve their craft, enhance their understanding about why certain outcomes were achieved and increase the confidence with which they represent their work to others, including colleagues and the general public" (pg. 11). Additionally, the authors discuss that utilizing general research regarding service-learning not only aids in the improvement, strengthening and increasing students' focus on critical and reflective thought, but also furthers learning objectives (Bringle et al., 2004). Therefore this concept stated by the authors of collecting data and continual research of service-learning to better educator's effectiveness in the classroom leads to the significance and purpose of this study. What we currently know about what makes service learning successful is largely based on flexibility of small class sizes. In order to benefit more students and expand service learning into more classes, this study aims to examine the effectiveness of service learning in a larger class and to further explore ways to make service learning experience successful in a larger classroom setting.

This research incorporates a better understanding and exploration of how a larger class can affect the attitudes and engagement of students in service-learning. Quantitative measures better help to understand the full impact of service-learning in such a large classroom setting (60 students). Qualitative statements by students and the community partner were analyzed to understand the thought process associated with the experience. According to U.S. News (2015) 18.4% of classes at the local university this research was conducted report to have 50 or more students in them. Research regarding this niche has not yet been a focus.

What we currently know about service-learning being successful, is largely based on flexibility of small class sizes. In order to benefit more students and expand service learning into more classes, this study aims to examine the effectiveness of project based service-learning in a larger class and to further explore ways to make service learning experience successful from the student professor and community partner in a larger classroom setting.

Methodology

This is a mixed methods study measuring student attitudes towards and engagement with service-learning in a larger classroom. Both quantitative survey and qualitative questionnaires will be utilized to fully understand and better explore the experiences students have when taking part in service-learning in a larger classroom context. The course included in this study was a senior level International Textile and Apparel required course in apparel merchandising and interior design at a large Midwest university. Service-learning facilitation and contracts for spring 2016 were been

negotiated with a local community partner. The students conducted project reports of various apparel manufacturers in different countries that could possibly be utilized by the local community partner to source their promotional apparel items (i.e. hoodies, t-shirts, singlets, etc). The students researched an identified country and the specific factories' human resource issues, trade issues and agreements of that country, the environmental effects that factory has, as well as cultural implications of doing business with that specific location.

This study utilized the Community Service and Attitudes Scale (CSAS) (Perry, 2010). The **CSAS** is a tool developed by service-learning practitioners and used nationally to measure student perceptions about service-learning. The scale consists of 34 items regarding attitudes of helping the community on a 7 point Likert scale (1 = strongly disagree, 7 = strongly agree) and 12 items measuring the impact service-learning can have on the student, also on a 7 point Likert scale (1 = extremely unlikely, 7 = extremely likely). Students were asked to rate their agreement with items such as "Volunteer work at community agencies helps solve social problems," "It is important to me to gain an increased sense of responsibility from participating in community service," and "Community service is a crucial component of the solution to community problems." Additional questions regarding the students being impacted (likely to unlikely) by service-learning are also included. For example, "I would have forgone the opportunity to make money in a paid position," and "I would make valuable contacts for my professional career." See table 3.

Additionally, the Student Course Engagement Questionnaire (SCEQ) by Handelsman, Briggs, Sullivan & Towler, (2005), which includes 23 items, was used as a pre and posttest. Examples of items include rating personal characteristic strengths in the course on items such as, "Participating actively in small-group discussions," and "Being confident that I can learn and do well in the class." This survey is broken up into skills, performance, emotional, and participation engagement. The surveys will be taken by participants prior to the start of the semester and then again at the end to understand differences in attitudes and engagement after a service-learning classroom experience. See table 3.

Coupled with the quantitative surveys (CSAS and SCEQ), a qualitative open ended reflection was given to the participants at the end of the semester. This portion allowed students to give written feedback on the service-learning course experience. What did students enjoy most? What would they change? How did the service-learning project impact them and community partners? This portion of the research helped in the exploration of how the students felt regarding their experience and to provide suggestions for future use. This data was compared to similar data collected on smaller classroom sizes to understand the differences if any, of the service-learning experience in a larger classroom setting compared to a smaller traditional setting. Additional, qualitative, open ended surveys were given to the community partner to assess their understanding and level of experienced success with the project at the midpoint and endpoint of the semester.

Because this particular study dealt with unbroken groups it did not disrupt the existing research setting. This component lessened the possibility of reactive effects of the experimental procedure and improved the external validity of the design. However, this method was more sensitive to internal validity problems due to interaction between

factors as selection and maturation, selection and history, and selection and pretesting (Dimitrov and Rumrill, 2003).

Data Analysis

Reliability was calculated using Cronbach's alpha, in which Cronbach's alpha >0.7 is considered acceptable (Stephens, 1992). Using SPSS 23.0 paired samples t-tests will be conducted to compare the mean scores of the pre and post test results of the students individual answers as well as the scale differences. Item differences will be noted to determine the specific attitudes that are positively affected and negatively affected through the treatment of a service-learning project over the course of the semester.

Additionally, the qualitative portions of both the students and the community partner were analyzed by determining themes. The answers were studied and common themes were determined to understand perhaps better classroom and teaching considerations of project based service-learning in larger classrooms.

Findings

Quantitative

Cronbach's alpha was conducted and all scales were found reliable above the .7 level (Stephens, 1992). See table 1.

Table 1. Reliability

Scale	n	# of Items	α
CSAS Part 1	54	34	.98
CSAS Part 2	54	12	.74
SCEQ	54	23	.94
Skills	54	9	.83
Emotion	54	5	.94
Participation	54	6	.79
Performance	54	3	.90

The population of the study consisted of 54 undergraduate students at a large Midwestern university. The participants ranged in age 20 (n= 5) to 25 (n=4) with the majority of the participants being 21 years old (n=29). A majority of the participants were female (n=49) and Caucasian (n=37) followed by Asian/Pacific Islander (n=9). All of the sample was juniors (n= 10) and seniors (n=43). Of the participants most had previous community service experience (n= 41) in which they took part in mainly once per year (n=18) up to 2 to four times per year (n=18). For a complete breakdown of the population see table 2.

Table 2. Sample Population (n=54)

Item		n	%
Age			
	20	5	9.4
	21	29	53.7
	22	12	22.2
	23	1	1.9
	24	2	3.7
	25	4	7.4
	N/A	1	1.9
Gender			
	Male	4	7.4
	Female	49	90.7
	N/A	1	1.9
Race			
	White/Caucasian	37	68.5
	Black/ African American	4	7.4
	Asian/ Pacific Islander	9	16.7
	Other	3	5.6
	N/A	1	1.9
Year in School			
	Junior	10	18.5
	Senior	43	79.6
	N/A	1	1.9
Previous Community Service Experience			
	Yes	41	75.9
	No	12	22.2
	N/A	1	1.9
Frequency of Experience			
	Once Per Year	18	33.3
	2-4 times per Year	18	33.3
	Monthly	3	5.6
	N/A	15	27.8

Paired samples t-tests were conducted to determine the change in scores after the treatment of a semester of service learning project in the specified course. It was found that the most changed among the community service and attitudes questions part one were items 11-12, 14- 16-18, and 27 ($p < .01$) Examples of these items include “My contribution to the community will make a real difference.” (M pre= 5.68, M post= 6.11,

t=-3.25, df=52, SD=.97, p=.002), “I can make a difference in the community.” (M pre=5.75, M post=6.15, t=-3.64, df=52, SD=.79, p=.001), and “It is my responsibility to take some real measures to help others in need.” (M pre=, M post=, t=-3.32, df=52, SD=.95, p=.002). Followed by items 3, 5, 28, and 31 (p<.05). Examples of these items include I am responsible for doing something about improving the community.” (M pre=5.57, M post=6.00, t=, df=, SD=, p=.024) and “It is important to me to have a sense of contribution and helpfulness through participating in community service.” (M pre=5.64, M post=5.98, t=-2.43, df=52, SD=1.02, p= .019). For part two of the CSAS only two items were found significant at the p<.05 level; “I would have less time to work.” (M pre=, M post=, t=, df=, SD=, p= .025) and “I would be contributing to the betterment of the community.” (p= .028). Regarding the SCEQ scale measuring engagement two items were found significant at the p<.05 level including “I would have less time to work.” (M pre=5.04, M post=4.64, t=2.32, df=52, SD=1.25, p=.021) and “I would be contributing to the betterment of the community.” (M pre=6.13, M post=5.70, t=2.27, df=52, SD=1.39, p= .028). For a complete list of change associated with scale items see table 3.

Table 3. T-tests

Scale Item	M (pre and post)	t	df	Std. dev.	Sig. (2-tailed)
Community Service and Attitude Scale					
Part One					
1.Community groups need our help.	6.11 6.21	-.84	52	.82	.40
2. There are people in the community who need help.	6.43 6.30	.87	52	1.11	.39
3. There are needs in the community.	6.30 6.26	.19	52	1.44	.85
4. There are people who have needs which are not being met.	6.38 6.40	-.18	52	.75	.86
5. Volunteer work at community agencies helps solve social problems.	5.85 6.08	-1.81	52	.91	.08
6. Volunteers in community agencies make a difference, if only a small difference.	5.96 6.15	-.87	52	1.60	.39
7. College student volunteers can help improve the local community.	6.34 6.36	-.16	52	.84	.87
8. Volunteering in community projects can greatly enhance the community’s resources.	6.08 6.28	-1.42	52	1.10	.16
9. The more people who help, the better things will get.	6.08 6.15	-.63	52	.87	.53

10. Contributing my skills will make the community a better place.	6.00 6.23	-1.90	52	.87	.06
11. My contribution to the community will make a real difference.	5.68 6.11	-3.25	52	.97	.002**
12. I can make a difference in the community.	5.75 6.15	-3.64	52	.79	.001**
13. I am responsible for doing something about improving the community.	5.70 5.98	-2.33	52	.89	.024*
14. It is my responsibility to take some real measures to help others in need.	5.57 6.00	-3.32	52	.95	.002**
15. It is important to me to have a sense of contribution and helpfulness through participating in community service.	5.64 5.98	-2.43	52	1.02	.019*
16. It is important to me to gain an increased sense of responsibility from participating in community service.	5.60 6.04	-2.92	52	1.08	.005**
17. I feel an obligation to contribute to the community.	5.32 5.94	-3.79	52	1.20	.000**
18. Other people deserve my help.	5.53 6.00	-3.27	52	1.05	.002**
19. It is important to help people in general.	6.42 6.53	-1.00	52	.82	.32
20. Improving communities is important to maintaining a quality society.	6.26 6.19	.65	52	.85	.52
21. Our community needs good volunteers.	6.23 6.15	.78	52	.70	.44
22. All communities need good volunteers.	6.25 6.19	.44	52	.93	.66
23. It is important to provide a useful service to the community through community service.	6.09 6.21	-.90	52	.91	.37
24. When I meet people who are having a difficult time, I wonder how I would feel if I were in their shoes.	6.09 6.06	.27	52	1.02	.79
25. I feel bad that some community members are suffering from a lack of resources.	6.21 6.08	.91	52	1.06	.37
26. I feel bad about the disparity among community members.	5.96 6.04	-.50	52	1.11	.62

27. Lack of participation in community service will cause severe damage to our society.	5.32 5.87	-3.36	52	1.19	.001**
28. Without community service, today's disadvantaged citizens have no hope.	5.19 5.58	-2.18	52	1.32	.033*
29. Community service is necessary to making our communities better.	5.79 6.00	-1.80	52	.84	.078
30. It is critical that citizens become involved in helping their communities.	5.77 5.94	-1.42	52	.87	.16
31. Community service is a crucial component of the solution to community problems.	5.60 5.91	-2.26	52	.97	.028*
32. I want to do this (service-learning) activity.	5.58 5.55	.20	52	1.34	.84
33. I will participate in a community service project in the next year.	5.70 5.62	.46	52	1.21	.65
34. Would you seek out an opportunity to do community service in the next year.	5.64 5.89	-1.61	52	1.11	.11
Part Two					
1. I would have less time for my schoolwork.	4.96 4.68	1.26	52	1.63	.21
2. I would have forgone the opportunity to make money in a paid position.	4.66 4.62	.18	52	1.53	.86
3. I would have less energy.	4.17 4.30	-.69	52	1.40	.50
4. I would have less time to work.	5.04 4.64	2.32	52	1.25	.025*
5. I would have less free time.	5.13 4.85	1.51	52	1.36	.14
6. I would have less time to spend with my family.	4.53 4.55	-.09	52	1.62	.93
7. I would be contributing to the betterment of the community.	6.13 5.70	2.27	52	1.39	.028*
8. I would experience personal satisfaction knowing that I am helping others.	6.17 6.09	.47	52	1.17	.64
9. I would be meeting other people who enjoy community service.	6.02 5.98	.26	52	1.06	.80
10. I would be developing new skills.	6.13 5.89	1.64	52	1.09	.11

11. I would make valuable contacts for my professional career.	5.51 5.72	-1.20	52	1.26	.24
12. I would gain valuable experience for my resume.	6.11 5.96	1.05	52	1.05	.30
Student Course Engagement Questionnaire					
Skills Engagement					
1. Making sure to study on a regular basis.	3.89 3.85	.38	52	.73	.71
2. Putting forth effort.	4.40 4.28	1.18	52	.70	.24
3. Doing all the homework problems.	4.34 4.42	-.85	52	.65	.40
4. Staying up on the readings.	3.49 3.47	.16	52	.89	.88
5. Looking over class notes between classes to make sure I understand the material.	3.47 3.57	-.65	52	1.06	.52
6. Being organized.	4.47 4.36	1.06	52	.78	.29
7. Taking good notes in class.	4.45 4.30	1.38	52	.79	.17
8. Listening carefully in class.	4.25 4.21	.42	52	.65	.67
9. Coming to class every day.	4.26 3.98	2.39	52	.86	.021*
Emotional Engagement					
10. Finding ways to make the course material relevant to my life.	3.77 4.06	-2.13	52	.97	.038*
11. Applying course material to my life.	3.89 4.09	-1.56	52	.97	.13
12. Finding ways to make the course interesting to me.	3.87 4.09	-1.90	52	.87	.06
13. Thinking about the course between class meetings.	3.70 3.64	.38	52	1.08	.71
14. Really desiring to learn the material.	3.81 3.83	-.15	52	.93	.88
Participation/ Interaction Engagement					
15. Raising my hand in class.	3.45 3.58	-.93	52	1.04	.36
16. Asking questions when I don't understand the instructor.	4.00 4.00	.00	52	.73	1.00
17. Having fun in class.	3.83	.74	52	.93	.46

18. Participating actively in small-group discussions.	3.74 3.89 3.79	.65	52	1.06	.52
19. Going to the professor's office hours to review assignments or tests or to ask questions.	3.45 3.19	1.92	52	1.00	.06
20. Helping fellow students.	4.11 4.00	.97	52	.85	.34
Performance Engagement					
21. Getting a good grade.	4.42 4.34	.81	52	.68	.42
22. Doing well on the tests.	4.19 4.13	.65	52	.63	.52
23. Being confident that I can learn and do well in the class.	4.28 4.36	-.89	52	.62	.38

**p <.01
* p <.05

Overall the only scale in its entirety that showed significant change from the beginning of the semester to the end of the semester was the CSAS part one scale measuring attitudes (M pre= 194.95, M post= 200.70, t=-2.31, df= 52, SD= 18.13, p=.025). See table 4.

Table 4. CSAS Scale T-tests

Scale Item	M (pre and post)	t	df	Std. dev.	Sig. (2-tailed)
CSAS Part 1	194.95 200.70	-2.31	52	18.13	.025*
CSAS Part 2	58.96 57.51	1.33	52	1.09	.19
SCEQ	87.58 87.11	.34	52	10.06	.74

**p <.01
* p <.05

The SCEQ scales measuring engagement did not show significant differences from the beginning to the end of the semester. See table 5.

Table 5. SCEQ T-Tests

Dimension	M (Pre and post)	t	df	Std. Dev.	Sig. (2-tailed)
Skills	33.23 32.90	.70	53	3.48	.49
Emotion	15.99 16.65	-1.50	53	3.30	.15
Participation	19.31 18.97	.73	53	3.38	.47
Performance	10.03 9.92	.61	53	1.27	.54

Qualitative- Students

The research was coded by the author and a graduate assistant, themes were identified from both the researchers from the students and the community partner questionnaires.

What were the benefits of participating in this service-learning course?

Many of the themes that emerged regarding the benefits of the service learning course were focused on skills utilized and knowledge gained. Many students discussed their ability to collaborate as one students discussed "I was able to work with an actual company and guide them to new ideas of which helped me develop to become a more innovative thinker and collaborator," while others focused on learning how to do research more thoroughly was the greatest benefit of the experience, "Working with an actual company that could benefit from our research, it helped me learn things I never knew before." Two of the biggest themes of this question included the word community and also collaboration. For example one student stated, "It drove me to think about things I don't normally think about such as going to volunteer. " while another said, "Thoughtfully thinking about myself and the way in which I am active in my community and how I act in a classroom setting when completing work both inside and outside of the classroom." Finally students focused on their ability to bring a more realistic view into the classroom that they can use more specifically in their future careers. For example one student stated "I think I better understand the needs within our community and how our education will one day make a difference in the future of our community and world."

What was your outlook about service-learning before you started the course and now?

The majority of the students in the course had very limited to no knowledge about service learning. After the course was complete the students seemed to have a much more positive outlook on service learning. For example, one student stated, "I wasn't sure what it was. I now understand it can be helpful to local community members" and another "I had no particular outlook originally but I now see the benefits of doing this type of work." Many students were inspired by the service learning course to give back to those less fortunate in their community and the rest of the world. For example one

student stated “I think before I always thought I couldn't make a difference or nothing in my lifetime would have the ability to impact so many for the better. “ and another agreed stating “When I started the service learning, I thought I wasn't going to enjoy it or learn anything. Now, I feel that I have thoroughly enjoyed the course and have learned a lot to apply in my future endeavors.” Many were appreciative of the hands on approach that service learning offers to complement the course material “I have had other different types of service-learning courses but this one was different because it was more hands on and a learning experience relevant to class material.”

What impact, if any, do you believe your service-learning activity had on the organization or people?

A majority of students focused on the impact of the project being solely informing and assisting the local company with their sourcing issues and helping them to have a more global perspective. One student stated, “I think it opened their eyes to all the possibilities out there and it brought everything to them with a different perspective.” and another agreed saying.” I believe we were able to provide them with ideas that they could use for their company. We also educated the organization about the global economy and further how their production would work.” Some students felt they that little to no impact with most not furthering their explanation. One participant did indicate there could be future change “I believe that it could potentially have more impact over time but for now it was just a demonstration of what could happen.” Another theme found in the answer was the idea of the realization of the participants that they are lucky and that there are many atrocities within the apparel and textile industry currently, “It definitely forced me to look at the unfortunate circumstances that other people are currently facing from a human resources and sustainability stand point.” Finally, many students believed the project not only helped them and the client but also the local community, “The impact of service learning activities has on the organization or people I worked with is that it enables others to help the community. It is really a great idea to have students participate in this activity and gain perspective of global apparel and trade.”

What were the challenges you faced in your service-learning experience?

There were two main challenges to the project that participants faced. The first was finding adequate and timely research to provide to the company. One students stated, “It was challenging to find materials at first but the writing center at the library was able to help me and the guest speakers were very helpful as well.” As developing research skills was a learning objective of the course many of the students overcame this challenge. Another was putting more effort into the class due to the fact they felt like they owed more to the final project as it was for an actual client. One student stated “Applying the knowledge I had learned was a pretty challenging part. Normally we just learn the material, regurgitate it on an exam and then never remember it again. Here, we turned around and applied all the knowledge we have learned in class and used it towards our company projects.”

Qualitative- Community Partner

The community partner associated with the service learning course was a food company and mention during their midpoint and final questionnaire that the information

the students obtained for them was both crucial and informative as they do not have expertise in the subject matter. When asked whether the need the students are addressing for the company was important the director stated, “Absolutely important. My company specializes in food and we need advertising apparel and we want it to be in line with our corporate values (fair wage, ethically sourced, environmentally friendly are a few criteria) and we don’t have the time or experience in this area” They also indicated that they will be using one of the recommendations from the service learning participants, “The students will be providing my company with choices that will be immediately valuable. We will be using at least one of their recommended sources this summer for printed apparel. Plus we will be sharing the information with the other small manufacturers we work with locally so when they need apparel sources they can have responsible options.” Overall, the community partner was not only pleased with the projects presented to them but also impressed by the level of work the students took part in “The project was amazing. I loved learning about an industry that has ethical and unethical business practices. The geo-political aspects of the research was also very informative.”

Discussion

Overall service learning in a larger classroom did not help as much as desired but did have some implications in the classroom. Overall students were more engaged in the community through service learning even in a larger classroom size and the impact of the large classroom did not affect the students negatively. Student responses increased significantly regarding their attitudes and having a more positive attitude towards community after a larger service learning course. However students did relate to the course material as being more relevant to their lives but believed the course took up too much time for their work and did not necessarily come to class any more. This could be due to the fact that it was a group project with a service learning component and the students relied more heavily on their group members than if it would have been an individual project. Students however did feel more obligated that they participate in community service after the course and had a higher attitude regarding the benefit of community service in their own lives. Overall there was a significant change in how students regarded their own roles in the community in a positive way and planned to act upon that in the future. A larger classroom did not negatively impact this reasoning in regards to service learning and therefore promote the use and further understanding of how service learning can positively be beneficial in higher academia no matter the class size.

Conclusion and Implications

Whether there are significant differences in student attitudes or not, these findings help inform future teaching by pointing to activities and practices that are working, and/ or demonstrating difficulties that arise in these situations. For example, to be more impactful perhaps the projects should be of individual nature rather than group work so that students own more responsibility of coming to class and being more engaged in the project. Future service-learning instructors of larger class sizes can use this information to not only be encouraged to incorporate service-learning, but also to better adapt their classroom setting to further facilitate positive attitude change and

project-based engagement. Future research is also encouraged to continue to better understand the role classroom size plays in service learning attitude and engagement. The findings and dissemination of this research can help to aid educators and community partners on the benefits and challenges that occur during larger setting service-learning based projects. Based on the findings of this study, educators should ultimately be able to integrate service-learning into their classrooms in spite of the challenge of class size. In terms of course outcomes there are a number of benefits included in service-learning for all parties involved. Benefits for students include positive effect on personal development, the ability to work well with others, and leadership and communications skills. Service learning is also proven to enhance academic learning, when compared to similar courses that are not integrating service-learning. Projected outcomes for the community partner include a more organizational capacity to achieve the business problem. Finally, outcomes for faculty include an enhanced quality of student learning and also creating connections and betterment with and for the community (Eyler, Giles, Stenson, and Gray, 2001).

Acknowledgements
This study was funded by the Scholarship of Teaching and Learning Grant, Phase I at Indiana University for the 2015-2016 academic year.
Contact: Lauren Copeland, Kent State University, The Fashion School, Rockwell Hall, 515 Hilltop Drive, Kent, OH 44242 email: laureniaeliz@gmail.com

References

Bringle, R. G., Phillips, M. A., & Hudson, M. (2004). *The measure of service learning: Research scales to assess student experiences*. Washington, DC: American Psychological Association.

Curran, J. M., & Rosen, D. E. (2006). Student attitudes toward college courses: An examination of influences and intentions. *Journal of Marketing Education*,*28*(2), 135-148.

Dimitrov, D. M., & Rumrill, P. D. (2003). Pretest-posttest designs and measurement of change. *WORK-ANDOVER MEDICAL PUBLISHERS INCORPORATED THEN IOS PRESS-*, *20*(2), 159-165.

Eyler, J., Giles Jr, D. E., Stenson, C. M., & Gray, C. J. (2001). At a glance: What we know about the effects of service-learning on college students, faculty, institutions and communities, 1993-2000.

Handelsman, M. M., Briggs, W. L., Sullivan, N., & Towler, A. (2005). A measure of college student course engagement. *The Journal of Educational Research*, *98*(3), 184-192.

Moely, B. E., McFarland, M., Miron, D., Mercer, S., & Ilustre, V. (2002). Changes in college students' attitudes and intentions for civic involvement as a function of service-learning experiences. *Michigan Journal of Community Service Learning*, *9*(1).

Perry, B. (2010). Reliability and Validity Analyses of the Community Service Attitudes Scale.

Sigmon, R. (1979). Service-learning: Three principles. *Synergist*, *8*(1), 9-11.

Simons, L., Williams, E., & Russell, B. (2011). An exploration of the value of service-learning: characteristics of traditional and honor service learners. *The Journal of Effective Teaching*, *11*(1), 6-18.

Stevens, J. (1992). Repeated measures analysis. *Applied Multivariate Statistics for the Social Sciences*, Hillsdale, NJ: L. Erlbaum Associates.

U.S. News (2015). Indiana University- Bloomington. http://colleges.usnews.rankingsandreviews.com/best-colleges/indiana-university-1809

Zhao, C. M., & Kuh, G. D. (2004). Adding value: Learning communities and student engagement. *Research in Higher Education*, *45*(2), 115-138.

Kinloch, Valerie and Peter Smagorinsky (2014).
Service-Learning in Literacy Education: Possibilities for Teaching and Learning.
Charlotte: Information Age Publishing, Inc.

By

Cedric Bass

Winston-Salem State University

Service-Learning in Literacy Education: Possibilities for Teaching and Learning argues with great clarity and thought that service-learning is a meaningful pedagogy which integrates student learning, community engagement and reflective understanding. As interest in and investigation into service-learning abides, this edited collection provides a robust assortment of well-organized, themed essays germane to literacy based service-learning initiatives and programs. For those assuming service-learning mirrors volunteerism, Kinloch and Smagorinsky argue candidly that "service-learning explicitly endeavors to promote an ethic of giving, of viewing formal education as a vehicle for improving not only one's own prospects in life, but also for addressing social inequalities and contributing to stronger communities." Teachers, school administrators, university faculty and others curious about service-learning might consider this book a shining beacon of light towards better understanding the multifaceted benefits of literacy-based service-learning.