

## Incorporating service learning into college fitness classes

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The purpose of this study was to examine the importance of all four components of the National Community Service and Trust Act's definition of service learning, to assess the effects of service learning pedagogy on college students, and to further the research of service learning. More specifically, this study focused on how civic responsibility is affected by the inclusion of the other three components of the service learning definition (community service project, academic curriculum, and reflection). Factors such as gender, ethnicity and class were also investigated in the study.

*Keywords: Service learning, civic responsibility, reflection.*

### INTRODUCTION

Service learning programs across America have addressed a variety of valuable student outcomes, ranging from academic achievement to civic responsibility. Research has shown that schools view service learning as highly compatible with student outcomes, including use of a variety of learning materials other than textbooks, provision of opportunities for students to apply knowledge and skills learned to real-life situations and problems, and time for reflection (Wade, 2001). Another study showed that participating in high school service learning significantly predicted the frequency of voting and volunteering during early adulthood, even after controlling for civic attitudes and youth characteristics (Hart, Donnelly, Youniss, & Atkins, 2007). In addition, studies have shown an increase in policy development and incorporation of service learning into school standards (Milson, 2000).

The National Community Service and Trust Act (NCSTA) developed a comprehensive definition now widely used to define service learning pedagogy (Furco, 2000). This definition focuses on four key components that must be present for a learning experience to be considered a service learning pedagogy strategy. Service learning pedagogy requires that the learning experience 1) be conducted in and meet the needs of the community, as well as be coordinated with an educational organized program; 2) foster civic responsibility; 3) be integrated into and enhance the academic curriculum of the educational organized program; and 4) include a reflection requirement.

Teacher education programs at the undergraduate level have used service learning pedagogy effectively. A 1998 survey conducted by the National Service Learning in Teacher Education Partnership discovered that more than 225 of the approximately 1,325 teacher education programs then operating in the United States offered service learning experiences (Education Commission of the States (ECS), 2000). In an earlier study, Sax and Astin (1997) evaluated the impact of the Learn

and Serve America Higher Education (LSAHE) program, a program designed to implement service learning into educational programs with the purpose of engaging students in service to local community, on student academic achievement. Data were collected from 3,450 students (2,309 service learning participants and 1,141 non participants) attending 42 institutions. Results of the study suggested service learning participants were likely to spend more time (20 hours plus per week) studying and doing homework than the non participants, who reported spending less than three hours a week studying.

In addition to the previously mentioned study, Sax and Astin (1997) explored the long-term effects of service learning by conducting a longitudinal study on more than 12,000 students. Participants in this study were surveyed over a nine year period, at three different points: a) as freshmen in college, b) as college seniors, and c) as adults five years post-college graduation. Findings of this study indicated students having participated in service learning experiences during their college careers were more likely to attend graduate school. Further, they were more likely to perceive their undergraduate college had provided good preparation for the workforce and/or provided practical experiences for the "real world." The study also found that service learning participants were more likely to donate money to their undergraduate college.

Ikeda (2000) examined the importance of structured reflection in service learning courses. Data collected for this study included interviews of 15 faculty and 72 students from three different higher education institutions. Findings revealed that: a) it was essential to include and provide structured and intentional reflection in service learning courses, and b) reflection enhanced learning by connecting the service experience to the academic course.

Service learning pedagogy has struggled in receiving credibility due to the lack of sufficient research. This in itself can cause a reciprocal effect: educators need service learning

implemented for future research, but service learning needs proven research to justify implementation. Greenberg (2000) acknowledged the lack of valid research by stating that “in new disciplines or educational methodologies, research starts off slowly with most studies small scale, involving few subjects, and with limited generalization” (p. 46). Eventually interest increases and there is a surge of research.

## METHODOLOGY

When evaluating the NCSTA’s definition of service learning (Furco, 2000), three of the components (meeting a community need, integration into academic curriculum and reflection) are things that can be implemented into an education program. The fourth component, fostering civic responsibility, is a result of the other three components being successfully implemented. The current study was designed to investigate the impact of the other three components of the NCSTA’s service learning on the civic responsibility of college students from a Midwestern university. Students were enrolled in sections of *Lifetime Fitness* (PE100), a course that is a graduation requirement for every student, regardless of major. The *Lifetime Fitness* course was eight weeks long, offered both during the first and second eight weeks of the semester. All sections were taught by graduate teaching assistants (GTA’s) while the researcher conducted the research components (pre- and post-surveys, academic component, and reflection component).

Four sections of the required *Lifetime Fitness* course offered during the second eight weeks of the fall 2004 semester were used for the purposes of this study. These course sections were identified as groups A, B, C and D. Changes were made to the course requirements for each of these four sections. Control group (A) was not given the requirement to complete a community service project; rather they were required to participate in an alternative fitness assessment assignment. The other three groups (B, C and D) were not given the requirement of participating in the alternative fitness assessment assignment; rather they were required to participate in the community service project. Group B was only required to participate in a community service project. Group C was required to participate in a community service project and the course itself included a 30-minute academic component. Group D participated in a community service, the 30-minute academic component, and a reflection activity.

The academic component consisted of a 30-minute lesson taught to the class by the researcher along with the graduate teaching assistant assigned to the class. The lesson’s primary focus was a class discussion on how being actively involved within your community can enhance overall health and wellness. The academic component was the same for both Group C and Group D. The reflection activity consisted of a

reflection worksheet that each student completed after participation in their community service project followed by a classroom discussion.

While the university provided the alternative fitness assessment assignment for the students in Group A, the community service project assignment could be anything students chose to participate in that benefited the community while requiring students to be physically active during participation in the activity. Projects could range from a walk/run for cancer research to serving meals at a soup kitchen. Students chose what they wanted to participate in and then showed proof to the instructor of their participation (for example, a registration form or signature from the project coordinator).

To measure civic responsibility, a pre-post-test design was used. Data were collected through the use of the Higher Education Service Learning Survey developed by Diaz, Furco & Yamada (1999). The survey included 29 questions and used a four-point Likert scale for responses. Survey questions were separated into four clusters: academic, civic responsibility, career, and empowerment. Nine questions asked specifically about civic responsibility. For the purposes of the study, the entire survey was administered to all participants, but only nine questions were used for analyses. Reliability assessments for the nine civic responsibility questions on this survey yielded a Cronbach Alpha = 0.79 and Test-Retest Reliability Coefficient = 0.71. No validity was reported (Diaz, Furco & Yamada, 1999). The post-survey contained the same 29 Likert scale questions, followed by additional open-ended questions developed by the researcher. The open-ended questions were used to gain insight as to why students did or did not participate in community service, what they gained from the experiences in the community service project and how they visualized it affected their overall health and wellness. These questions were used for an additional assessment of the community service project and to see what could be done in future semesters to improve on the project.

All of the community service project components in the three sections were taught and organized by the researcher of the study to prevent extraneous variables. The researcher was present in the classes during the times when collecting both pre- and post-surveys from all four groups (including control group) and was also the person who explained the community service project requirements, answered any questions relating to the requirements, and provided the academic component to Groups C and D. Students in Group D also completed a reflection activity that was collected by the researcher after participation in the community service portion of the assignment. The pre-survey was given on the first day of class prior to the handing out of the course syllabus, so participants were not aware of the assignment or requirements

before taking the survey. The post-survey was given on the last class period before the final exam.

**RESULTS**

One hundred and twenty-four participants took part in the study. Twenty-nine participants either did not attend class on the first day or dropped the course before completion and therefore did not complete either the pre- or post-survey. Females outnumbered male participants by almost two-thirds with 65 (65.3%) females and 33 (34.7%) males participating. Eighty-four percent of the participants were Caucasian in race, and the remaining individuals were divided between Latino (6), African American (4), Native American (1) and other (4). Almost half of the subjects (47.4%) were freshman, followed by sophomores (31.6%), juniors (16.8%) and seniors (4.2%). These percentages are reflective of the general population at the university and are an accurate description of the student body as a whole.

Table 1 provides the means and standard deviations for the pre- and post-surveys for each of the four groups. This table illustrates a small decrease in sample mean values for Groups B and C; a slight increase in sample mean values for Group A; and a larger, but not statistically significant, increase in the sample mean values of Group D (the group that contained all four components of service learning in the course).

An analysis of covariance (ANCOVA) was used to determine if any significant difference existed in civic responsibility between any of the four groups. The ANCOVA was used to control for any existing variables of previous civic responsibility levels in subjects participating. The data were examined at the  $p < 0.05$  level of significance. As suggested by the results of the ANCOVA (Table 2), no significant difference ( $F = 0.466, p = 0.707$ ) was found between the groups involved in the study. Analysis did indicate pre-existing civic responsibility levels had a significant impact on the level of civic responsibility on the post-survey.

Table 1. Means and standard deviations for pre- and post-surveys.

Group	N	Pre-mean	Pre_SD	Post-mean	Post-SD
A (control)	19	25.89	3.56	25.95	2.91
B (CSP)	24	27.96	4.14	27.79	3.55
C (CSP+AC)	24	26.17	3.46	25.88	4.67
D (CSP+AC+RF)	28	25.64	3.72	26.39	4.15

CSP = Community Service Project; AC = Academic Component; RF = Reflection.

**DISCUSSION**

Results of the study indicated no statistically significant differences in the post-test scores for civic responsibility between the four groups. Group D did experience a higher increase for the post-test; however, this increase was not statistically significant. A number of factors could have led to not finding a significant difference between the groups, including pre- and post-surveys, type of community service project, post-survey open-ended questions and the reflection component.

**Pre- and post-surveys**

The factor that played the most critical role in determining levels of civic responsibility was the pre- and post-surveys. The mean scores that were calculated for each person were based on nine questions on a 4-point Likert scale, which means that each person could have a minimum score of 9 and a maximum score of 36. When taking this into consideration, the groups' mean scores for the pre-surveys ranged from 25.89 to 27.96, which illustrated that on average the population selected 3 (agree) on most questions on the pre-survey. The post-survey group means ranged from 25.95 to 27.79, which was within the same range as the pre-surveys. With such high pre-survey scores, the likelihood to increase scores enough to show any statistically significant change by post-test was minimal.

Another factor the researcher considered was the type of assessment tool utilized. An attitude scale rather than a behavioral change scale was used to assess civic responsibility. When presented with the statement, "being involved in a program to improve my community is important" (statement #4 on the survey), most people would agree it is important. Perhaps the survey should have asked, "To what extent did engaging in the behavior affect your commitment to being involved in future community service projects?" Another example of this would be statements such as "exercising three times a week is important for overall health." A majority of

Table 2. Post survey analysis of covariance for all groups (test of between-subjects effects).

Source	SS	df	MS	F	p
Pre-existing CR levels	652.357	1	652.357	77.677	0.0
Group	11.729	3	3.910	0.466	0.707
Error	755.852	90	8.398		

CR = Civic Responsibility.

people might agree with this statement, but agreeing to the statement does not indicate they actually exercise three times a week to maintain overall health. In this study, the attitude scale analyzed attitude levels of civic responsibility and the attitudes of participants in this study did not significantly change. The study, however, did not measure the subjects' engagement in additional community service projects after the initial project. There may have been different results if the study assessed behaviors in addition to civic responsibility attitudes.

More than 1/3 (10, 34%) of Group A participants did not complete one of the two surveys. Groups B and C each had 25% (8 participants in each group) who did not complete both surveys. One reason some participants from Groups A, B, and C, might have not come to class on the last day or refused to fill out the survey is that they were not interested in the course content itself. Group D had the least number of students, only 10% (3), who did not complete both surveys. Group D participated in all service learning components, suggesting the service learning community service project created more interest in the course and resulted in higher attendance and completion of the course. Past research indicated that if all service learning components were not present, interventions were not as affective in fostering civic responsibility (Greenburg, 2000).

### Community service project

The requirements of the community service project assignment stated that the students were to participate in some community service that required physical activity while meeting a community need. Each participant was able to select the project in which they wanted to participate. Because the participants had free choice of the selection, there was a great deal of variation in they types of projects students chose, as well as a large difference in the amount of time commitment to the projects. More participants chose non-profit health, youth education, senior program volunteering, and homeless/low income types of community service. One could speculate there may have been significant findings if there had been more structured guidelines for the project, including a required time to be involved in the community service and a list of pre-approved community service activities. Table 3 shows the breakdown of community service projects based on type of organization by the participants.

### Post-survey open-ended questions

For Groups B, C and D, the post-surveys included open-ended questions addressing the community service project. When examining the responses, one student from Group B stated, "It's more like a random assignment to make this class less easy than anything pertaining to lifetime fitness. The

Table 3. Community service projects for groups B, C and D.

Type of Community Service	Group B	Group C	Group D	Total
Campus oriented	1	1	1	3
Church oriented	3	2	4	9
Non-profit health oriented	9	9	8	26
Youth education oriented	4	4	6	14
Homeless &/or low-income volunteer	5	3	2	10
Senior volunteer	2	5	7	14
Total	24	24	28	76

N = 76, Groups B, C & D only. Group A (control) had no community service project.

implication of this course is fitness in a strictly physical sense. You can argue that it makes you feel good, but there are other ways to do that." This comment seemed to show frustration with the course itself and not just the assignment. The quality of the GTAs' teaching in Groups B and C may have been a factor in the decrease in sample means from pre to post.

Other statements specifically tied the community service project to overall health. For example, a student from Group C commented, "I think it was a lot better once the reasoning behind the project was explained more." Another student in Group D stated, "I think it benefits everybody, especially college students. They don't always know how good they have it or how good it feels to help someone in need. The whole personal health and being active go together, only helps if you feel better about what you did. When you do something good for someone else it usually makes you feel better which is good for your health." These examples indicated that subjects connected the community service project to the course and their overall health (the goal of the academic component).

### Reflection component

The reflection activity component of service learning aids in students developing concerns about their community, learning more about themselves, and developing a better understanding of the environment in which they live (Ikeda, 2000). The reflection activity, included only in Group D, yielded these

observations. One student commented, "The project made me have a whole new outlook on things and that if everyone does a little it can help a lot." Another student stated, "Being active in the community gives a feeling of acceptance...like you belong. In feeling like this, it is more likely than not that a person would be at peace with their life and their character. Also, helping out other people often brings a joy with it because they're not always concerned with only themselves." Still another student wrote, "The best thing that happened was the way I felt when I was finished. The 'thank you' I received really meant a lot to me. I learned that helping out in the community would make not only me feel good, but others." According to research, the reflection activity is the key end component that ties all the components together affecting civic responsibility. It could then be speculated in this study that the reflection activity in Group D could have had an impact on the 0.75 increase in mean sample scores from pre- to post-survey for Group D.

### CONCLUSIONS

The recognition of service learning as a viable pedagogical option is a progressive movement. The main objective of current service learning research is to validate and solidify service learning as an important component in the educational process. The growing support for service learning and the national recognition it has received has aided the development of funding opportunities for service learning.

Although analysis showed no significant differences between groups, the quantitative data and reflection activity statements provided information for future research. Group D had the largest descriptive gain from pre- to post-test. This result may suggest the reflection activity may have had some impact on the scores of the students in the Group D. If this were the case, this finding would be consistent with prior research suggesting that all service learning components are necessary for service learning pedagogy to have a positive impact on students.

Additional research on service learning is needed. This study only examined an eight week course. Looking at full semester

or full year courses may yield more significant results. Longitudinal studies should be undertaken that not only examine the results of service learning during course sessions, but also examine the impact of participation in these projects on participants in the years following enrollment in the course. Further, studies placing more stringent guidelines on the types of community service projects should be examined. These studies should investigate attitude, as well as behavior change.

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