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## **Service-Learning Pedagogy, Civic Engagement, and Academic Engagement: Multiple Bidirectional Relationships in College Freshmen**

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This study begins to unravel the multiple bidirectional relationships between service-learning pedagogy and civic and academic engagement attitudes and behaviors. A quasi-experimental, nonequivalent comparison group pre- and post-test design was used with a sample of 300 first-semester freshmen participating in either a service-learning-based learning community or a learning community without service-learning. Participants completed a pre-test at the beginning of the semester measuring high school civic and academic engagement behaviors and attitudes and a post-test at the end of the semester measuring the same variables based on their first semester in college. Students with higher civic engagement attitudes and behaviors prior to college were more likely to take a service-learning course than students with lower civic engagement attitudes and behaviors. Students in service-learning were more likely to participate in community activities than students not participating in service-learning. Finally, within the service-learning groups, students who were more academically engaged had higher academic and civic attitudinal engagement at the end of the course. Students who were more civically engaged were more likely to see lower costs of helping to themselves; they did not change in terms of their beliefs about the community's needs. This study replicates and extends previous research to demonstrate that there are multiple bidirectional relationships among these variables that need to be taken into account in research and practice.

**Keywords:** *service-learning; academic engagement; civic engagement*

The use of service-learning as an engaged pedagogy in two- and four-year institutions of higher education has grown steadily in the past 30 years as evidence continues to mount indicating that service-learning has a positive impact on academic, personal, and citizenship outcomes by way of civic and academic engagement (see Conway, Amel, & Gerwein, 2009, for a meta-analysis). In addition, service-learning is considered to be one of the high-impact educational practices that produces higher levels of both civic and academic engagement (Kuh, 2008; NSSE, 2011). To date, the dominant research paradigm of the relationship between service-learning pedagogy and outcomes is unidirectional, with pedagogy acting upon the behavior and attitudes of the individual. However, one could posit the existence of a more complex relationship consisting of multiple bidirectional relationships between these variables, or "reciprocal determinism" (Bandura, 1978, 1986), which is the idea that "behavior, internal personal factors, and environmental influences all operate as interlocking determinants of each other." For example, a high school student could volunteer (behavior), discover that it was fulfilling (attitude), and, when the opportunity to receive course credit for engaging in service arises, sign up (behavior). The course (environment) encourages engaging both academically and civically (behavior), which leads to an increased appreciation of learning as well as working in the civic arena (attitudes).

The purpose of this study is to begin to unravel these multiple bidirectional relationships between service-learning pedagogy, academic engagement, and civic engagement during the first semester of the freshman year. While we replicate the relationship between service-learning and academic and civic engagement, we also seek to answer the following questions: Do previous

behavioral and attitudinal “inputs”—in terms of previous academic and civic engagement—influence a student’s decisions to enroll in a service-learning course? And do a student’s academic engagement and civic engagement impact each other within a service-learning course?

## **Service-Learning**

Service-learning is an instructional method used by academic disciplines to enhance both students’ involvement in the community and their involvement in curriculum. It is defined as a “course-based, credit bearing educational experience in which students (a) participate in an organized activity that meets identified community needs, and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility” (Bringle & Hatcher, 2009, p. 38). Benson and Harkavy (2002) describe service-learning as one of “a handful of creative, active pedagogies . . . that enhance a student’s capacity to think critically, problem solve, *and* function as a citizen in a democratic society” (p. 362, emphasis added). Also, service-learning has been recognized as a “high impact educational practice.” High-impact educational practices such as first-year seminars, undergraduate research, and service-learning consist of teaching and learning activities that produce higher levels of civic and academic engagement by channeling students’ time and energy in ways that deepen their learning and change their thinking and behavior (Kuh, 2008; Swaner, 2011).

Evidence suggests that service-learning pedagogy does have a positive impact on academic, personal, and citizenship outcomes. In a meta-analysis, Conway et al. (2009) found moderate changes in academic outcomes and small changes in personal and citizenship outcomes. Academic outcomes include knowledge, grade-point average (GPA), grades, cognitive outcomes, and academic motivation and attitudes. Personal outcomes include motivations, development, and well-being. Citizenship outcomes include personally responsible, participatory, and justice-oriented citizenship.

However, less attention has been paid to understanding the “input” side of the equation: Who takes service-learning courses in the first place? Does student enrollment in a service-learning course happen by choice, chance, or program design? Service-learning courses have a counter-normative nature (Clayton & Ash, 2004; Howard, 1998). While many students may not be aware that they are signing up for a service-learning course in the first place (or what it means to take such a course), others may be attracted to service-learning’s unique pedagogy that is described as “collaborative,” “participatory,” “reciprocal,” “self-directed,” “egalitarian,” “engaging,” and “connected” (Clayton & Ash, 2004).

## **Civic Engagement**

Although little research directly assesses who chooses to take service-learning courses (for an exception, see Reeb, Katsuyama, Sammon, & Yoder, 1998), there is a rich literature in the related field of civic engagement about who chooses to engage in civic engagement activities. The terms “service-learning” and “civic engagement” are often used interchangeably in higher education literature; however, civic engagement can be seen as a broader term, encompassing but not limited to service-learning. Erlich (2000) defines civic engagement as “working to make a difference in the civic life of our communities and developing the combination of knowledge, skills, values, and motivation to make that difference” (p. vi). Civic engagement is multidimensional and may include cognitive, affective, and behavioral components (Bobek, Zaff, Li, & Lerner, 2009; Zaff, Boyd, Li, Lerner, & Lerner, 2010). When individuals are engaged as citizens or embrace or feel connected to the role of being a citizen (i.e., being a citizen is an important part of who they are), they may express themselves behaviorally (e.g., by participating in civic activities), cognitively (e.g., by acknowledging civic or societal issues), and/or emotionally (e.g., by having positive attitudes toward civic engagement). In addition, civic engagement includes community activities, electoral activities,

and political voice activities (Keeter, Zukin, Andolina, & Jenkins, 2002; Lopez, Levine, Both, Kiesa, & Marcelo, 2006; Zukin, Keeter, Andolina, Jenkins, & Carpini, 2006). Community activities generally focus on improving one's local community and helping individuals. Electoral activities concentrate on the political process. Political voice activities are associated with things people do to express their political or social viewpoints.

Although we do not provide a complete review of the literature here, the following are some examples of predictors of civic engagement. Foster-Bey (2008) found that whites are more likely to be engaged than blacks, Hispanics, or Asians. Similarly, U.S. native-born citizens have higher rates of civic engagement and lower attrition than immigrants. Higher family income and higher education are also associated with more civic engagement (Campbell, 2006; Foster-Bey, 2008). Adaptive functioning and extracurricular activity involvement in adolescence predict civic engagement in adults (Obradovic & Masten, 2007). Those who participate in civic activities are motivated to use civic engagement activities as a way to do something for themselves (e.g., to boost their self-esteem, to make friends, or to gain skills) while, at the same time, they do good for others (Omoto, Snyder, & Hackett, 2010).

Recognizing this, Astin and Sax (1998) suggest that certain students may be more inclined than their peers to participate in service-learning courses and that these predispositions must be controlled for in research studies. To account for these predispositions, researchers sometimes remove participants with previous service-learning experience from the analyses (e.g., Prentice, 2007) or statistically control for differences in analyses (Sessa, Natale, London, & Hopkins, 2010). In addition, a few studies have begun to directly address this relationship, finding that service-learning efficacy is higher in those choosing to take service-learning courses than those choosing other courses (Reeb, 1998). Given that there are recognized differences in those inclined to be civically engaged and that these differences may influence who chooses to take service-learning courses, we offer the following hypothesis targeting first-semester freshmen:

*Hypothesis 1:* Students with higher civic engagement in high school are more likely to take a service-learning course during their first semester in college than students with lower civic engagement in high school.

## **Academic Engagement**

Similar to the above argument, no research directly assesses whether students who are more academically engaged are more inclined than their peers to enroll in service-learning courses. Presently, the construct of academic engagement in higher education is described as a function of two key features: student input and institutional input. Student input may include level of involvement, quality of effort, amount of energy, and time devoted to academically purposeful activities or tasks. Institutional input refers to the policies and practices used by institutions to induce students to take part in these activities (Kuh, 2009; Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2007; Kuh, Kinzie, Schuh, Whitt, & Associates, 2005; Ludlum, Gordon, Noyes, Gardner, & Davis-Barham, 2008; Pascarella & Terenzini, 2005; Wolf-Wendel, Ward, Kinzie, 2009).

Others also suggest that academic engagement, similar to civic engagement, is multidimensional. When individuals are engaged as learners or embrace the role of or feel connected to the role of being a student (i.e., being a student is an important part of who they are), they may express themselves behaviorally (e.g., adhering to classroom norms and rules and participating in learning and academic tasks), cognitively (e.g., cognitive investments in learning, and mastering knowledge and skills), and emotionally (e.g., emotional reactions to the school, teachers, and other students, including positive affective reactions in the classroom, such as values, interest, and happiness) (Fredricks, Blumenfeld, & Paris 2004; Kahn, 1990; Leithwood & Jantzi, 1999, 2000; Martin, 2009; Rich, LePine, & Crawford, 2010).

Although there is no research that directly assesses whether students who tend to be academically engaged also seek out courses that may be more engaging (such as those defined as high-impact educational practices), logic suggests that students who enjoy deep/engaged learning as well as participating in class, being involved and making an effort in class, and expending energy learning may look for “engaged learning” courses that allow and encourage them to do just that. Although they did not make a hypothesis about this relationship, Sessa et al. (2010) found that those with higher academic engagement in high school were more likely to take a service-learning course during their first semester in college. In line with this finding, we predict the following relationship:

*Hypothesis 2:* Students with higher academic engagement in high school are more likely to take a service-learning course during their first semester in college than students with lower academic engagement in high school.

## **Impact of Service-Learning Course on Civic and Academic Engagement**

### **Impact of Service-Learning Course on Civic Engagement**

Service-learning participants, in comparisons with students who have not participated in service-learning, are more involved in the community (Prentice, 2007), have greater understanding of community problems (Astin & Sax, 1998), greater knowledge and acceptance of diverse races and cultures (Astin & Sax, 1998; McKenna & Rizzo, 1999), a greater ability to get along with people of different backgrounds (Astin & Sax, 1998; McKenna & Rizzo, 1999), and are more likely to believe that their attitudes regarding the community have changed positively (Gallini & Moely, 2003). Students who participate in service-learning have shown a significant increase in the belief that they could make a difference (Eyler & Giles, 1999), a greater valuing of and commitment to future volunteer service (Eyler & Giles, 1999; Markus, Howard, & King, 1993; McKenna & Rizzo, 1999), and a desire to become involved in helping careers (Markus et al., 1993).

### **Impact of Service-Learning Course on Academic Engagement**

In some studies, academic engagement is measured by student reports; in others, engagement is inferred from the grades students receive. For example, McKenna and Rizzo (1999) found evidence of positive effects on academic attitudes in students who reported service-learning’s positive impact on their acquisition and understanding of course concepts. Similarly, Moely, McFarland, Miron, Mercer, and Ilustre (2002) found that students reported higher learning levels about the field of study of their service-learning courses than students in non-service-learning courses. In their national survey, Eyler and Giles (1999) found that more than 58% of service-learning students felt they had learned more in their service-learning classes than in their other classes. Kuh (2008) also cites evidence that high-impact educational practices do lead to greater academic engagement than more traditional courses.

In line with the reviewed literature, we expect to replicate and find support for the following hypotheses:

*Hypothesis 3:* Controlling for previous levels of civic engagement, students in service-learning courses are more civically engaged than students in non-service-learning courses.

*Hypothesis 4:* Controlling for previous levels of academic engagement, students in service-learning courses are more academically engaged than students in non-service-learning courses.

Although we expect to find support for hypotheses 3 and 4, meta-analyses suggest that these effects are only small to moderate (Conway et al., 2009). In this section, we argue that although service-learning pedagogy represents the opportunity for and encourages both academic and civic engagement, students may not respond as planned. For example, Sessa et al. (2010) found that students in a service-learning course were just as likely to admit they had missed class, come to class late or unprepared, or were bored and slept in class over the course of the semester as students in non-service-learning courses. Thus, it may be that service-learning pedagogy does not universally impact the engagement of all students and that research needs to address this. In this study, we seek to demonstrate that when students are more behaviorally engaged within the service-learning course, they will have greater changes in their attitudinal engagement (this study does not address cognitive engagement).

We use Bem's (1967, 1972) Self Perception Theory to guide predictions regarding how student behavioral engagement (both academic and civic) in a service-learning course leads to changes in student attitudinal engagement (both academic and civic) at the end of the course. According to Bem (1972), internal cues are often "weak, ambiguous, or uninterpretable" (p. 2), suggesting that people often need to rely on their own external behavior to understand their internal preferences. That is, a person comes to know his or her own attitudes, emotions, and internal states by inferring them from observations of their own behavior and circumstances in which the behavior occurs. Students who actively participate in discussions, ask questions in class, and reflect with classmates may infer from their behavior that they believe education is important (attitudes). Environmental influences, however, play a role. If students are engaged in community work (behavior) but know that their grade is contingent upon their participation, they may not conclude that participation in the community is evidence about their civic attitudes (see also Sobus, 1995). We argue that students will use their behavior in the classroom (academic behavioral engagement) and in their service project (civic behavioral engagement) to help them determine both their academic attitudinal engagement and their civic attitudinal engagement. Students who are more behaviorally engaged during the semester in the classroom—as *encouraged* by service-learning pedagogy—will show greater positive change in their engagement attitudes than those who are less behaviorally engaged. However, students who are more behaviorally engaged during the semester in service—as *required* in a service-learning course—will show little or no change in their engagement attitudes compared to those who are less behaviorally engaged.

*Hypothesis 5:* Within a service-learning course, higher academic behavioral engagement leads to higher civic and academic attitude engagement.

*Hypothesis 6:* Within a service-learning course, the amount of civic behavioral engagement has little or no relationship to civic or academic attitude change.

## Methods

### Participants

The participants for this study were drawn from 379 freshmen participating in learning communities that included a cohort of classes and a series of activities in the students' first semester of college. One of the courses that was similar across the learning communities was a freshman seminar. Students were drawn from 16 (eight per year) freshman seminar classes in two consecutive fall semesters at a large public teaching university in the mid-Atlantic region of the United States. Of these, 300 voluntarily agreed to participate in this research and completed pre- and post-surveys, making for a response rate of 79%. Eight classes (four per year) consisted of 139 students participating in a learning community utilizing service-learning pedagogy and practices in one of its

courses and eight (four per year) consisted of 161 students in learning communities with no service-learning courses. There were 212 females and 88 males (between the ages of 17 and 21). The sample was predominantly White/non-Hispanic (49%), with Hispanic (25%), Black/non-Hispanic (11%), and Asian/Pacific Islander (6%) students also represented. Fifty-four percent of the students lived on campus. All 300 participants were offered financial incentives at each of two points during the semester for their participation.

## Design and Procedure

We employed a quasi-experimental, nonequivalent comparison group design with data collected at two points in time. The experimental group participated in a freshman learning community in which one course was based on service-learning pedagogy. In this course, the service project was fully integrated into the course. Students either mentored or tutored students in grades one through middle school. Within class, they reflected on their learning and experiences both verbally and in written form. The comparison learning group consisted of freshmen enrolled in non-service-related freshman learning communities. Due to the enrollment size of those non-service-related learning communities, students were drawn from approximately four separate communities.

Data were collected at two points in time using a pre-post design. All 300 freshmen completed a pre-test survey at the beginning of their first semester and a similar post-test survey at the end of their first semester. Some control data were obtained through the university's Student Information System (SIS).

For the pre- and post-tests, two researchers handed out materials, answered questions, and distributed student incentives. In the pre-test data collection, the researchers first explained the purposes of the study to the students and distributed consent forms. Students were given time to read, ask questions about, and sign the consent form if they were interested in participating. Students who consented to participate in the study received packets containing study instruments. Survey completion took from 15 to 45 minutes. Students were given \$10 for their participation, and they signed a form stating that they received their incentive. Post-test data collection proceeded in a similar manner.

## Measures

### Pre-test (Beginning of First Semester Freshman Year)

We collected two sets of measures that were used to determine student civic engagement and academic engagement in high school. Civic engagement was measured in two ways: attitudes and behaviors. Academic engagement was measured in two ways: attitudes and behaviors.

**Civic engagement attitudes.** We measured civic engagement attitudes using the Community Service Attitudes Survey (CSAS) (Shiarella, McCarthy, & Tucker, 2000). This instrument has eight attitude scales: "Awareness" (of needs in the community), "Norms" (a sense that people can and should help in the community), "Connectedness" (beliefs that one is part of the community and should help out), "Seriousness" (of the needs in the community), "Costs" (of helping), "Benefits" (general benefits of volunteering), "Career Benefits" (career benefits of volunteering), and "Intentions" (a personal desire to participate). Published reliabilities (coefficient alphas) vary from .72 to .93 (Shiarella et al., 2000).

**Civic engagement behaviors.** To measure civic engagement behaviors during the last year in high school, the 2006 National Civic and Political Health Survey (CPHS) (Lopez et al., 2006) was used as a guide. The CPHS was designed to collect data from young Americans about their engagement in politics and communities and their attitudes toward government and current issues.

The CPHS was divided into three main categories: civic activities, electoral activities, and political voice activities.

For the purpose of this study, the following three scales were developed by creating means of the scale items: community activities participated in during the last year in high school (three items), electoral activities participated in during the last year in high school (six items), and political voice activities participated in during the last year in high school (eight items).

The community activities scale consisted of the following three items: performed volunteer work; performed community service as a part of class or school; and joined a community group or organization. Each of those items was measured on a 1 to 5 scale (1 = never, 2 = sometimes, 3 = occasionally, 4 = often, and 5 = very often). The Cronbach's alpha for the electoral activities scale in the pre-test was .76.

The electoral activities scale consisted of the following six items: voted in student election; voted in a local, state, or national election; worked on a student campaign (including running for office); worked on a local, state, or national election; joined a political group (e.g., Young Democrats or Young Republicans); and made a campaign contribution. The same 5-point Likert-type scale was used to measure each of those items. The Cronbach's alpha for the electoral activities scale in the pre-test was .64; consequently, this pre-test scale was dropped from the remaining analyses.

The political voice activities scale consisted of the following eight items: developed, maintained, and/or submitted entries on an online political blog; organized and/or participated in a house meeting or event sponsored by an online political advocacy group or party; participated in political discussions on social networking websites such as Facebook; participated in an organized march, protest, or demonstration; participated in a boycott; sent a letter or e-mail, or called the media; contacted public officials (e.g., mayor, member of congress, etc.) about an issue; and attended a public hearing about a proposal affecting the student's community. The same 5-point Likert-type scale was used to measure each of these items. The Cronbach's alpha for the political voice activities scale in the pre-test was .71.

**Academic engagement attitudes.** Academic engagement attitudes during the last year in high school were measured using one scale from the Student Participation and Identification Survey (SPIS) (Leithwood & Jantzi, 1999, 2000). The SPIS was designed to collect data from high school students on their engagement with school and their families' educational cultures. To measure student academic engagement attitudes, we modified the items of a scale originally designed to measure the extent to which the student valued his or her school and education. This measure was modified to include only those items specifically targeting academic engagement attitudes. The revised scale contained three items: "In the past year, I thought schoolwork was really important," "All people should get as much education as they can," and "It was really important to me to gain knowledge and develop skills through my schoolwork." The revised scale was measured on a 6-point Likert-type scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree, and 6 = N/A). The Cronbach's alpha for the student educational values scale was .64. As there were only a few items in the scale (which may have caused the low reliability), we included this scale in our analysis. The scale was created using the means of the items.

**Academic engagement behaviors.** Academic engagement behaviors during the last year in high school were measured using two scales from the SPIS. To measure student academic behavioral engagement, we used two scales directly assessing behavioral engagement in the classroom: respond to requirements (ten items assessing the extent to which the student showed up and did what he or she was asked to do) and class-related initiative (six items assessing the extent to which the student was actively engaged through such activities as sharing opinions, discussions, and doing extra work). Each of these items was measured on a 1 to 6 scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree, and 6 = N/A). Reliabilities (coefficient alphas) for these two scales are .81 and .69 respectively.



### **Post-test (End of First Semester Freshman Year)**

We collected two sets of measures that were used to determine student civic engagement and academic engagement during the first semester of college. These measures were similar to measures in the pre-test. However, items and wording were slightly modified to measure civic and academic engagement during the first semester of college. Therefore, we thoroughly describe these measures, while recognizing that there is overlap in the descriptions.

**Civic engagement attitudes.** We again measured civic engagement attitudes using the Community Service Attitudes Survey (CSAS) (Shiarella, McCarthy, & Tucker, 2000) with no modification—that is, the same eight attitude scales: Awareness, Norms, Connectedness, Seriousness, Costs, Benefits, Career Benefits, and Intentions.

**Civic engagement behaviors.** Similar to the pre-test, the following three scales were developed: community activities (three items), electoral activities (six items), and political voice activities (eight items). However, students were asked to rate their behaviors over the past semester. To determine the viability of these scales, we used Cronbach's alpha. All three scales demonstrated reasonable validity: Cronbach's alpha for community activities was .86; for electoral activities, .75; and for political voice activities, .78.

**Academic engagement attitudes.** The academic engagement attitudes students reported during the first semester in college were measured using the same scale as the pre-test from the SPIS, with no further modifications.

**Academic engagement behaviors.** Academic behavioral engagement during the first semester in college was again measured using a modified version of the SPIS's responding to class-related requirements and class-related initiative-taking scales (Leithwood & Jantzi, 1999, 2000). From the original two scales (which included 16 items), we dropped five items that were not pertinent to college (e.g., "I rarely receive a detention"). Because we dropped approximately one-third of the items, we ran a factor analysis to determine if the same two scales were still relevant. Factor analysis confirmed the two scales (i.e., responding to class-related requirements and class-related initiative taking).

The modified responding to the class-related requirements scale measured the extent to which the student participated in routine classroom-related activities such as attending class, following directions, and submitting assignments (measured on the same rating scale discussed previously). This scale had a Cronbach's alpha of .83. The modified class-related initiative-taking scale measured the extent to which the student participated in other, non-required classroom-related activities such as asking questions, giving opinions, and doing extra schoolwork (measured on the same rating scale discussed previously). This scale had a Cronbach's alpha of .79.

## **Results**

### **Control Variables**

First, we compared our experimental group (service-learning) with our comparison group (no service-learning) on a number of demographics and prior performance indicators. Students in the two groups did not differ on gender, age, or financial status. However, our experimental group was more likely to be Black/non-Hispanic, have a lower GPA, and have lower SAT scores. We include these three control variables in subsequent analyses to control for their influence.

See Table 1 (total sample) and Table 2 (service-learning only sample) for means, standard deviations, and correlations of all variables.

**Table 1.** Means, Standard Deviations, and Correlations for the Total Sample

	<b>E</b>	<b>M</b>	<b>SD</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
1. SATs	1440.98	185.72							
2. HS-GPA	3.10	.37	.29**						
3. RACE	1.88	.32	.27**	.13*					
4. HS-VAL	4.05	.61	-.14*	.09	-.05				
5. HS-RES	3.80	.68	-.06	.21**	.02	.40**			
6. HS-INI	3.36	.67	-.13*	-.05	-.10	.46**	.39**		
7. HS-NOR	3.93	.48	-.03	.02	-.09	.30**	.04	.23**	
8. HS-CON	3.59	.64	-.13*	-.01	-.13*	.23**	.07	.26**	
9. HS-COS	3.37	.74	.13*	-.01	.13*	-.16**	-.14*	-.08	
10. HS-AWA	4.03	.49	-.08	.01	-.22**	.30**	.11	.19**	
11. HS-INT	3.66	.91	-.16**	-.05	-.20**	.27**	.10	.22**	
12. HS-BEN	4.11	.58	-.14*	-.03	-.12*	.43**	.13*	.29**	
13. HS-SER	3.56	.61	-.16**	-.05	-.12*	.30**	.10	.23**	
14. HS-CAR	4.11	.69	-.23**	-.04	-.11	.35**	.14*	.24**	
15. HS-COM	7.65	3.13	-.17**	.07	-.18**	.22**	.18**	.26**	
16. HS-POL	10.03	3.35	.02	-.07	-.02	.03	-.15**	.10	
17. GR-TYP	1.46	.50	-.30**	-.15**	-.20**	.09	.03	.17**	
18. CF-VAL	3.82	.57	-.13*	-.04	-.05	.48**	.21**	.29**	
19. CF-RES	2.03	.56	-.09	.08	-.05	.33**	.40**	.29**	
20. CF-INI	1.95	.53	-.08	-.10	-.08	.22**	.16**	.49**	
21. CF-NOR	3.93	.51	-.03	-.001	-.07	.26**	.09	.21**	
22. CF-CON	3.64	.67	-.16**	-.03	-.10	.32**	.06	.25**	
23. CF-COS	3.35	.74	.23**	.05	.24**	-.16**	-.09	-.05	
24. CF-AWA	4.05	.50	-.09	.08	-.07	.33**	.16**	.20**	
25. CF-INT	3.41	.94	-.13*	-.01	-.09	.19**	.11*	.15**	
26. CF-BEN	4.00	.64	-.02	.05	-.04	.36**	.18**	.18**	
27. CF-SER	3.55	.64	-.18**	-.02	-.07	.28**	.11	.21**	
28. CF-CAR	4.04	.68	-.20**	-.004	-.01	.28**	.16**	.15**	
29. CF-COM	7.60	3.88	-.28**	-.17**	-.24**	.15**	-.01	.18**	
30. CF-ELE	8.44	3.71	-.15**	-.20**	-.07	.02	.02	.16**	
31. CF-POL	10.39	3.73	-.14*	-.14*	-.04	-.02	-.07	.12*	

Note: N=300; \*p < .05 (2-tailed), \*\*p < .01 (2-tailed).

**Table 1. (continued)**

	7	8	9	10	11	12	13	14	15	16	17	18	19	20
7. HS-NOR	.76**													
8. HS-CON	-.11*	-.26**												
9. HS-COS	.69**	.61**	-.14*											
10. HS-AWA	.50**	.51**	-.38**	.46**										
11. HS-INT	.60**	.54**	-.22**	.57**	.53**									
12. HS-BEN	.62**	.61**	-.12*	.49**	.53**	.55**								
13. HS-SER	.40**	.36**	-.16*	.38**	.40**	.69**	.38**							
14. HS-CAR	.26**	.38**	-.28**	.21**	.40**	.28**	.28**	.20**						
15. HS-COM	.11	.10	.03	.07	.09	.10	.04	.04	.13*					
16. HS-POL	.25**	.32**	-.28**	.21**	.46**	.21**	.22**	.17**	.46**	-.02				
17. GR-TYP	.29**	.26**	-.15**	.25**	.21**	.30**	.27**	.31**	.22**	-.01	.12*			
18. C-VAL	.14**	.16**	-.16**	.16**	.11*	.22**	.14*	.18**	.24**	.003	.09	.38**		
19. C-RES	.12**	.20**	-.13*	.08	.13*	.10	.17**	.10	.18**	.07	.09	.27**	.41**	
20. C-INT	.61**	.61**	-.11*	.49**	.37**	.49**	.54**	.31**	.26**	-.05	.20**	.43**	.25**	.19**
21. C-NOR	.55**	.65**	-.23**	.46**	.45**	.52**	.60**	.37**	.29**	.003	.23**	.44**	.28**	.24**
22. C-CON	-.13*	-.25**	.61**	-.14*	-.31**	-.24**	-.17**	-.16**	-.24**	.08	-.27**	-.19**	-.09	-.14*
23. C-COS	.56**	.52**	-.09	.64**	.40**	.52**	.54**	.35**	.22**	-.02	.16**	.40**	.26**	.13*
24. C-AWA	.35**	.37**	-.30**	.27**	.43**	.38**	.34**	.21**	.21**	.03	.23**	.31**	.23**	.11*
25. C-INT	.45**	.37**	-.16**	.39**	.39**	.53**	.43**	.37**	.14*	.06	.11	.40**	.29**	.08
26. C-BEN	.44**	.47**	-.21**	.40**	.35**	.41**	.59**	.28**	.22**	.07	.13*	.37**	.28**	.28**
27. C-SER	.38**	.36**	-.12*	.31**	.31**	.41**	.38**	.47**	.17**	.04	.13*	.38**	.30**	.12*
28. C-CAR	.29**	.38**	-.28**	.23**	.43**	.24**	.24**	.20**	.56**	.04	.78**	.25**	.16**	.17**
29. C-COM	.16**	.18**	.05	.07	.20**	.15**	.16**	.16**	.18**	.20**	.18**	.09	.08	.22**
30. C-ELE	.12*	.15*	.12*	.12*	.05	.06	.02	.06	.07	.23**	.09	.02	.04	.14*
31. C-POL														

Note: N=300; \*p < .05 (2-tailed), \*\*p < .01 (2-tailed).

**Table 1.** (continued)

	21	22	23	24	25	26	27	28	29	30
21. C-NOR										
22. C-CON	.78**									
23. C-COS	-.15**	-.29**								
24. C-AWA	.73**	.65**	-.17**							
25. C-INT	.43**	.53**	-.33**	.39**						
26. C-BEN	.59**	.56**	-.16**	.61**	.47**					
27. C-SER	.62**	.69**	-.22**	.58**	.49**	.47**				
28. C-CAR	.47**	.54**	-.19**	.48**	.31**	.62**	.37**			
29. C-COM	.26**	.31**	-.37**	.24**	.30**	.13*	.18**	.19**		
30. C-ELE	.08	.13*	-.12*	.07	.19**	-.04	.07	.06	.31**	
31. C-POL	.01	.05	-.01	.06	-.02	-.13*	-.09	.04	.21**	.46**

Note: N = 300; \*p < .05 (2-tailed), \*\*p < .01 (2-tailed). RACE=Race (Black/Non-Hispanic [coded as 1] vs. Other [coded as 2]); HS-VAL=Educational Valuing, High School; HS-RES=Responding to Class-Related Requirements, High School; HS-INI=Class-Related Initiative Taking, High School; HS-NOR=Norms, High School; HS-CON=Connectedness, High School Students; HS-COS =Costs, High School; HS-AWA=Awareness, High School Students; HS-INT=Intentions, High School Students; HS-BEN =Benefits to Volunteering, High School Students; HS-SER=Seriousness, High School Students; HS-CAR=Career Benefits, High School Students; HS-COM=Community Activities, High School; HS-POL=Political Voice Activities, High School; GR-TYP=Non-Service-learning [coded as 1] vs. Service-learning [coded as 2]; C-VAL=Educational Valuing, College; C-RES=Responding to Class-Related Requirements, College; C-INI=Class-Related Initiative Taking, College; C-NOR=Norms, College; C-CON=Connectedness, College; C-COS=Costs, College; C-AWA=Awareness, College; C-INT=Intentions, College; C-BEN =Benefits, College; C-SER=Seriousness, College; C-CAR=Career Benefits, College; C-COM=Community Activities, College; C-ELE=Electoral Activities, College; C-POL=Political Voice Activities, College.

**Table 2.** Means, Standard Deviations, and Correlations for the Service-Learning Sample

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. HS-VAL	4.11	.58													
2. HS-RES	3.82	.73	.49**												
3. HS-INI	3.49	.65	.44**	.46**											
4. HS-NOR	4.06	.45	.33**	.13	.14										
5. HS-CON	3.81	.61	.28**	.15	.22**	.72**									
6. HS-COS	3.14	.78	-.18**	-.12	.02	-.06	-.16								
7. HS-AWA	4.14	.47	.39**	.19*	.19*	.63**	.53**	-.13							
8. HS-INT	4.11	.75	.36**	.15	.09	.47**	.38**	-.29**	.42**						
9. HS-BEN	4.24	.59	.52**	.20*	.21*	.52**	.45**	-.22**	.53**	.52**					
10. HS-SER	3.70	.56	.40**	.20*	.27**	.55**	.55**	-.03	.43**	.44**	.51**				
11. HS-CAR	4.23	.68	.39**	.11	.13	.39**	.36**	-.17*	.37**	.46**	.69**	.37**			
12. HS-COM	9.19	3.08	.15	.22**	.19*	.12	.24**	-.25**	.12	.28**	.15	.24**	.15		
13. HS-POL	9.96	2.90	.10	-.06	.17*	.07	.06	.04	.17*	.12	.09	.15	.03	.27**	
14. C-VAL	3.90	.57	.48**	.13	.24**	.38**	.35**	-.19*	.28**	.31**	.39**	.30**	.36**	.18*	.06
15. C-RES	2.09	.58	.34**	.39**	.34**	.20*	.19*	-.22**	.22*	.14	.27**	.18*	.16	.23**	.11
16. C-INI	2.01	.49	.15	.12	.39**	.17*	.20*	-.08	.13	.11	.08	.19*	.03	.16	.04
17. C-NOR	4.04	.51	.23**	.14	.18*	.54**	.60**	-.06	.38**	.25**	.42**	.45**	.30**	.18*	-.09
18. C-CON	3.81	.64	.34**	.19*	.20*	.51**	.62**	-.23**	.44**	.34**	.52**	.50**	.41**	.21*	.000
19. C-COS	3.14	.79	-.22**	-.12	-.05	-.17*	-.26**	.64**	-.20**	-.31**	-.33**	-.21*	-.19*	-.14	.08
20. C-AWA	4.14	.52	.44**	.19*	.22**	.55**	.51**	-.14	.64**	.42**	.55**	.50**	.38**	.17*	.09
21. C-INT	3.65	.90	.19*	.14	.13	.22**	.26**	-.37**	.20*	.21*	.33**	.21*	.16	.12	.12
22. C-BEN	4.07	.67	.38**	.21*	.17*	.36**	.26**	-.18*	.27**	.29**	.46**	.29**	.28**	.06	.08
23. C-SER	3.64	.64	.29**	.20*	.16	.40**	.44**	-.25**	.38**	.30**	.35**	.53**	.27**	.21*	.14
24. C-CAR	4.14	.68	.30**	.21*	.11	.45**	.38**	-.14	.31**	.31**	.42**	.41**	.46**	.06	.05
25. C-COM	10.85	2.76	.12	.06	.11	.19*	.28**	-.11	.17*	.23**	.27**	.23**	.25**	.42**	.14
26. C-ELE	9.16	4.05	.05	.01	.25**	.13	.17*	.20*	.08	.20*	.20*	.25**	.20*	.20*	.19*
27. C-POL	10.75	4.32	.01	-.003	.17*	.10	.09	.25**	.18*	.07	.08	.09	.13	-.01	.17*

Note: N = 139; \*p < .05 (2-tailed), \*\*p < .01 (2-tailed).

**Table 2.** (continued)

	14	15	16	17	18	19	20	21	22	23	24	25	26
14. C-VAL													
15. C-RES	.36**												
16. C-INI	.20*	.38**											
17. C-NOR	.44**	.30**	.22**										
18. C-CON	.48**	.36**	.20*	.81**									
19. C-COS	-.27**	-.20*	-.16	-.15	-.32**								
20. C-AWA	.46**	.34**	.14	.69**	.72**	-.26**							
21. C-INT	.42**	.29**	.14	.33**	.43**	-.38**	.36**						
22. C-BEN	.44**	.43**	.01	.47**	.56**	-.19*	.57**	.47**					
23. C-SER	.34**	.37**	.28**	.57**	.65**	-.28**	.59**	.49**	.39**				
24. C-CAR	.41**	.33**	.02	.45**	.60**	-.27**	.50**	.33**	.63**	.40**			
25. C-COM	.29**	.19*	.10	.23**	.25**	-.25**	.30**	.24**	.17*	.15	.24**		
26. C-ELE	.11	.04	.31**	.08	.08	-.05	.10	.15	-.06	.04	.07	.26**	
27. C-POL	.11	.03	.15	-.01	.01	-.01	.11	-.03	-.15	-.11	.03	.14	.57**

Note: N = 139; \*p < .05 (2-tailed), \*\*p < .01 (2-tailed). HS-VAL=Educational Valuing, High School; HS-RES=Responding to Class-Related Requirements, High School; HS-INI=Class-Related Initiative Taking, High School; HS-NOR=Norms, High School; HS-CON=Connectedness, High School Students; HS-COS=Costs, High School; HS-AWA=Awareness, High School Students; HS-INT=Intentions, High School Students; HS-BEN =Benefits to Volunteering, High School Students; HS-SER=Seriousness, High School Students; HS-CAR=Career Benefits, High School Students; HS-COM=Community Activities, High School; HS-POL=Political Voice Activities, High School; C-VAL=Educational Valuing, College; C-RES=Responding to Class-Related Requirements, College; C-INI=Class-Related Initiative Taking, College; C-NOR=Norms, College; C-CON=Connectedness, College; C-COS=Costs, College; C-AWA=Awareness, College; C-INT=Intentions, College; C-BEN =Benefits, College; C-SER=Seriousness, College; C-CAR=Career Benefits, College; C-COM=Community Activities, College; C-ELE=Electoral Activities, College; C-POL=Political Voice Activities, College.

Hypothesis 1 predicted main effects of high school civic engagement levels on college freshmen enrollment in a service-learning course. To test these main effects, we ran a multiple hierarchical regression analysis, entering the control variables of students' SATs and HS-GPA and race (Black/non-Hispanic) in the first step and high school civic attitude and behavioral engagement levels in the second step. The results indicated that in step 2, previous civic engagement attitudes (student intentions toward community involvement in particular) ( $\beta = .24, p < .01$ ), previous civic engagement behaviors of student participation in community activities ( $\beta = .36, p < .001$ ), and student participation in political voice activities ( $\beta = -.12, p < .05$ ) added additional significant variance to the model ( $\Delta R^2 = .26, p < .001$ ). These results demonstrated support for hypothesis 1, that students with prior community engagement experience were more likely to take a service-learning course. See Table 3.

**Table 3.** Main Effects of Previous (High School) Civic Attitude and Behavioral Engagement Levels on College Freshman Enrollment in a Service-Learning Course

	<i>Step 1</i>	<i>Step 2</i>
Control Variables		
SATs	-.24***	-.15**
HS-GPA	-.09	-.15**
RACE	-.14*	-.05
Previous Civic Attitudinal Engagement		
HS-AWARENESS		-.04
HS-NORMS		.11
HS-CONNECTEDNESS		.09
HS-SERIOUSNESS		-.14
HS-COSTS		-.06
HS-BENEFITS		-.11
HS-CAREER BENEFITS		.02
HS-INTENTIONS		.24**
Previous Civic Behavioral Engagement		
HS-COMMUNITY PARTICIPATION		.36***
HS-POLITICAL VOICE PARTICIPATION		-.12*
<i>Adj R</i> <sup>2</sup>	.11***	.35***
$\Delta R^2$		.26***

Note: N = 300; \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . GROUP = College Freshman Group Type (Non-Service-learning [coded as 1] vs. Service-learning [coded as 2]).

Hypothesis 2 predicted main effects of high school academic engagement levels on college freshman enrollment in a service-learning course. To test these main effects, we ran a multiple hierarchical regression, entering the same control variables as above in the first step and high school academic attitude and behavioral engagement levels in the second step. The results indicated that in step 2, neither previous academic engagement attitudes nor behaviors significantly contributed to the model. These results demonstrated no support for hypothesis 2; there was no relationship between prior academic engagement and likelihood of taking a service-learning course.

Hypothesis 3 was a replication of the previous literature, demonstrating that students in a service-learning course are more civically engaged than students in a non-service-learning course.

However, here, we provided a more stringent test because we controlled for previous levels of civic engagement. This hypothesis predicted main effects of participation in a service-learning course on civic engagement levels for college freshmen. To test these main effects, we ran a series of 11 multiple hierarchical regressions (using the eight civic engagement attitudes and the three civic engagement behaviors as the dependent variables), entering the same control variables as above in the first step, high school civic attitude and behavioral engagement levels in the second step, and college freshman group type (comparison/non-service-learning group and experimental/service-learning group) in the third step. The results indicated that only civic behavioral engagement around student participation in community activities was significantly predicted by service-learning ( $\beta = .59$ ,  $p < .001$ ) and added additional variance to the overall model ( $\Delta R^2 = .22$ ,  $p < .001$ ). These results demonstrated partial support for hypothesis 3, that students in the service-learning course were more civic behaviorally engaged in community activities but not more civic behaviorally engaged in electoral activities or political voice activities; nor were they more civic attitudinally engaged. See Table 4 for regression results for civic behavioral engagement around student participation in community activities.

**Table 4.** Main Effects of Service-Learning on Civic Behavioral Engagement Levels around Participation in Community Activities for College Freshmen

	<i>CIVIC BEHAVIORAL ENGAGEMENT</i>		
	<i>Step 1</i>	<i>Step 2</i>	<i>Step 3</i>
Control Variables			
SATs	-.18**	-.06	.03
HS-GPA	-.12*	-.19***	-.10*
RACE	-.20**	-.10	-.07
Previous Civic Attitudinal Engagement			
HS-AWARENESS		-.07	-.05
HS-NORMS		.09	.02
HS-CONNECTEDNESS		.15	.10
HS-SERIOUSNESS		-.08	.004
HS-COSTS		-.09	-.06
HS-BENEFITS		-.12	-.05
HS-CAREER BENEFITS		.04	.03
HS-INTENTIONS		.15*	.01
Previous Civic Behavioral Engagement			
HS-COMMUNITY PARTICIPATION		.45***	.23***
HS-POLITICAL VOICE PARTICIPATION		-.08	-.01
College Freshman Group Type			.59***
<i>Adj R</i> <sup>2</sup>	.12***	.43***	.65***
$\Delta R^2$		.33***	.22***

Note: N = 300; \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . College Freshman Group Type= Non-Service-learning [coded as 1] vs. Service-learning [coded as 2].

To further explore the above results, we compared the types of service projects engaged in between the two groups of students (with the control variables and high school civic attitudinal and



behavioral engagement levels entered as co-variables). As expected (due to their service projects), students in service-learning courses indicated that they were more likely to engage in tutoring/teaching (means = 2.74 vs. 1.92,  $F = 16.61, p < .001$ ) and mentoring (means = 2.68 vs. 1.70,  $F = 26.93, p < .001$ ). However, they also indicated that they were more likely to engage in a fundraiser (means 2.33 vs. 1.74,  $F = 10.40, p = .001$ ), and community improvement (means = 1.55 vs. 9.25,  $p < .01$ ). There was no difference between the two groups on conflict mediation, service to the homeless, hospital work, or substance abuse education. This lends further support for hypothesis 3, that students in the service-learning courses participated in community service beyond the service projects within their course.

Hypothesis 4 was a replication of the previous literature, demonstrating that students in a service-learning course are more academically engaged than students in a non-service-learning course. However, here, we provided a more stringent test because we controlled for previous levels of academic engagement. The hypothesis predicted main effects of participation in a service-learning course on academic engagement levels for college freshmen. To test these main effects we ran a series of three multiple hierarchical regressions (using the academic engagement attitudes scale and the two academic engagement behaviors as the dependent variables), entering the same control variables as above in the first step, high school academic attitude and behavioral engagement levels in the second step, and college freshman group type (comparison/non-service-learning group and experimental/service-learning group) in the third step. None of the analyses were significant. The results indicated that freshmen in a service-learning course were not more likely to have higher academic engagement attitudes or behaviors than freshmen in the comparison group - demonstrating no support for hypothesis 4.

Hypotheses 5 and 6 were structured within the college freshman service-learning course and predicted main effects of academic *behavioral* engagement on academic and civic *attitudinal* engagement. We expected weak or no main effects of civic *behavioral* engagement on these variables. To test these main effects we ran a series of nine multiple hierarchical regressions, entering the control variables of high school academic and civic attitudinal and behavioral engagement levels in the first step, and college freshman academic and civic behavioral engagement levels in the second step. The results of these regressions indicated that (a) academic behavioral engagement around responding to class-related requirements made a significant impact on both academic attitudinal engagement (valuing education,  $\beta=.23, p<.001$ ), and civic attitudinal engagement around norms ( $\beta=.11, p<.05$ ), connectedness ( $\beta=.12, p<.05$ ), seriousness ( $\beta=.16, p<.01$ ), benefits ( $\beta=.17, p<.01$ ), and career benefits ( $\beta=.19, p<.01$ ). Opposite of predictions, academic behavioral engagement was associated with higher cost ( $\beta=.16, p<.01$ ) (b) academic behavioral engagement around class-related initiative taking made a significant impact on civic attitudinal engagement around connectedness ( $\beta=.12, p<.05$ ), seriousness ( $\beta=.14, p<.05$ ), costs ( $-.14, p<.05$ ), and intentions ( $\beta=.17, p<.05$ ), (c) civic behavioral engagement around participation in community activities made a significant impact on civic attitudinal engagement around costs ( $\beta=-.21, p<.01$ ), but had a negative impact on seriousness ( $\beta=-.21, p<.05$ ),  $p<.001$ ), (d) civic behavioral engagement around participation in electoral activities made a significant impact on civic attitudinal engagement around intentions to participate ( $\beta=.13, p<.05$ ), and (e) civic behavioral engagement around participation in political voice activities made a significant negative impact on civic attitudinal engagement around connectedness ( $\beta=-.14, p<.01$ ), and intentions ( $\beta=-.12, p<.05$ ). See Table 5. These results demonstrated support for hypothesis 5 that academic behavioral engagement within a service-learning course leads to greater change in both academic and civic attitudinal engagement at the end of the course, and partial support for hypothesis 6 that civic behavioral engagement within a service-learning course leads to little or no change in academic attitudinal engagement. Civic behavioral engagement led more to changes in individual costs and intentions to participate (both in positive and negative directions depending on type) but had a negative impact on attitudes towards the community in terms of seriousness and connectedness.

**Table 5.** Main Effects of Academic and Civic Behavioral Engagement on Academic and Civic Attitudinal Engagement for College Freshmen in a Service-Learning Course

	Academic Attitudinal Engagement		Civic Attitudinal Engagement										
	VALUING ED		NORMS		CONNECTED		SERIOUSNESS		COST				
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2			
Previous Academic Attitudinal & Behavioral Engagement													
HS-VALUING ED	.37***	.33***	.11*	.08	.08	.04	-.04	-.05	-.04	-.04	-.05		
HS-RESPOND TO REQUIREMENTS	.01	-.04	-.09	-.12*	.01	-.03	.02	-.08	.02	.02	-.08		
HS-CLASS RELATED INITIATIVE	.05	-.02	.04	-.02	.01	-.03	.05	.12*	.05	.05	.12*		.12*
Previous Civic Attitudinal & Behavioral Engagement													
HS-A WARENESS	.01	.01	.001	.004	.08	.10	.02	-.01	.02	.02	-.01		-.01
HS-NORMS	.12	.11	-.03	-.04	-.01	-.01	.06	.08	.06	.06	.08		.08
HS-CONNECTEDNESS	.02	-.003	.40***	.39***	.11	.12	-.06	.003	-.06	-.06	.003		.003
HS-SERIOUSNESS	.05	.06	.26***	.25***	.47***	.44***	-.05	-.06	-.05	-.05	-.06		-.06
HS-COSTS	-.05	-.004	-.05	-.02	-.13*	-.08	.56***	.56***	.56***	.56***	.56***		.56***
HS-BENEFITS	-.10	-.08	.10	.12	.02	.03	-.10	-.13	-.10	-.10	-.13		-.13
HS-CAREER BENEFITS	.15*	.13	.02	.01	-.01	-.01	.03	.03	.03	.03	.03		.03
HS-INTENTIONS	-.06	-.06	.02	.04	-.06	-.03	-.01	.05	-.01	-.01	.05		.05
HS-COMMUNITY PARTICIPATION	.08	-.01	.01	-.01	-.01	-.02	-.06	.04	-.06	-.06	.04		.04
HS-POLITICAL VOICE	-.04	-.04	-.08	-.08	.04	.06	.08	.08	.08	.08	.08		.08
College Freshman Academic & Civic Behavioral Engagement													
CF-RESPOND TO REQUIREMENTS		.23***		.11*		.12*		.16**			.16**		.16**
CF-CLASS RELATED INITIATIVE		.13		.13*		.12*		.14*			.14*		-.14*
CF-COMMUNITY PARTICIPATION		.13		.02		-.02		-.21**			-.21**		-.21**
CF-ELECTORAL PARTICIPATION		.01		-.02		.01		-.07			-.07		-.07
CF-POLITICAL VOICE PARTICIPATION		-.04		-.02		-.15**		-.02			-.02		-.02
<i>Adj R</i> <sup>2</sup>	.25***	.31***	.46***	.47***	.51***	.53***	.37***	.40***	.38***	.43***	.43***		.43***
<i>ΔR</i> <sup>2</sup>		.07***		.02*		.03**		.04**		.07***			.07***

Note: N = 139; \*p < .05, \*\*p < .01, \*\*\*p < .001.

**Table 5.** (continued)

	Civic Attitudinal Engagement					
	BENEFITS		CAREER		INTENTIONS	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Previous Academic Attitudinal & Behavioral Engagement						
HS-VALUING ED	.12*	.08	.07	.05	-.01	-.03
HS-RESPOND TO REQUIREMENTS	.11	.04	.11	.05	.07	.07
HS-CLASS RELATED INITIATIVE	-.06	-.04	-.07	-.06	-.001	-.09
Previous Civic Attitudinal & Behavioral Engagement						
HS-AWARENESS	-.004	-.02	-.04	-.06	-.09	-.06
HS-NORMS	.18*	.19*	.15	.15	.13	.12
HS-CONNECTEDNESS	-.06	-.02	.06	.08	.06	.03
HS-SERIOUSNESS	.12	.11	.13	.14	.05	.03
HS-COSTS	-.04	.01	-.01	.01	-.16**	-.13*
HS-BENEFITS	.30***	.30***	-.03	-.03	.22*	.24**
HS-CAREER BENEFITS	-.001	.01	.35***	.33***	-.13	-.14*
HS-INTENTIONS	.09	.12	.01	.02	.23**	.21**
HS-COMMUNITY PARTICIPATION	-.08	-.09	-.01	-.03	-.02	-.09
HS-POLITICAL VOICE	.03	.07	.02	.03	-.01	-.01
PARTICIPATION						
College Freshman Academic & Civic Behavioral Engagement						
CF-RESPOND TO REQUIREMENTS		.17**		.19**		.06
CF-CLASS RELATED INITIATIVE		-.02		-.04		.17*
CF-COMMUNITY PARTICIPATION		.01		.04		.10
CF-ELECTORAL PARTICIPATION		-.09		-.06		.13*
CF-POLITICAL VOICE		-.14**		.01		-.12*
PARTICIPATION						
<i>Adj R</i> <sup>2</sup>	.33***	.38***	.27***	.29***	.24***	.28***
$\Delta R^2$		.05***		.03*		.05**

Note: N = 139; \*p < .05, \*\*p < .01, \*\*\*p < .001.

## Discussion

The purpose of this study was to begin examining the multiple bidirectional relationships between service-learning pedagogy, academic engagement, and civic engagement. We generally found support for the idea that these multiple bidirectional relationships do exist and that these reciprocal relationships may work in a progressive and self-perpetuating manner. Previous attitudes and behavior were associated with choosing to participate in service-learning pedagogy; participating in service-learning was associated with subsequent behavior; and behavior during the course was associated with attitudes at the end of the course. A discussion of our findings follows.

## **How Previous Civic and Academic Engagement Impacts the Decision to Take a Service-Learning Course**

We found, as predicted by Astin and Sax (1998), that students with greater civic engagement (in terms of behaviors and intentions to participate in the future) prior to college were more likely to take a service-learning course in the first semester of their freshman year than students with less civic engagement. This is in line with other research that has examined these relationships in service-learning courses (see Reeb et al., 1998).

## **Relationship Between Service-Learning Course and Civic and Academic Engagement**

We partially replicated earlier research that demonstrated that students in a service-learning course are more likely to be civically engaged. We provided a more stringent test of this hypothesis by including previous civic engagement attitudes and behaviors. We found that students in service-learning were more likely to participate in community activities (over and above their class-related community service activities) than students not participating in service-learning. However, we found no difference in civic *attitudinal* engagement between students in service-learning and students in a comparison group.

Interestingly, unlike previous research on high-impact educational practices (Kuh, 2008), we found no support for the notion that students in a service-learning course would be more academically engaged, either behaviorally (responding to class-related requirements and taking initiative) or attitudinally (valuing education). There may be two reasons for this lack of replication. First, all students in the study were already part of a freshman learning community which is also a high-impact educational practice (Kuh, 2008). It may be that the relationship between the number of high impact educational practices per semester and academic engagement is not additive; one practice per semester may be enough to boost academic engagement. Second, for research purposes, all service-learning projects centered on helping to educate children and adolescents. Students were given little choice in selecting their service projects, and this may have resulted in projects that were not “valuable, useful, relevant, or interesting” to the students (see Billig, 2007) and thus not academically engaging.

## **How Academic and Civic Behavioral Engagement Within a Service-Learning Course Impact Attitudes**

To further understand the previous two findings as well as previous research suggesting moderate to small changes in outcomes (Conway et al., 2009), we looked at civic and academic engagement within the service-learning course. We hypothesized that student behavioral engagement during the semester would be associated with attitudinal engagement at the end of the semester. We found that students who were more academically engaged showed greater change in both academic and civic attitudinal engagement. That is, the students who were more academically engaged in the course were more likely to value education at the end of the course. In addition, they were more likely to demonstrate more positive attitudes both toward the needs of the community and the benefits to themselves, although results of costs of participating were mixed. This suggests that if the service-learning pedagogy “works,” that is, academically engages students, then the expected beneficial outcomes of the pedagogy are stronger (see also Gallini & Moely, 2003). However, service-learning courses, or even the particular service projects selected, may not academically engage all students. This is in line with similar findings by Astin et al. (2000), who suggest that the single most important factor associated with a positive service-learning experience appears to be the student’s degree of

interest in the subject matter. Different projects and practices may appeal to different students.

Students who were more civically engaged did not demonstrate change in their academic attitudinal development. In addition, their civic attitudinal engagement only focused on seeing lower costs of helping. Students did not change in terms of their beliefs about community needs. In line with previous research (Astin et al., 2000) as well as theory (Bem 1967, 1972; see also Sobus, 1995, regarding mandatory service-learning), community engagement (particularly when a student's grade is contingent upon participating) may not be enough to change civic attitudes. The key seems to be academic engagement. While Astin et al. (2000) found that processing the service project through class discussions and student discussions was important, students may have perceived less "environmental influence" on their academic engagement and thus concluded that their attitudes reflected their behavior.

Finally, and unexpectedly, those students who demonstrated more political voice activities were less likely to see the seriousness of community needs, were less likely to see the benefits of participating, and were less likely to participate in the future than students with fewer political voice activities. This suggests that different sorts of civic engagement in the classroom may have different effects on students.

## **Limitations and Research Implications**

In this study, although we considered engagement in freshmen at a single, large public teaching university, we replicated previous findings in the service-learning research, suggesting that our sample is similar to other samples in published research. Most research to date has been unidirectional, considering the impact of service-learning on engagement; however, our study suggests that there are multiple bidirectional relationships between service-learning pedagogy, academic engagement, and civic engagement, demonstrating the need for future, larger scale studies to take into account the relationships between these variables. This study also suggests that service-learning pedagogy, and perhaps the nature of the service projects, may not be academically engaging to all students. Researchers need to further understand which students respond best to which high-impact educational practices. Finally, although there has been a great deal of research on the community service component of civic engagement, less has been done on the impact of electoral activities and political voice activities in the classroom on civic engagement outcomes. The research presented here suggests that these experiences may differentially impact student attitudes and behaviors. More research is needed in this area to understand these different influences.

## **Practical Implications**

This study adds to a steadily emerging body of research growing our understanding and use of service-learning pedagogy and practices along with other high-impact educational practices. This body of research demonstrates that a student's active participation in community organizations is generally beneficial in a number of ways. Students who engage in service-learning appear to be open to engaging in more service-learning and or community engagement. We found that students who participated and who intended to participate more in high school were more likely to choose a service-learning course in their first semester in college. Students in the service-learning course in college were more involved with the community that semester (beyond their service projects), and those who were more civically engaged found that participating was less "costly" than those who were less civically engaged. This provides additional support to the literature that service-learning can enhance a student's involvement in the community. Service-learning opportunities introduced early and continually in students' educational paths may help them to develop "habits" of participating in the community, both during their education and after. However, there may be students who are not naturally inclined toward civic engagement. Therefore, it is also important to

understand how to design good service-learning experiences for such students; perhaps a different design of educational experience is required for them than for those students who are predisposed toward civic involvement.

Another key variable suggested in this study is student academic engagement as a result of the pedagogy. Higher student academic behavioral engagement during the service-learning course was associated with higher academic attitudinal engagement and higher civic attitudinal engagement. However, being exposed to service-learning pedagogies (an environmental influence) does not necessarily change a student's engagement (either behaviorally or attitudinally). Some students become academically engaged when encouraged to do so, via course requirements. However, there are a number of students who remain disengaged. Perhaps they have never learned to engage, have been discouraged from doing so (or *encouraged* not to), or were not stimulated to do so using service-learning pedagogy (but might respond to other forms of engaged pedagogy). It is becoming evident that it is important to change the culture within the K-12 system and the university to a culture of engagement that shifts engaged learning from the periphery (or occasional course/subject) to the center of teaching and learning (Swaner, 2005). If researchers and practitioners truly want students to improve on their academic and civic outcomes, students need to take control of their own learning. Faculty need to learn to teach differently, assisted by on-going, school-supported faculty development and rewards. And universities need to provide students with more seamless opportunities for learning in ways that encourage academic engagement.

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