

Research Brief

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Key Highlights:

Analysis of data from the 2014 IUPUI Alumni survey found that undergraduate alumni who participated in service learning courses reported higher levels of civic-mindedness than alumni who did not participate or participated less often in service learning courses. These results were significant after adjusting for gender, ethnicity, volunteer service in high school, and four high impact practices - participation in study abroad, research with faculty, practicum, and co-curricular service. High school volunteer service, practicum, and co-curricular service were also independent predictors of civic-mindedness. Alumni who participated in service learning courses also reported higher levels of effectiveness working with people of different races, ethnicities and religions.

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The Relationship of Participation in Service Learning Courses with Alumni Civic-Mindedness and Effectiveness Working with Diversity

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This investigation seeks to understand how participation in service learning courses as an undergraduate contributes to alumni civic-mindedness and effectiveness working with diverse others.

Research Questions

1. To what extent is the frequency in which Indiana University-Purdue University, Indianapolis (IUPUI) undergraduate alumni participated in service learning courses associated with their reported level of civic-mindedness?
2. Do IUPUI undergraduate alumni who participated in service learning courses report higher levels of working effectively with people of different races, ethnicities, and religions than those alumni who did not?

Introduction

Since Boyer's (1994) call for a renewed focus on the public purposes of higher education, many institutions of higher education have increased their efforts to support the community engagement of their students (Reich, 2014). The presence of service learning courses on college campuses is one response to this charge. Service learning has increased substantially over the past two decades and is recognized as a pedagogy that results in several positive outcomes for students (Finley, 2011). The Center for Service and Learning (CSL) at IUPUI defines service-learning as:

a course or competency-based, credit-bearing educational experience in which students (a) participate in mutually identified service activities that benefit the community, 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 & Clayton, 2012, p. 105; adapted from Bringle & Hatcher, 1996).

Participation in service learning courses has been shown to have positive connections with multiple cognitive, affective, and civic outcomes (Conway, Amel, & Gerwien, 2009). Brown (2011) found participation in service learning led to a decline in social dominance orientation, which is associated with several oppressive attitudes. Special qualities of service learning as a high impact teaching practice include: (1) sense of being able to effect change in their community, (2) increase in outcomes related to citizenship, (3) positive cognitive and affective outcomes after graduation (e.g., frequency of socializing with diverse people, promotion of racial understanding, participating in community action programs (Finley, 2011; Assessment Institute, 2013).

Fenzel and Peyrot's (2005) alumni study showed that participation in service learning courses and co-curricular service was positively related with alumni attitudes toward social and personal responsibility as well as alumni involvement in post-college community service. Participation in service learning courses had an effect higher than that of co-curricular service. A recent multi-campus study focused on undergraduate alumni of three course-based community engagement programs found high levels of political participation (95.4%) and participation in community service (82%) (Mitchell, 2016).

Civic-Minded Professional

Civic-mindedness is defined as “a person’s inclination or disposition to be knowledgeable of and involved in the community, and to have a commitment to act upon a sense of responsibility as a member of that community” (Steinberg, Hatcher, & Bringle, 2011, p. 20). Hatcher (2008) conducted the seminal work on the civic-minded professional (CMP) construct and scale. A CMP is one who is (a) skillfully trained through formal education, with (b) the ethical disposition as a social trustee of knowledge, and (c) the capacity to work with others in a democratic way, (d) to achieve public goods. Characteristics of a CMP include:

Knowledge

- Volunteer and pro bono service opportunities
- Contemporary social issues, community

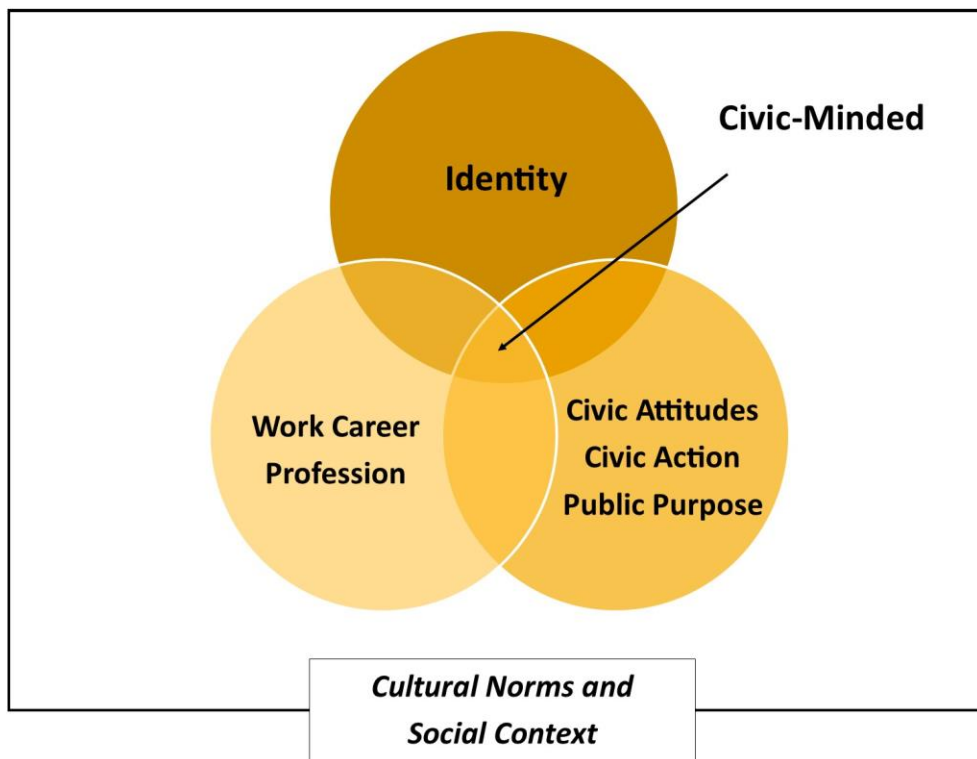
Skills

- Competency with diversity
- Consensus building across diverse opinions
- Participatory civic skills

Dispositions

- Values voluntary and pro bono service
- Motivated to serve others
- Sense of gratitude
- Social trustee of knowledge
- Passionate about work
- Sense of calling, either civic or religious
- Democratic values

The diagram below illustrates that a CMP represents the intersection of an individual’s (1) identity, (2) work, career, profession, and (3) civic attitudes, civic action, and public purpose.





CMP Scale

The CMP scale (23-items, standardized alpha = .93) was developed to be a tool for research on professionals who contribute their time, skill, and expertise to others to achieve the collective good. Understanding the traits of civic-minded professionals can ultimately contribute to more informed strategies to sustain and enhance these practices. The CMP scale measures differences among professionals and evaluates how various types of experiences are associated with differences in civic-mindedness. Survey data from a purposeful sample of campus faculty (N = 373), collected through the online Public Roles of Professionals questionnaire, was used to evaluate the reliability and validity of the CMP scale. Exploratory factor analysis identified that the CMP scale is comprised of five factors (i.e., **Voluntary Action, Identity and Calling, Citizenship, Trustee of Knowledge, Consensus across Difference**). Empirical tests for convergent validity correlated CMP scores with other measures (e.g., Perry, 1996) and correlations were significant for each of the five factors (Hatcher, 2008; (Richard, Keen, Hatcher, & Pease, 2016).

Methods

The IUPUI Office of Institutional Research and Decision Support (IRDS) administers the Alumni Survey every three years to graduates who have graduated within the past three years. The survey is focused on alumni satisfaction with their time on campus, their current employment, etc. The CSL had the opportunity to add a limited number of questions to this survey and decided to administer a version of the CMP scale. For practical reasons (survey length), CSL elected to create a short form measure from the CMP scale. Administering shortened versions of original scales is a common strategy in survey research. While the use of a short form (SF) is likely to lessen the psychometric properties of the long form it is derived from (Widaman, Little, Preacher, & Sawalani, 2011), its use was appropriate for the purposes of this alumni survey. The structure of the CMP-SF scale was informed, in part, by the face validity of the items as well as their factor loadings from prior research (Hatcher, 2008).

The 5-item CMP-SF scale was included to assess civic-mindedness among alumni. Using a 7-point response format (1 = Strongly Disagree; 7 = Strongly Agree), respondents were asked the following:

To what extent do you agree or disagree with the following statements?

- 1) I am aware of many opportunities to use my skills and abilities in community, voluntary, or pro bono service.
- 2) I often feel a deep sense of purpose in the work that I do.
- 3) I would describe myself as a politically active and engaged citizen.
- 4) The education and knowledge that I have gained should be used to serve others.
- 5) I have a strong ability to come to consensus with others through dialogue and compromise.

The following question was added to measure the frequency of participation in service learning courses using a 4-point response format (1 = none; 2 = 1 - 2 courses; 3 = 3 - 4 courses; 4 = 5 or more courses):
How many service learning courses did you take during your college years at IUPUI?

To address Research Question 2, the independent variable (*How many service learning courses did you take during your college years at IUPUI?*) was recoded to a dichotomous variable (have or have not participated in service learning courses). The dependent variable was measured using a 4-point response format (1 = Not at all Effective; 2 = Somewhat Effective; 3 = Effective; 4 = Very Effective). Respondents were asked to indicate their effectiveness in: *Working effectively with people of different races, ethnicities, and religions.*

The study used a quasi-experimental design to examine the relationship of participation in service learning courses with alumni's civic-mindedness (as measured by their CMP-SF score) and their effectiveness working with people of different races, ethnicities and religions. The survey was administered in October 2014 to all undergraduate alumni who had graduated within the past three years.



Results

The respondents' (N=770) descriptive statistics and School are shown in Table 1 (adapted from Rauch & Graunke, 2015). According to IUPUI campus data, service learning courses are represented in each of these schools to varying degrees.

Table 1: Demographic and Academic Characteristics of Respondents and Full Sample

	Respondents (%)	All IUPUI Alumni (%)
Gender		
Female	61.8	58.2
Male	38.2	41.8
Ethnicity		
White	75.1	75.9
Black	9.1	9.2
Hispanic	2.8	3.2
International	2.8	3.1
Asian	4.6	4.2
American Indiana	0.5	0.4
Unknown	5.3	3.9
Cumulative GPA		
Less than 2.49	7.9	9.4
2.50 - 2.99	20.8	23.7
3.00 - 3.49	37.9	36.8
3.50 - 4.00	33.4	30.2
School		
Fairbanks School of Public Health	1.4	1.0
Herron School of Art & Design	3.2	3.7
Kelley School of Business	13.4	11.8
Lilly Family School of Philanthropy	0.1	0.1
School of Public and Environmental Affairs	5.8	4.1
Purdue School of Engineering & Technology	12.3	13.2
Purdue School of Science	14.2	10.8
School of Health and Rehabilitation Sciences	1.0	0.6
School of Informatics & Computing	3.3	3.3
School of Dentistry	0.1	1.3
School of Education	2.8	4.8
School of Liberal Arts	26.5	23.9
School of Medicine	1.8	4.1
School of Nursing	6.5	9.2
School of Physical Ed. And Tourism Mgmt.	5.2	5.9
School of Social Work	2.3	2.2

Service Learning Courses Taken by Alumni

- 62% took one or more service learning courses at IUPUI
- 46% took 1-2 service learning courses at IUPUI
- 13% took 3-4 service learning courses at IUPUI
- 4% took 5 or more service learning courses at IUPUI

Race/Ethnicity

A chi square test for association found no statistically significant differences in alumni participation in service learning courses by race/ethnicity, $X^2(18) = 16.692, p = .544$

Gender

Differences in participation in service learning by gender are detailed in Table 2.

Table 2: Participation in Service Learning Course by Gender

SL Courses Taken	Female	Male	Total
None	30.9%	48.3%	37.5%
1-2	49.1%	39.7%	45.6%
3-4	14.0%	10.1%	12.5%
5 or more	6.0%	1.9%	4.4%

A chi-square test for association was conducted between gender and participation in service learning courses. Female students were more likely than males to report that they had participated in at least one service learning courses, $\chi^2(3) = 29.429, p = .001$.

Research Question 1

To test for the reliability of CMP-SF, a principal components analysis (PCA) was run on the 5 items in the CMP-SF. PCA revealed one component with an eigenvalue greater than one and which explained 49.1% of the variance. CMP-SF demonstrated internal consistency ($\alpha = .73$) below that of the entire 23-item CMP scale ($\alpha = .93$) (Hatcher, 2008). Despite the decreased reliability of CMP-SF from the original scale, it was still at an acceptable level (DeVellis, 1991).

The multiple regression analysis (see Table 3) controlled for gender, ethnicity, volunteer service in high school, and participation in other high impact practices (i.e., participation in study abroad, research with faculty, practicum, co-curricular service) while at IUPUI.

Table 3: Regression Results Predicting Civic-Mindedness of Alumni

Variables		<i>B</i>	<i>SE b</i>	β	<i>R</i> ²
Model 1	Gender	.103	.074	.049	.039
	Ethnicity	.134	.083	.057	
	Volunteer in High School	.259	.051	.180***	
Model 2	Gender	.112	.073	.054	.065
	Ethnicity	.108	.082	.046	
	Volunteer in High School	.201	.052	.139***	
	Study Abroad	.044	.115	.014	
	Research with Faculty	.036	.085	.015	
	Practicum	.220	.075	.104***	
Co-Curricular Service	.229	.077	.110***		
Model 3	Gender	.096	.073	.046	.083
	Ethnicity	.106	.082	.045	
	Volunteer in High School	.196	.052	.136***	
	Study Abroad	.021	.114	.006	
	Research with Faculty	.016	.085	.007	
	Practicum	.185	.075	.088**	
	Co-curricular service	.187	.077	.090**	
	Service Learning Courses	.174	.046	.137***	

Note: Statistical significance of variables contributing to these predictions is indicated in the table as follows: ** $p < .01$ *** $p < .001$

These findings indicate that participation in service learning courses significantly predicts alumni civic-mindedness as measured by CMP-SF, even when controlling for other confounding variables. As in prior



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studies (Tomkovick, Lester, Flunker, & Wells, 2008), volunteer service in high school remained a significant predictor of civic-mindedness after graduation. Practicum and co-curricular service were also significant predictors of civic-mindedness.

Research Question 2

An independent samples t-test was run to compare alumni's reported levels of "working effectively with people of different races, ethnicities and religions" for those who had taken one or more service learning courses and those who had never taken a service learning course. There was a significant difference in the scores for "working effectively with people of different races, ethnicities and religions" between alumni who had participated in service learning courses ($M = 3.58$, $SD = .61$) and alumni who had never taken a service learning course ($M = 3.43$, $SD = .71$); $t(833) = -3.36$, $p = .001$; $d = .23$.

These results suggest that participating in service learning courses as an undergraduate student is associated with an increased ability to work effectively with people of different races, ethnicities and religions after graduation.

Open-Ended Question

The survey also included a broad, open-ended question: *What do you see as the strength of the IUPUI experience?* In examining the responses, themes of the importance of IUPUI's commitment to the community and diversity, both of which are central to service learning courses, emerged.

- "The push for the students to get more involved in their community. This serves as a highlight when I think back on my time at IUPUI."
- "The community involvement and connections made throughout the city are great strengths of IUPUI."
- "Helpful faculty, tight-knit community, chance for community service experiences, and quality education."
- "Very diverse environment. Lots of opportunities to get involved around the city. Dedicated staff."
- "The diversity of the student body, as well as cultural and intellectual diversity."
- "Diversity, both in terms of race/ethnicity as well as age.....I appreciated the wide range of perspectives and experiences."
- "An urban environment with a lot of diversity. I was able to expand my classes to encompass many cultures and backgrounds."
- "LOVED the strong focus on volunteering in the community. I did not realize, until recently when I had a friend visiting Indianapolis.....how many different places I had volunteered while studying at IUPUI. I was amazed at how involved I felt and how connected I felt to the community."

Discussion

This study investigated the influence of undergraduate participation in service learning courses on alumni civic-mindedness and their reported ability to work effectively with people of different races, ethnicities, and religions. Alumni who participated more frequently in service learning courses scored higher on CMP-SF, controlling for gender, prior volunteer experience, and participation in other high impact teaching practices. They also reported a higher level of effectiveness in working with people of different races, ethnicities, and religions. This finding provides evidence for the benefits of service learning as a pedagogical strategy. It also indicates a continuing influence of service learning courses on alumni civic-mindedness and their ability to work with diverse others, within the period of three years after graduation. Likewise, the open-ended responses suggest the positive influence of experiences in the community, a central component of service learning, to students during their years on campus.

These findings have implications for campuses that promote service learning. Evidence shows that service learning is a teaching strategy that can change students' attitudes towards others in a manner different than typical course instruction. However, it is crucial for service learning instructors to follow the principles of best practices (Eyler & Giles, 1999; Mabry, 1998). To facilitate this task for IUPUI service learning faculty, the CSL developed a taxonomy of service learning courses (Hahn & Hatcher, 2015). This provides a means to support the fidelity and quality by identifying six essential attributes of service learning courses



(i.e., diversity of interactions, civic competencies, community activities, critical reflection, reciprocal partnerships, and assessment). The Taxonomy can be accessed at <http://hdl.handle.net/1805/10851>.

Limitations

The self-report nature of this data and the potential for alumni's definition of service learning to differ from the researcher's definition are both possible shortcomings of the findings. Because there was no random assignment to service learning courses, these results are correlational, no causality can be inferred. While appropriate for the circumstances and purposes of this survey, the use of a short form of a scale does decrease its psychometric properties. Finally, the current study examined the influence of participation in service learning courses from an institutional perspective, with the implication that the experiences in all service learning courses are similar. It did not examine variance in reflection activities, diverse interactions, and type of community activities and the implications of this variance on civic-mindedness and ability to work effectively with people of different races, ethnicities, and religions.

Future Research

Prior research has infrequently examined the influence of service learning courses from the context of course design, students, instructor, or community partners. Future studies should investigate service learning courses by identifying dimensions of the course (variables) that may vary and be associated with civic-mindedness and other outcomes (e.g., cognitive, affective, civic). Also, the current study is based on an instrument administered to alumni who graduate within the past three years. Future research should survey alumni who have been off campus for longer periods of time.

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