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# An exploratory study on the value of service learning projects and their impact on community service involvement and critical thinking

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## Abstract

**Purpose** – This exploratory study attempts to capture some of the principal benefits/factors attributable to service learning/community service projects, from a student perspective.

**Design/methodology/approach** – A sample of 67 males and 83 females (16 graduate, 71 seniors, and 63 juniors) participated in the study.

**Findings** – Students believe that their college experience is preparing them for the job market, that critical thinking has been enhanced, and that their college academic experience has emphasized community service upon graduation.

**Practical implications** – The results increase one's knowledge of the benefits of service learning since so much emphasis is currently being placed on improving the critical thinking and problem-solving ability of undergraduate business students.

**Originality/value** – Practitioners would be interested in understanding the impact that service learning can have on the problem-solving ability of potential employees. If additional research could advance the proposition that students with service learning experience are generally superior in terms of their problem-solving skills to students with no similar experience, then evidence of a service learning component on a student résumé suddenly adds value to the employer.

**Keywords** Learning, Education, Critical thinking

**Paper type** Research paper



## Introduction

Much has been written in recent years regarding the merits of integrating service-learning projects into course curricula, particularly in the social and behavioral science arenas. Strictly speaking, service-learning (SL) is a teaching and

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learning technique that emphasizes the integration of outside community service with in-class academic instruction. Proponents of service learning indicate that properly implemented service learning projects not only enrich the learning experience of the students, but promote reflection on the long term benefits of community service. In addition to providing students with opportunities to apply the knowledge they learn in the classroom to a real world environment, proponents argue that SL teaches civic responsibility at the same time it is helping to strengthen communities.

Even though there are many different interpretations, objectives, and contexts under which service learning can be implemented, the core concept upon which most participants tend to agree is that service-learning combines service objectives with learning objectives, with the intent that the engagement changes both the recipient and the provider of the service. This is accomplished through the combining of service tasks with structured classroom opportunities, with the service task linked to material being studied in the classroom. The resultant goal of service learning is to increase student self-reflection, self-discovery, acquisition and comprehension of values, skills, and knowledge ([www.servicelearning.org/welcome\\_to\\_service-learning/service-learning\\_is/index.php](http://www.servicelearning.org/welcome_to_service-learning/service-learning_is/index.php)). Because of the relatively recent proliferation of these type offerings, academics across disciplines have begun to expand their efforts in exploring the effectiveness of service learning techniques as a pedagogical tool. Not surprisingly, results indicate stronger support from the social science community than from business academicians, particularly in terms of applicability, resource requirements, and the additional motivation necessary to successfully implement a legitimate service learning component. Indeed, the earliest advocates of service learning were those whose academic focus included community service (i.e. liberal arts, social science, education, etc.) and whose students could readily apply the theoretical training they receive in class to a field service environment. As many business academics have since noted, however, service learning projects, when properly selected, monitored, and then executed, are entirely appropriate as a pedagogical tool for business students of all disciplines (McIntyre *et al.*, 2005; Easterling and Rudell, 1997).

While the service learning approach in most cases does appear to work well for business students, in that properly conceived service learning projects can and do offer real-world applicability, so do business internships, and so does part time private sector employment. Rhetorically speaking then – where’s the carrot? Other than the twin promise of promoting the importance of social responsibility among business students and generating goodwill for college administrators (because their students are engaging in service related community projects), why should business faculty and/or their students be encouraged to commit themselves to the taxing (e.g. often more than the advertised 15 hour outside the class commitment) requirement of a service learning experience? If service learning delivered all that its proponents suggest, then business professors would be including a SL component each semester in at least one course, *and*, students would be demanding the experience as part of their course instruction for the semester. Clearly, that has not been the case. If anything, students (as well as faculty) appear somewhat resistant to the idea, citing any number of valid reasons for not participating in a community oriented student learning course.

**Purpose of the study**

As more university instructors are encouraged to incorporate service learning activities into their course requirements, a research window exists for documented evidence of the impact that service learning experiences have on students' level of preparedness for the job market, whether it be in the area of social responsibility, or having the ability to think clearly and make rational decisions. This research begins an examination of those benefits, or learning outcomes, beginning with a focus on developing a basic understanding of the fundamental benefits suggested in the literature. It is initially believed, based on anecdotal assumptions, that additional empirical documentation supporting "the positive outcomes" of the service learning experience is needed if administrators and instructors are to truly "buy-in" and embrace service learning as a fundamental component of undergraduate learning.

The authors of the current study thus conducted a literature review examining several cross-disciplinary streams of service learning research for evidence of its value as a pedagogical tool. After confirming (from a theoretical perspective) the positive contributions attributable to service learning, the authors conducted an exploratory investigation in an attempt to capture some of the principle benefits/factors attributable to service learning/community service projects, *from a student perspective*. The study began with a series of discussions held with interdisciplinary student groups to develop background insight into the positive attributes of their college experience. One of the key insights the authors hoped to assess was the impact participation in community service learning projects had on developing the student's:

- sense of community awareness and social responsibility;
- critical thinking skills; and
- job skills and marketability upon graduation.

Input received from the students was then imbedded into an adapted version of the 2005 National Survey of Student Engagement, from which items related to the service learning component could later be extracted.

One of the anticipated findings of the study was that student perspectives on the effectiveness of community service learning projects would differ by discipline, and specifically, between business students and non-business students. In general, we believed that non-business students place more weight on the value of community service than business students. Hence, the authors were curious to determine the extent to which the various disciplines (business and/or non business majors) utilized service learning components in their course curricula, how frequently students are being exposed to the experience, and whether or not the concept of incorporating volunteerism with an applied academic component led to increased understanding of the material being discussed in class. Finally, the authors were interested in determining whether the experience proved useful (again, from a student perspective) in developing their critical thinking and improving their marketability *vis-à-vis* improving their job skills.

From a theoretical standpoint, any new information that increases our knowledge of the benefits of service learning would prove useful to business professors since so much emphasis is currently being placed on improving the critical thinking and problem solving ability of undergraduate business students. While much of the existing research in the area of service learning points to its strength as a pedagogical

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tool, new information demonstrating its effectiveness in promoting critical thinking among undergraduate business students would provide additional support to those who believe it provides valuable real world training. While it is difficult to estimate the extent to which service learning has been adapted by the business academic community, anecdotal evidence suggests a general hesitancy on the part of business professors (and their students) to use SL as a pedagogical tool. In addition, any positive confirmation of an association between service learning and the development of social responsibility among business students would provide support to those favoring the use of community service learning projects as a tool for promoting socially responsible behavior (among undergraduate business students).

Similarly, practitioners would be interested in understanding the impact that service learning can have on the problem solving ability of potential employees. If additional research could advance the proposition that students with service learning experience are generally superior in terms of their problem solving skills than students with no similar experience, then evidence of a service learning component on a student resume suddenly adds value to the employer. Students, upon noting the value of service learning from a hiring perspective, would then be more receptive to classes offering a service learning component. Similarly, business practitioners are being constantly upbraided for their perceived lack of concern for local community issues. Evidence of student involvement in community service would thus indicate the applicant's awareness of the importance of the issue from a societal standpoint, and, all things being equal, perhaps provide a leg up on the competition.

### **Service learning: background review**

Service learning has essentially been described as the integration of community service (e.g. unpaid tasks performed for a profit or not-for-profit organization) and traditional academic classroom learning requirements where the focus of the study remains within the classroom. Berson (1994) noted that the benefit of service learning is that it provides students with opportunities to gain practical experience while enhancing their resumes, but gives them a free look at possible career choices. What is known and (believed to be) understood about service learning notwithstanding, in order to promote broader acceptance and implementation of service learning initiatives, university administrators and faculty must see documented evidence of the results of service learning on individuals' future career paths. What currently exists is an abundance of anecdotal and qualitative evidence of the value of service learning initiatives (Nathan and Kielsmeier, 1991; Weatherford and Owens, 2000). Given the nature of this anecdotal evidence, there is a call to action from practitioners and decision makers to provide increased and more rigorous evidence of the effectiveness of these initiatives (Martin, 2002; Astin and Sax, 1988). Future research in this area therefore needs to begin examining the link between the outcomes associated with an undergraduate education, and student participation in service learning activities. In order to make this link, it is first necessary to understand the documented results of service learning initiatives.

Because the potential advantages offered by service learning integration appear to offset the considerable managerial oversight necessary (i.e. on the part of the professor monitoring the project and the social services manager in charge of supervising an unpaid assistant) research indicates that business educators familiar with the concept

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generally agree that service learning adds value to the undergraduate curricula (Easterling and Rudell, 1997). While several key benefits have been suggested in the literature, much of the supporting evidence is derivative in nature and based in part on the testimonials of professors who have conducted student community led projects. Despite the lack of an intense base of empirical support one would naturally expect prior to widespread acceptance and adaptation as a teaching tool, community based service learning enjoys a fine reputation among a growing number of supporters – both in the academic community and among those in the community responsible for providing social services. The following sections thus provide a brief list of the benefits attributable to the applicability of community service projects in the educational experience of undergraduate college students:

#### *Service-learning benefits to students*

It is generally acknowledged that students who engage in service learning activities as a part of their course requirements have the opportunity to gain practical experience, connect with real-world settings, and hone their leadership and problem-solving abilities. Zlotkowski (1996), for example, found that students who were engaged in service learning activities have enhanced development of skills that prepare them for real world experiences. Skills noted in the study include *effective teamwork, cross functional flexibility, increased interpersonal and communication skills, and multicultural sensitivity*. Development of these skills has been demonstrated to positively impact student confidence when pursuing (and later, succeeding) in future jobs. Easterling and Rudell (1997) provide a litany of the long-term benefits of service learning initiatives, concluding that service learning components offer students an opportunity to:

- develop their problem-solving skills;
- improve their self confidence and basic social skills;
- cultivate leadership potential; and
- and finally, because service learning projects often place students in environments where they will be working with people from different cultural backgrounds: the ability to confront issues of diversity.

Barnes (2001) notes that among its other benefits to students, service learning provides networking opportunities through the development of new contacts with clients, which in turn, give students a competitive advantage during the job interview process. Supporting earlier research, the author basically reaffirms the idea that service learning involvement enables student self-confidence, communication and leadership skills, and enhances time management.

#### *Measurement of outcomes*

Researchers have begun to answer the call to develop more substantive evidence of the effects of service learning. Vogelgesang and Astin's (2000) study found that service learning had a significant effect on all student outcomes measured, including leadership and future plans. Bonnette (2006) found that technology students who participated in a service learning project for the Habitat for Humanity gained real world experience and enhanced levels of personal and social maturity. McIntyre *et al.*



(2005) tested the effects of service learning within the marketing discipline and discovered that a majority of the marketing faculty in their sample associated service learning with positive student outcomes. The positive attitude of marketing faculty duly noted, the authors then warned that empirical studies assessing the impact of service learning were too scarce at the moment for anyone to make reliable assertions as to the verifiable benefits, and specifically, evidence related to service learning in the marketing curriculum was virtually non-existent. Given that so many have somewhat wistfully proclaimed the positive benefits of service learning experiences, it is now time to document the effectiveness of service learning using new and innovative methodologies. Weatherford (1998) and Weatherford *et al.* (2003) have recently articulated that one of the future challenges for service learning proponents will be in developing effective ways to demonstrate the true impact of service learning. Practitioners in the field and decision-makers outside the field of service learning have therefore called for more rigorous evidence advancing what is, at this point, a strong theoretical underpinning of service learning supported by anecdotal perspective.

The current study is a “first step” process that uses an exploratory methodology to develop an initial platform to advance the direction of future empirical research. As a starting point, researchers would benefit from knowing the real, as opposed to the perceived, impact service learning projects have on improving student comprehension of in-class material. Because there has been little effort at this point to develop a conceptual model of the casual outcome of service learning projects, the current research effort is confined to three elements believed to be part of the panoply of outcomes associated with service learning:

- (1) promoting community awareness;
- (2) promoting critical thinking skills; and
- (3) improved job related skills.

The authors believe that in order to promote better understanding of the possible components delineated as service learning outcomes, research will have to progress slowly in the initial stages and therefore the authors have intentionally limited the scope of factors studied.

### Methodology

A total of 67 males and 83 females (16 graduate, 71 seniors, and 63 juniors) participated in the study, with 97 indicating some major other than business and 53 indicating they were business majors. The survey developed for the current study uses items adapted from the 2005 National Survey of Student Engagement (NSSE) as well as questions derived from student focus groups when asked to evaluate various aspects of their educational experience. In addition to general questions related to the focus of the study, two items item *specifically* related to student involvement in community service learning (V27 and V51) was imbedded in the questionnaire. The items selected for the current study (Figure 1) were believed to be associated, either directly or indirectly, to service learning. Hence, while the overall survey effort was designed to several constructs, what is presented below is an analysis of items that we believe relate well to student perceptions of applied academic projects involving community service, critical thinking skills, and job related skills.



Please indicate how important the following are to you personally: (1=not important at all; 2=not too important; 3=neutral; 4=somewhat important; 5=very important)

V1: Becoming involved with a program to improve my community.  
1 2 3 4 5

V2: Finding a career that provides the opportunity to be helpful to others in society.  
1 2 3 4 5

Please indicate how strongly you agree or disagree with each statement. Circle the number that best describes your response: (1=strongly disagree; 2=somewhat disagree; 3=neutral; 4=agree; 5 strongly agree)

V3: I have a good understanding of the needs and problems facing the community in which I live.  
1 2 3 4 5

V5: I am motivated by courses that contain hands-on application of theories to real life situations.  
1 2 3 4 5

V9: I learn course content best when connections to real life situations are made.  
1 2 3 4 5

Please respond to the following questions. (1=never; 2=almost never; 3=sometimes; 4=usually; 5=always)

V16: How often does what you learn in your courses relate to your life outside of college?  
1 2 3 4 5

Other items of interest that were included as part of the study (but are not limited to) the following:

In your experience at college, how often have you been involved in one of the following activities? (1=never; 2=almost never; 3=sometimes; 4=often; 5=very often)

V27: Participated in a community-based project as part of a regular course.  
1 2 3 4 5

Which of the following have you done or do you plan to do before you graduate from your institution?

	Done	Plan to do	Don't	Undecided
				plan to
V50: Practicum, internship, field experience, co-operative experience, or clinical assignment	___	___	___	___
V51: Service Learning or community service.	___	___	___	___

To what extent has your college experience contributed to your knowledge, skills, and personal development in the following area? (1=not at all; 2=very little; 3=some; 4=quite a bit; 5=very much).

V62: Acquiring job or work-related knowledge and skills.  
1 2 3 4 5

V65: Thinking critically and analytically.  
1 2 3 4 5

V73: Contributing to the welfare of your community.  
1 2 3 4 5

Figure 1.

The university population used in the study attends a medium sized (5,000-10,000) public liberal arts institution located in the South Eastern part of the United States. The university has six principle schools: *Life Sciences* (Biology, Chemistry, Botany, etc.); *Business* (Accounting, Business Administration, Management, Economics, etc.); *Health Sciences* (Nursing, Physical Therapy, Health Technology); *Humanities* (English, Philosophy, Religion, etc.); *Social Sciences* (Anthropology, History, Political Science, Psychology, etc.) and *Education* (Other schools include Parks and Recreation, Communications, and Visual and Performing Arts which were not included with the totals). The mean scores of non-business majors were combined into a single variable and compared against the mean for business majors on the various items listed above.

The percentage breakdown in terms student response, by school, and prior to the combining of majors, is as follows:

- School of Business: 35.3 percent.
- Social Sciences: 26.0 percent.
- Life Sciences: 12.0 percent.
- Health Sciences: 9.3 percent.
- Humanities: 2.0 percent.
- Education: 1.3 percent.

### Results and findings

A reliability analysis for the initial seven item scale was assessed using Cronbach's Alpha. The reason for the reliability assessment was to insure the measurement items (or scale statements) used in the survey instrument were a consistent measurement of the intended concept. According to Hair *et al.* (1992), reliability is the degree to which a set of scale items "share" in their measurement of the construct being measured. An increase in the reliability of the scale therefore indicates that the items are internally consistent with one another and thus a good indicator that the items are actually measuring the concept under investigation. Coefficient alpha is generally considered one of the best measurements of the reliability of the scale being used (Nunnally, 1978).

The initial standardized score (Coefficient alpha) for the scale was 0.588. Removing item V27 improved the scale's Alpha coefficient (item to total correlation score) to 0.627. Additionally, scale development researchers indicate that inter-item correlations, or the degree to which the various items are related to other items in the scale, should be low (Nunnally, 1978). With the exception of items V1 and V2, which had a correlation of 0.537, there was no evidence of additional items with correlations approaching the 0.5 level. Hence, the initial survey instrument demonstrates an acceptable level of reliability (e.g. items measure the same construct), and little or no evidence of redundancy among the various items comprising the scale instrument (e.g. each item contributes but is distinct from other items in the scale).

Since scale reduction did not appear to be an issue, the authors next conducted a factor analysis. The result of the factor analysis revealed individual scale items were highly correlated with one of three factors and did not cross-load on other factors. In other words, if an item had a high factor loading on one of the identified factors, it did not have a high factor loading on either of the other two factors, indicating to a sufficient degree that individual items were associated with single factors. Results of the factor loadings are as follows:

- Factor 1 = V1 (0.822), V2 (0.659), V3 (0.645) and V16 (0.607)
- Factor 2 = V27 (0.750), V51 (0.648)
- Factor 2 = V5 (0.781), V9 (0.753).

Items loading on factor 1 (28.6 percent of variance) appear to relate to *social responsibility and involvement in community improvement*, factor 2 (17.6 percent of variance) appears related to whether the *student participated in or plans to plans to participate in a service learning/community based experience*, and factor 3 (13.1 percent) appears to relate to *choosing courses based on the fact that they allow for improved learning though hands on experience*. Both factors 1 and 3 appear to relate well to the conceptual underpinnings of service learning and thus provide a degree of content validity to the study.

Prior to analyzing the data by group affiliation (business majors vs. non-business majors), descriptive statistics were run on the items selected for study, using input from the entire student pool. The percentage of those who responded positively (i.e. the respondent circled either 4 or 5 indicating either important or very important, etc.) to the items previously noted are as follows:

- 56.6 percent (Item V1: Becoming involved with a program to improve my community).
- 80.1 percent (Item V2: Finding a career that provides the opportunity to be helpful to others in society).
- 53.9 percent (Item V3: I have a good understanding of the needs and problems facing the community in which I live).
- 83.1 percent (Item V5: I am motivated by courses that contain hands-on application of theories to real life situations).
- 91.5 percent (Item V9: I learn course content best when connections to real life situations are made).
- 90.8 percent (Item V16: How often does what you learn in your courses relate to your life outside of college?).
- 44.7 percent (Item V27: Participated in a community-based project as part of a regular course).

The results indicate that students are, in fact, interested in community service, and attitudes toward course work that offers hands-on or real world applicability are generally positive. Indeed, responses to items 50 and 51, which relate to either outside projects (V50, internships, etc.) or, (V51; service learning projects in particular) indicate that a majority of students have either participated in, or plan to participate in, one or the other type projects prior to graduation:

- 68.0 percent (Item V50: Practicum, internship, field experience, co-operative experience, or clinical assignment).
- 69.3 percent (Item 51: have done or plan to do a Service Learning or community service project prior to graduation).

Additionally, based on responses to items 62, 65, and 73 (which relate to the benefits of the college educational experience the students are receiving), most students

apparently believe that the college used in the study has prepared them for “life after college,” in the same areas that service learning is presumably ideally suited as a pedagogical tool. While interesting, no empirical linkage could be drawn (simply using the descriptive statistics) between the sample’s positive response on these three items and participation in a service learning project:

- (1) 89.6 percent (Item V62: Acquiring job or work-related knowledge and skills).
- (2) 94.1 percent (Item V65: Thinking critically and analytically).
- (3) 72.6 percent (Item V73: Contributing to the welfare of your community).

### Assessing statistical difference: business vs non-business majors

#### *Community-based service learning projects*

A *T*-test was run on items V51 (whether the individual has participated in or plans to participate in a service learning or community service project) and item V27 (participated in a community-based project) between business majors ( $n=52$ ) and non-business majors ( $n=97$ ). The *T*-test was used to determine if a statistically significant difference existed between the two groups of students. Indications of a statistically significant difference would imply that the two groups are, in fact, behaviorally different in terms of these two variables. Another way of saying this would be that one group participates in these type activities either (statistically) more or less than the other group.

The results are significant at the 0.019 level for item V51 and non-significant for item V27, indicating that there appear to be real differences between the participation rate of business and non-business students on the item specifically measuring community based *service learning* projects. Ironically, item V51 suggests that participation rates among business students is actually higher than for non-business majors ( $F=5.6$ ; mean Bus = 1.6 vs mean non-Bus = 1.27). When asked about participation in community based projects, the opposite was true ( $F=2.0$ ; mean Bus = 2.03 vs mean non-Bus = 2.57), perhaps suggesting confusion on the part of respondents as to what constitutes service learning and/or community service. Combining the two variables into a single factor (COMPRJ) the means for non-business majors is 1.97 and for business majors it is 1.82, with no significant difference between the two groups. The low mean scores suggest a low participation rate for community based projects, *among both groups*.

#### *Community service involvement*

Items V1-V3 and item V16 convey the importance respondents attach to community service. *T*-tests revealed significant differences for items V1 and V2 (0.05 and 0.002 respectively) and no significance for items V3 (0.156) and V16 (0.363). Interestingly, the mean scores for *non-business majors* was higher for all four variables (V1: 3.71 vs 3.42; V2: 4.40 vs 3.88; V3: 3.34 vs 3.11; V16: 3.37 vs 3.22). When combined as a single variable (COMAWARE), the mean scores for non-business majors become 3.71 vs 3.41 for business majors, and non significant, suggesting that *non-business majors are not more concerned with community service than business majors*.

*Learning enhancement*

Items V5 and V9 relate to criteria used by undergraduate students in their course selection, specifically, whether courses offering hands on application to real life situations were valued (V5), whether learning improves when the course content is connected to real life situations (V9) and whether what is learned in class relates to real life (V16). The two items in question (e.g. item V5: I am motivated by courses that contain hands-on application of theories to real life situations; and item V9: I learn course content best when connections to real life situations are made), are higher for non-business than business majors (item V5: mean for non-Bus = 4.20 vs mean for Bus = 3.88; and item V9: mean for non-Bus 4.32 vs mean for Bus 4.26, with V5 significant at the .04 level and item V9 non-significant). The combined variable (LEARN) mean score for non-business majors is 4.26 and for business majors is 4.07, with the factor itself being non-significant. The relatively high mean scores, however, suggest that *both groups value hands on experience as a learning tool and would probably take courses that did in fact offer some sort of outside the class project because they feel it improves the learning experience.*

**Correlation analysis***Improved cognitive ability*

One of the positive attributes associated with service learning projects is its presumed ability as a pedagogical tool to improve cognitive thinking (i.e. analysis, synthesis, decision making, and application of academic theories to real world scenarios). The authors adapted the standard items listed on the NSSE (2005) survey to assess the degree of association between the four scale items noted as areas of cognitive thinking (ANAL; SYN; JUD; and APPLY) and the three items noted earlier as associated with service learning projects (i.e. increased community awareness (COMAWRE); increased learning (LEARN); and participation in community based service learning projects (COMPRJ)). The correlation table for degree of association between these variables is listed in Table I.

Based on the finding from the correlation tables, the following results are summarized (\*\* = significance at the 0.01 level; \* = significance at the 0.05 level):

- *Analysing*: community awareness ( $p = 0.172^{**}$ ); learning ( $p = 0.286^{**}$ ) and community based service learning projects ( $p = 0.066$ ).
- *Synthesis*: community awareness ( $p = 0.128$ ); learning ( $p = 0.272^{**}$ ); and community based service learning projects ( $p = 0.172^*$ ).
- *Making judgments*: community awareness ( $p = 0.130$ ); learning ( $p = 0.221^{**}$ ); and community based service learning projects ( $p = 0.144$ ).
- *Applying*: community awareness ( $p = 0.157$ ); learning ( $p = 0.294^{**}$ ); and community based service learning projects ( $p = 0.113$ ).

While there were several areas of significance between the four aspects of cognitive learning and the three items associated with Service Learning outcomes, the only area in which a significant relationship exists between *participation in community service learning projects* and one of the four major learning areas is in the area of *synthesizing information* ( $p = 0.172^*$ ). When the four items associated with cognitive learning were collapsed into a single item (see Table II), however, the results become:

	ANAL	SYN	JUD	APPLY	COMAWRE	LEARN	COMPRJ
ANAL	Pearson Correlation Sig. (2-tailed) n	1 0.000 153	0.338(**) 0.000 153	0.530(**) 0.000 151	0.172(*) 0.036 149	0.286(**) 0.000 152	0.066 0.421 149
SYN	Pearson Correlation Sig. (2-tailed) n	0.550(**) 0.000 153	0.597(**) 0.000 153	0.433(**) 0.000 151	0.128 0.120 149	0.272(**) 0.001 152	0.172(*) 0.036 149
JUD	Pearson Correlation Sig. (2-tailed) n	0.338(**) 0.000 153	0.597(**) 0.000 153	0.432(**) 0.000 151	0.130 0.113 149	0.221(**) 0.006 152	0.144 0.079 149
APPLY	Pearson Correlation Sig. (2-tailed) n	0.530(**) 0.000 151	0.432(**) 0.000 151	1 0.000 151	0.157 0.057 147	0.294(**) 0.000 150	0.113 0.173 147
COMAWRE	Pearson Correlation Sig. (2-tailed) n	0.172(*) 0.036 149	0.130 0.113 149	0.157 0.057 147	1 0.000 148	0.361(**) 0.000 145	-0.013 0.878 145
LEARN	Pearson Correlation Sig. (2-tailed) n	0.286(**) 0.000 152	0.221(**) 0.006 152	0.294(**) 0.000 150	0.361(**) 0.000 148	1 0.000 152	-0.019 0.818 148
COMPRJ	Pearson Correlation Sig. (2-tailed) n	0.066 0.421 149	0.144 0.079 149	0.113 0.173 147	-0.013 0.878 145	-0.019 0.818 148	1 0.818 149

**Notes:** \*Correlation is significant at the 0.05 level (2-tailed); \*\* correlation is significant at the 0.01 level (2-tailed)

**Table I.**  
Correlations between the four learning objectives and three service learning factors

**Table II.**

Correlations between *all* objectives and three service learning factors

		ALLOBJ	COMAWRE	LEARN	COMPRJ
ALLOBJ	Pearson Correlation	1	0.179*	0.338*	0.162*
	Sig. (2-tailed)		0.030	0.000	0.050
	<i>n</i>	151	147	150	147
COMAWRE	Pearson Correlation	0.179*	1	0.361**	-0.013
	Sig. (2-tailed)	0.030		0.000	0.878
	<i>n</i>	147	150	148	145
LEARN	Pearson Correlation	0.338**	0.361**	1	-0.019
	Sig. (2-tailed)	0.000	0.000		0.818
	<i>n</i>	150	148	152	148
COMPRJ	Pearson Correlation	0.162*	-0.013	-0.019	1
	Sig. (2-tailed)	0.050	0.878	0.818	
	<i>n</i>	147	145	148	149

**Notes:** \*Correlation is significant at the 0.05 level (2-tailed); \*\*correlation is significant at the 0.01 level (2-tailed)

- ALLOBJ (all objectives): community awareness ( $p = 0.179^*$ ); learning ( $p = 0.338^*$ ); and community service learning projects ( $0.162^*$ ) (see Table II).

Here we discover that community based service learning projects is significant in terms of its correlation with the overall objective of promoting cognitive learning.

**Assessment of three major pedagogical outcomes**

The three major outcomes that have been associated with service learning projects are:

- (1) improvement/development of job skills (and thus improving the marketability of students – see NSSE item 11b);
- (2) improvement/development of cognitive skills (which has been assessed previously – see NSSE item 11e); and
- (3) contributing to the development of social responsibility among students (see NSSE item 11o).

These items appear in the adapted survey as items V62, V65, and V73 and were assessed both individually and as a component variable (ALLOUT, e.g. all outcomes) against the three component factors developed in the study. The results are seen in Tables III, IV and V.

As the results indicate, student perceptions of the importance of community involvement tend to be highly correlated with perceptions of their college experience

**Table III.**

Correlations between job skills and three service learning outcomes

		JOBSKIL	COMAWRE	LEARN	COMPRJ
<i>Item V62 (JOBSKIL)</i>					
JOBSKIL	Pearson Correlation	1	0.203*	0.009	-0.107
	Sig. (2-tailed)		0.013	0.917	0.193

**Notes:** \*Correlation is significant at the 0.05 level (2-tailed); \*\*correlation is significant at the 0.01 level (2-tailed)



(i.e. in terms of developing job skills, critical thinking ability and eventually contributing to the community). The only other significant correlation appears to be between perceptions that courses offering “hands on” type learning experiences (e.g. LEARN) and student perceptions that their college experience has enabled their ability to contribute to the community (WELFARE). Interestingly, the community service learning project variable was not significant across the three areas.

**Conclusions and recommendations for future study**

The preliminary findings suggest that service learning projects, while theoretically useful in, firstly, focusing business student efforts beyond simply making money (i.e. promoting socially responsible behavior *vis-à-vis* community service obligations), and secondly, improving student cognitive reasoning skills, are only marginally beneficial in promoting either attribute. The results of the current study indicate that:

- When studied as a whole using only descriptive statistical analysis, the sample used in this study were quite positive in their attitude when assessing their stated interest in participating in service learning projects.
- It is likely that most students don’t make a real distinction between community service learning projects and other outside projects (such as internships).
- Ironically, students appear to understand and appreciate the connection between hands-on/application type projects conducted outside the class, and increased understanding of academic concepts covered in class.
- Most students in the sample appear to believe that their college experience is preparing them for the job market, that critical thinking has been enhanced, and that their college academic experience has emphasized community service upon graduation.

		THINK	COMAWRE	LEARN	COMPRJ
<i>Item V65 (THINK)</i>					
THINK	Pearson Correlation	1	0.176*	0.105	-0.069
	Sig. (2-tailed)		0.032	0.199	0.400
	<i>n</i>	153	149	152	149

**Notes:** \*Correlation is significant at the 0.05 level (2-tailed); \*\* correlation is significant at the 0.01 level (2-tailed)

**Table IV.**  
Correlations between critical thinking and three service learning outcomes

		WELFARE	COMAWRE	LEARN	COMPRJ
<i>Item V72 (WELFARE)</i>					
WELFARE	Pearson Correlation	1	0.396**	0.266**	0.118
	Sig. (2-tailed)		0.000	0.001	0.153
	<i>n</i>	153	149	152	149

**Notes:** \*Correlation is significant at the 0.05 level (2-tailed); \*\* correlation is significant at the 0.01 level (2-tailed)

**Table V.**  
Correlations between welfare and three service learning outcomes

- Using statistical difference tests, it appears that actual college student participation rates for service learning and community service projects are relatively low among both business and non-business students, with no apparent significant differences discovered.
- Non-business majors appear to place greater weight on the importance of community involvement and its role in their career choice, than do business majors.
- Both business and non-business students appear to value courses with a “hands on” component offering some degree of applicability, as a learning tool. Non-business majors appear to place more weight on such courses than business majors, although the mean scores of both groups appear high.
- While the degree of association differs for each learning element (analysis, synthesis, decision making, and applicability), it would appear that combing the perceived importance of community service with participation in community service learning projects would in fact increase cognitive skills among students.
- The sample we tested doesn’t appear to associate improved job skills/marketability, critical thinking, and concern for the welfare of the community with community service projects. In other words, while the overall college experience *vis-à-vis* these three variables has been rated positively by the sample, improvements in these areas is attributable to service learning or community service projects.

The study has many limitations, the first being that some of the items used may not be theoretically palatable as a measurement instrument for studying the outcomes of a service learning experience. Even when specific items are included as part of a measurement on the overall college experience, there is difficulty in assessing whether students fully understand the concept, its impact on the learning process, and/or whether they even separate service learning from other outside of class projects. Hence, while we believe there is some validity for accepting the results of the factors we developed, any new survey should be properly validated for both reliability and content validity as provided by academic literature in this area. Secondly, the limited sample, and thus the results, can in no way generalize the attitudes of college students across the spectrum of college campuses. In order to redress this issue, future studies must include a random sampling of college campuses, with population size, composition, and mission statements isolated for further study. Since this was an exploratory investigation, much of what has been discovered could, however, be used to help develop a more rigorous model for future research efforts. By and large, one of the important findings from the current study appears to be the discordance between positive student assessments on the factors that community service learning is supposed to promote (i.e. community involvement and cognitive learning) and corresponding attitudes toward participating in these type projects (which appear negative at worst and neutral at best). Ironically, the findings appear to suggest that students are giving college administrators mixed messages: “Yes, I can understand the need to develop myself in these two areas and I agree with you – I just don’t want to participate in a community service project in order to develop those skills.” But such, unfortunately, is the nature of exploratory studies.

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