THE INFLUENCE OF SERVICE LEARNING ON STUDENTS' PERSONAL AND SOCIAL DEVELOPMENT

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Abstract. An explanatory methods design was used to evaluate the influence of a service learning course on learning, personal, and social outcomes for service learning (n = 142) students. These students showed improvements in diversity and political awareness, community self-efficacy, and civic engagement scores from the beginning to the end of the semester. In addition, the students' academic learning, personal and interpersonal development, and community engagement were detected as the major benefits from engaging in service learning. The findings of this study suggest that service learning contributes to students' academic learning and personal and social development through social-emotional processes.

There has been an increase in the number of investigations into service learning over the past few years (Eyler 2000; Harkavy et al. 2000; Moore 2000). Service learning refers to a method under which students apply particular course concepts to real-life situations (Furco 2003). Service-learning programs are distinguished from other forms of experiential learning (i.e., community service, volunteerism) by their intention to benefit students and recipients of service equally (Sigmon and Pelletier 1996). The majority of previous investigations have measured service learning outcomes for students using either quantitative or qualitative methodologies. The quantitative studies have measured changes in students' personal and interpersonal development (Eyler and Giles 1999; Eyler et al. 2003; Moely, Mercer et al. 2002); academic learning (Eyler 2000; Vogelgesang and Astin 2000); and civic engagement (Eyler et al. 2003; Gallini and Moely 2003; Moely, Mercer et al.), while the qualitative research has explored the processes linked with students' reduced stereotyping (Howard-Hamilton 2000; Rockquemore and Shaffer 2000; Root et al. 2002) and increased community involvement (Eyler et al.; Reinke 2003). Several researchers suggest that service learning research is fairly rudimentary and outcomes need to be further examined with more rigorous methods (Eyler; Moore 2000; Ramaley 2000).

The present study addresses methodological limitations by evaluating an academic service learning model on learning, personal, and social outcomes using a dominant-less-dominant quantitative-qualitative explanatory methods design. An explanatory methods design refers to a sequential phase of data collection and an integrative analysis of quantitative-qualitative data where quantitative results are used to generate questions and provide a context for the qualitative analysis (Creswell 1994; 2005).

The first section of this article defines what an academic service learning model is, and reviews previous research on service learning. Next, an explanatory methods design is described in terms of both the quantitative analysis and the qualitative analysis. Finally, the two sets of findings are synthesized through a single discussion.

Service Learning Model

Eyler and Giles (1999) and Furco (2003) describe Sigmon and Pelletier's

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(1996) typology of service learning as a balance between community service and academic learning where service and learning goals are explicitly integrated. In this article, the term "service learning" refers to reciprocal learning in that students apply theoretical knowledge to "real world" situations, and, at the same time, they connect the service experience to the course content (Ramaley 2000; Vogelgesang and Astin 2000) through goals and objectives, activities and assignments, and reflections and discussions.

Service Learning Research

Service learning practitioners agree that this style of learning provides students with an opportunity to learn beyond the bounds of the traditional classroom (Enos and Trope 1996; Harkavy 2000); however, research on service learning and learning outcomes is mixed. For example, Litke (2002) found that low- and high-achieving students demonstrated a better ability to apply and conceptualize course concepts after the service experience after systematically analyzing reflection papers of sixty students who participated in service learning. Similarly, Strage (2000) found that service learning students did not outperform non-service-learning students on initial examinations, after comparing 311 non-service-learning students to 166 service learning students enrolled in a child development course with a service learning option. However, service learners gained more points on midterm and final exams and course essays compared to non-service learners. Vogelgesang and Astin (2000) also found that service learners had better writing skills and higher grade point averages (GPAs) than nonservice learners after conducting a national longitudinal study with 22,236 undergraduate students enrolled at 177 institutions.

Several studies have found that service learning had a positive effect on students' interpersonal and personal development (Eyler and Giles 1999; Moely, Mercer et al. 2002). For example, Moely, Mercer et al. conducted a pre- and post-test study on an interest in civic and community issues, problem solving, political awareness, leadership skills, social justice attitudes, and diversity attitudes between 217 service learners and 324 nonservice learners enrolled in the College of Arts and Sciences at a large liberal arts university. These researchers found that students had similar scores at the beginning of the semester, but by the end of the semester service learners scored higher on civic action, social justice attitudes, leadership skills, and problem-solving skills than non-service learners. In addition, Moely et al. assessed service-learning and non-service-learning students' appreciation of the course and their interest in learning about the course and the field, as well as the differences between these two groups before and after the service. Members of neither group maintained their initial optimism by the end of the semester, but service learners maintained their positive view of the course and increased their ratings for learning about the community. Similarly, Boyle-Baise and Kilbane (2000) conducted an ethnographic study with twenty-five preservice teaching students and found that students changed their attitudes toward themselves and the community after a semester of tutoring neighborhood children. In this study, students were interviewed before, during, and after their service, and their observations and experiences were audiotaped and recorded through field notes and reflective papers. These researchers analyzed the data with a triangulation method and concluded that the students developed an understanding of the families that they worked with and were able to identify community assets through bonding with community recipients. Eyler and Giles (1999) suggest that students in service learning courses gain a greater level of self-knowledge and change their beliefs about the community.

Previous research on social outcomes has found that service learning had a favorable effect on students' multicultural competencies and community involvement (Root et al. 2002; Moely, Mercer et al. 2002; Rockquemore and Schaffer 2000). For instance, Payne (2000) conducted a pre-post study on exploration, affiliation, experimentation, and assimilation preferences for community involvement for eighty-three students enrolled in four sections of a service learning course. In this study, students changed their exploration and assimilation preferences for community service by the end of the semester. Service learners reduced their apprehension levels (exploration preference) for community involvement, and they increased their lifelong commitments (assimilation preference) to community service. Gallini and Moely (2003) assessed community engagement, academic engagement, and interpersonal engagement for 142 service-learning and seventy-one non-service-learning students at the end of the semester and found that service learners reported greater levels of engagement than nonservice learners.

Investigations on service learning provide important documentation on students' learning, social, and personal changes between pre-post service; however, national surveys are usually limited in the amount of data (retrospective vs. prospective) obtained from each subject compared to the extensive data gather with single samples (Eyler and Giles 1999; Vogelgesang and Astin 2000). For example, students may divulge more information on an anonymous survey than during an interview. Additionally, it is impossible to detect if the reported attitudinal changes in pre-post surveys with single samples is a result from the service experience when these studies had small samples and lacked randomization methods (Payne 2000; Reinke 2003; Root et al. 2002), measured attitudes instead of behaviors (Gallini and Moely 2003; Moely, McFarland et al. 2002; Moely, Mercer et al. 2002), and assessed attitudes with either single-item surveys (Rockquemore and Schaffer 2000), reflective essays (Green 2001), or ethnographic techniques (Boyle-Base and Kilbane 2000). While some are concerned about the reliability and validity of qualitative research, we have addressed those concerns by using reflection questions to explain the missing links in students' attitudes and behaviors from pre-service to post-service.

To date, there is a lack of investigation on service learning and learning, social, and personal outcomes using an explanatory methods design. We used quantitative methods to test two hypotheses: Are there significant changes in learning, social, and personal outcomes post-service for service learning students? And are there differences in service learning outcomes according to the placement site and placement activity? We used qualitative meth-

ods to identify and explore the major themes of service learning guided by two research questions: What do students get out of service learning? What are the processes through which service learning occurs?

Method

Participants

College students enrolled in undergraduate psychology courses at a private teaching university in an eastern metropolitan area during the fall of 2002 through the spring of 2004 served as the sample for this study. As shown in table 1, 142 students enrolled in educational psychology courses completed the pre-test at the beginning of the semester, and 140 students completed the post-test at the end of the semester, so the retention from pre-test to post-test was 98 percent. The majority of students were Caucasian (78 percent), female (79 percent), and either psychology or education majors (82 percent); the average age was nineteen. Less than half the students (37 percent) were freshmen, and about one-third of them (38 percent) had volunteer experience prior to the course. Although service learning was optional, 95 percent of the students self-selected to participate. Service was carried out at three sites; the majority of service learning students (62 percent) were placed in an elementary school, while the remaining students were placed in an after-school program (25 percent) or a community learning program (11 percent). Almost half of all students (48 percent) continued in service activities after the required hours, and more than half (75 percent) reported that they would engage in future service learning activities.

TABLE 1. Descriptive Data for Service-Learning Students

Variables	Service Learning (n = 142) %
Gender	
Male	21
Female	79
Ethnicity	
Caucasian	78
African American	20
Hispanic	1
Other	1
Major	
Psychology	28
Education	54
Nursing	2
Humanities	10
Sciences	6
Year in school	
Freshman	37
Sophmore	44
Junior	12
Senior	7
Volunteer experience	38
Service learning placement	
Elementary school	62
After-school	25
Learning program	11
Service learning activity	
Tutor	61
Mentor	36
Service learning continued	48
Service learning future	75

Course Content

The in-class time (three fifty-minute sessions per week) for the educational psychology course was taught by one instructor and began with a lecture on service learning. The instructor explained to the students that the class was a part of an evaluation on service learning and that their participation in this study was voluntary. Then a code was assigned to the students to use on surveys instead of providing their names. The instructor further explained to the students that their individual responses would be kept confidential and only group data would be used in the evaluation. Informed consent and surveys were administered to students at the end of the first class.

The next two classes consisted of a two-hour orientation on mentoring and tutoring by guest speakers representing one of the three placement sites. The guest speakers explained to the students the delicate nature of working with at-risk children, and how they would work with children in groups of four for sixteen hours at a public elementary school (grades K–6), public after-school program (grades K–8) or a community learning program (grades K–6). Guest speakers trained the students in either a mentor or tutor role. Mentors were trained to read to children using a district-approved curriculum that consisted of structured and nonstructured activities. Tutors were trained in a district-approved tutorial curriculum that consisted of semi-structured reading and math exercises, as well as a research-based curriculum that emphasized behavior modification techniques, such as applied behavioral analysis and token economy, for the community learning program.

The rest of the course consisted of lecture, activities, and discussion. Five class periods were devoted to an introductory segment covering the general history of educational psychology, theory and purpose, and research methods, and then proceeded through an arrangement of lessons on psychological theories for twenty-three class periods. Each section of the course had three examinations, twelve reflection

activities, sixteen journal entries, and three written assignments.

Measures

Demographic questionnaire. A self-report survey was used to collect descriptive information on gender, race, age, year in school, and volunteer experience before taking the course.

Civic Attitudes and Skills Questionnaire (CASQ). Developed by Moely, McFarland et al. (2002), the questionnaire was used to assess students' self-evaluation on civic attitudes and skills that are useful in civic endeavors, values related to civic engagement, and the likelihood of action and involvement in community issues. The CASQ is an 84-item self-report questionnaire that was modeled on previous research on service learning outcomes (Moely, McFarland et al.). It yields scores on six scales for each respondent: civic action (intentions to become involved in the future in some community service or action), interpersonal and problem-solving skills (ability to listen, work cooperatively, communicate, make friends, take the role of another, think logically and analytically, and solve problems), political awareness (of local and national events and political issues), leadership skills (ability to lead and effectiveness as a leader), social justice attitudes (concerning the causes of poverty and misfortune and how social problems can be solved), and diversity attitudes (toward diversity and the respondent's interest in relating to culturally different people). Items are presented as statements, and respondents express their levels of agreement with each statement by marking a scale from 1 (strongly disagree) to 5 (strongly agree). Internal consistencies for each scale range from .69 to .88, and test-retest reliabilities for each scale range from .56 to .81 (Moely, Mercer et al. 2002).

The CASQ also measures students' view of their courses on four scales: course value (how important or useful material covered in the academic course had been), learning about academic field/academic application (content of the respondent's academic course such as understanding and application of the course concepts, interest in the field, and understanding a professional's role in the field of study), learning about the community/community application (how much the respondent learned about the community, different cultures, working with others effectively, and seeing social problems in a new way), and contribution to the community (perceptions of how useful their service activities had been in the community). Items are presented as statements and respondents endorse their level of agreement by circling a score on a scale from 1 (strongly disagree) to 5 (strongly agree). Internal consistency for each scale ranges from .81 to .82 (Moely, McFarland et al. 2002). Twelve items from Crandallm, Crandallm, and Katovsky (1965 qtd. in Moely, McFarland et al.) were used to measure the extent to which the respondent attempted to present himself or herself in a favorable manner. Internal consistency for social desirability ranges from .70 to .72 (Moely, McFarland et al.).

Community Service Involvement Preference Inventory (CSIPI). Developed by Payne (2000), the inventory was used to assess how students become involved in community service. The CSIPI is a 48-item paper and pencil inventory based on experiential learning (Payne 1998) and assesses four preferences for community involvement: exploration involvement (reflecting the affective nature of apprehension common in new experiences, and the behavioral perspective that commitment is short term and is usually at the convenience of the helper), affiliation involvement (reflecting that behavior motivation of recognition and commitments tend to be infrequent and shorter in duration), experimentation involvement (reflecting the desire to make a difference in the lives of others and to learn more about the community), and assimilation involvement (reflecting cognitive processes with career and lifestyle decisions based on the service experience as a way to understand what it means to be a responsible citizen). Items are presented as statements, and respondents indicate their level of agreement by circling a score on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Scores for each involvement preference range from twelve to sixty, and the total score for each preference serves as an indicator of how the student prefers to become involved in community service. Internal consistencies for exploration (r = .63), affiliation (r = .70), experimentation (r = .74), and assimilation (r = .70) preferences are modest.

Civic/Community Behaviors. This truncated version of the Civic Engagement Inventory developed by Reinke (2003) is a 20-item Likert-type questionnaire that measures different types of engagement. Items were presented as statements, and students circled either a yes (1) or no (0) dichotomized response to indicate the degree of engagement. Items were added together to produce the four subscales measuring social, religious, cultural, and political engagement, and a total scale score measuring civic engagement scale (Reinke 2003). The civic engagement scale was also used for this study. In addition, thirty items were developed by the researcher to measure community engagement and were analyzed separately. New items asked about community involvement and types of volunteer activities. Cronbach's alpha for the original and new items was modest (α = .83).

The Community Service Self-Efficacy Scale (CSSES). Developed by Reeb and colleagues (1998), this scale measured students' confidence in making a clinically significant contribution to the community through service. The CSSES scale presents ten items and responses range from 1 (quite uncertain) to 10 (certain). Scores are added together to produce a full scale score. Test-retest reliability for this scale was modest (r = .62).

Learning outcomes were assessed using individual student self-reported GPAs and application ability as demonstrated in reflection questions.

Open-ended and Closed-ended Questions. Twelve open- and closed-ended questions were designed to explore the extent, nature, and quality of students' thoughts and feelings about academic service learning. Nine open-ended questions directly assessed the service experience, and three closed-ended questions inquired about community engagement. The open-ended questions led to topical areas associated with the course content, while the closed-ended questions led to relevant areas associated with community partnerships. A copy of the open-ended and closed-ended questions is shown in the appendix.

The Texas Social Behavior Inventory-Short Form (TSBI). Developed by Helm-

reich and Strapp (1974) as cited in Bringle, Phillips, and Hudson (2004), this inventory was used to measure self-esteem and social competence. The TSBI is composed of thirty-two items and uses a five-category response format ranging from 1 (not at all characteristic of me) to 5 (very much characteristic of me). Items are added together to produce a full-scale score. Reliability coefficients were modest (r =.85).

Procedure

Service learning students were evaluated before and after service. They completed a consent form and a survey packet consisting of questionnaires measuring demographics, learning, and social and personal outcomes during the first week of the course, and then again after they completed service (the sixteen-hour requirement). Students completed each survey at their own pace, placed it in a coded, confidential envelope, and gave it directly to the researcher. Each survey took about forty-five minutes to complete.

Analysis

A paired t-test was conducted to examine if there were significant changes in learning, social, and personal outcomes post-service for service learning students, and a one-way ANOVA was conducted to examine differences in service learning outcomes according to the placement site and placement activity. In addition, we analyzed the nine open-ended and three closed-ended questions with a purposeful sample of seventy-five service learning students enrolled in educational psychology courses from the fall of 2003 through the spring of 2004 (reflection questions were added to the survey during the second year of the study, and for this reason we are reporting on seventy-five students). We identified major themes that were generated from the systematically obtained data and analyzed using the constant comparative method (Creswell 1994; 1998). Our analyses focused on our research questions: What do students get out of service learning? What are the processes through which academic service learning occurs?

Open- and closed-ended questions that inquired about what students' get out of participating in service learning were analyzed to categorize responses. Two independent coders read the responses, then met and identified the units of analysis; these were the isolated thoughts expressed by students. Typically, the thought units were found within a paragraph, but there were also instances in which a student expressed multiple thought units found in a sentence. Discrepancies between how coders identified discrete units were discussed until the coders agreed on units. The coding of the nine open-ended questions resulted in 1,123 units, and the coding of the three closed-ended questions resulted in 183 units.

These 1,306 individual thought units underwent an item-level analysis so that similar thoughts were combined to construct a common framework. Open coding of the individual thought units consisted of naming and categorizing the data. The categories were arranged and rearranged until "saturated"; that is, until the coders and the researcher agreed the concepts were similar and should be grouped together. Then the units were coded in the service learning framework of Eyler and Giles (1999). Fifteen major categories emerged in the open coding process: service learning added value to the course, course/field understanding, course/field application, career benefits, personal efficacy, self-knowledge, spiritual growth and reward of helping others, diversity, work well with others, community connections, stereotyping/tolerance, appreciating other cultures, understanding social problems, solutions to social problems, and reflection. Coders counted the number of responses that occurred in each category to obtain the frequency of responses and then divided the frequencies by the number of participants to identify the percentages for each category. The percentages were used to rank the major categories that resulted in eight dominant themes as illustrated in table 2.

Once the eight dominant themes were identified, an axial coding procedure was conducted to describe the learning processes that occur while students are engaged in service learning. The axial coding connected students' learning processes to the central concepts of social, emotional, cognitive, and multicultural learning (Gardner 1993; 1999; Howard-Hamilton 2000; Salovey et al. 2004), as shown in table 3. Social learning was defined as students' ability to identify, monitor, and discriminate feelings, and to draw on them as means of guiding one's behavior (Gardner 1993, 1999, and 2004). Social learning was identified and coded when the coders read either an interpersonal or an intrapersonal reflection. Interpersonal learning was coded when the students' reflections indicated knowledge about oneself, and intrapersonal learning was coded when the students' reflections indicated knowledge about others. In addition, students' statements were coded as emotional learning when they reflected an expression of feeling, and statements were coded as cognitive learning when they reflected thoughts, judgments, or reasoning ability (Salovey, Brackett, and Mayer 2004; Slavin 2003). Students' reactions were coded as multicultural learning when they reflected knowledge of cultural identity for themselves and others, understanding of cultural differences, and appreciation of different cultural groups (Howard-Hamilton). We used a reliability check for the qualitative data by comparing the dominant themes and major learning processes to students' self-reports on surveys and placement site coordinators' reports. The discussion section addresses the discrepancies between qualitative and quantitative results.

Results

Pre-Post Test Analyses for Service Learning Students

To determine if there were significant changes in social and personal outcomes for service learning students, a paired t-test was conducted on six dependent measures: GPAs, CASQ, CSIPI, TSBI, CSE, and civic engagement scores before and after service. We were able to demonstrate that service learners increase their political awareness, diversity attitudes, civic engagement, community self-efficacy, and affiliation preferences for community involvement, but they decrease their interests in the course and field and social competence from the beginning to the end of the course, as shown in table 4. The first hypothesis was partially supported.

TABLE 2. Dominant Themes of Academic Service Learning

Themes	Categories	Units
Academic learning	Service learning added value to the course	This course would have been difficult without the service; I could not have understood the concepts if it were not for service; I need real life examples to understand the material
	Better understanding	Understood the field and how it relates to the concepts and theories; I truly understood the terms "at-risk characteristics," "protective strategies," and "educational resilience"; I learned how being a role model can serve as a form of an intervention; I get what is meant by "basic needs"; I understand the challenges associated with student characteristics
	Better application	I was able to apply concepts and theories; I was able to use classroom management techniques; I was able to practice test-taking methods and memory aids with the students that I worked with; I practiced extrinsic motivation strategies; behavioral strategies work well with children with emotional and learning problems; I could distinguish between the different types of disorders
Personal—Career development	Career benefits	Hands-on experience; understanding of teachers' role; knowledge of what is required; respect for teachers—confirmed or disconfirmed career choice; changed major/career aspiration; contemplated career change
	Personal efficacy	Impact as teaching assistant; self-understanding; competence
Personal—Self-knowledge	Self-knowledge	Real world experience; understanding of the field and course
	Spiritual growth	Spiritually and emotionally benefited me; self-esteem and self-confidence; social confidence
	Reward of helping others	Impacted others; a better understanding of other cultures; an appreciation for different cultures; relationships with children and teachers; felt appreciated by children/teachers
Impact of the program on personal	Application	Reciprocal learning; motivational; knowledge of theories and techniques; teaching methods; classroom management skills
	Reflection	Role model; extra hands in the classroom; school improvement; relationships with others; felt good; giving back; community impact
	Diversity	Social/racial/culture identification; social/racial/cultural differences; worked well with others who are different; tolerant attitudes; teacher/role identification; others are like me; appreciating cultural differences
Interpersonal development	Working well with others	Others are like me; shared beliefs; mutual goals; genuine; concern
	Diversity	School culture identification; staff/role/children identification; socioeconomic/culture identification; tolerant attitudes
Developing connections with others	Community connections	Enhanced my beliefs in the good of others; continued after completed my hours; changed my beliefs about the community; developed partnerships/relationships; community engagement; civic engagement; I go into Chester now; Chester is a part of my community.
	Reward in helping others	It was better than what I expected; I enjoyed being there; I felt like I was needed; the children would smile every time I was there; I liked that I helped them with their skills—it made me feel good
	Diversity	Appreciation for other cultures; learned not to stereotype; changed my thoughts and feelings; understood student characteristics; developed empathy/passion for working in this type of school
Reduced stereotyping and tolerance	Stereotypes/ developing tolerance	I blamed the parents for the children's behaviors and problems until now; I didn't realize how involved the parents are—I thought the

(table continues)

TABLE 2. *Continued*

Themes	Categories	Units
Reduced stereotyping and tolerance		children were unsupervised; they have a lot of obstacles to overcome; I learned that these kids have potential; these kids are that different from other kids; they want to succeed; it opened my eyes to reality
	Appreciating other cultures	I learned how economics affects learning; I want to help more; I saw a different type of life; the school is a substitute for home and I want to be a part of that type of school; I learned that basic needs must be met before learning can proceed and this made me appreciate my family and life's opportunities; these children need more attention and you must be extra sensitive so that they stay on task—I never thought I would want to work in special education but I realized that this is so different than regular education and I want to be a part of this culture
Problem solving	Understanding social problems	At-risk children need extra attention and guidance; the finances impact the school resources; I would have been unable to truly understand the social problems addressed in this course if it were not for service-learning; an understanding of different cultures and social issues linked with poverty
	Solutions to social	Making an impact by giving your time; role modeling for students; building esteem in the children; using motivational approaches to engage them in class and to stay in school; providing alternatives to "street" activities; providing resources that are needed; being there and caring; giving up a few hours a week is worth helping students' improve their test scores and making a difference to a child
	Reflection	Feeling of making a difference; creating opportunities; adding value; I would never have learned about myself and ability to work in impoverished environments if it were not for this school; it opened my eyes to a reality that I didn't even know existed

TABLE 3. The Major Processes Associated With Academic Service Learning

%	Processes	Themes	Patterns
100	Social—Interpersonal	Academic learning	Better understanding or application ability
		Career development	Hands on experience; confirmation of career choice; competence
		Self-knowledge	Self-confidence, social competence, self-efficacy
		Impact of the program	An appreciation of different cultures
		Interpersonal skills	Sociocultural identification; role identification
		Community connections	Enhanced my beliefs in the good of others
		Stereotyping/tolerance	Enhanced my beliefs in the good of others; developed partnerships/relationships
		Problem solving	Giving up your time can make a difference to a child
83	Social—Intrapersonal	Academic learning	Understanding of the field; teacher's role
		Career development	Impact as teaching assistant
		Self-knowledge	Understanding of the field/course
		Impact of the program	Helped the children; made a difference

(table continues)

TABLE 3. *Continued*

%	Processes	Themes	Patterns
83	Social–Intrapersonal	Interpersonal skills	Share beliefs/mutual goals regardless of differences
		Community connections	Developed partnerships/relationships; civic engagement
		Stereotyping/tolerance	Changed my beliefs about the community
		Problem solving	At-risk characteristics/social problems; proving alternatives to "street" activities
81	Emotional	Academic learning	Empathy; compassion
		Career development	Passionate about being a teacher
		Self-knowledge	Felt good about myself
		Impact of the program	Felt good to be appreciated; concern for the children
		Interpersonal skills	I felt helpless; the children would smile every time I was there; the children would get excited
		Community connections	It was a surreal experience; I am thankful for this experience
		Stereotyping/tolerance	I felt like I was needed
		Problem solving	I am grateful for how much I have, but we need to create opportunities/resources for them
52	Cognitive	Academic learning	Evaluation of skills and impact
		Career development	Respect for teachers; student characteristics
		Self-knowledge	Realized the type of person that I am; personal values
		Impact of the program	I can work in a diverse atmosphere/individuals
		Interpersonal skills	I have learned that I can work anywhere/anyone
		Community connections	Learned how to relate to the students and deal with their characteristics and behaviors
		Stereotyping/tolerance	It opened my eyes to a reality that I did not know existed; I learned not to stereotype
		Problem solving	Service learning creates opporunities for the children
33	Multicultural	Academic learning	Application of school culture to course concepts
		Career development	Experience of teaching in urban schools
33	Multicultural	Self-knowledge	Desire to work in an urban environment
		Impact of the program	Learned that I can work anywhere and with anyone
		Interpersonal skills	Learned of different cultures/how others are like me
		Community connections	Appreciation for different cultures
		Stereotyping/tolerance	Learned racial/economic disparities affect learning and that the children are more capable than thought
		Problem solving	Methods to overcome barriers linked with disparities

Placement Site and Service-Activity Analyses

To evaluate placement site effects on students' social and personal outcomes, a one-way ANOVA was repeated with scores on five dependent measures: CASQ, CSIPI, TSBI, CSE, and civic engagement. There were no significant differences in personal and social outcomes according to the type of placement (school, after-school, and community program), but there were differences in social outcomes between service activities. Mentors (χ = 26.93) had higher social justice scores ($F(1, 125) = 6.92$, $p < .01$) compared to tutors (χ = 25.25). Mentors (χ = 20.10) also had higher community interests scores ($F(1, 127) = 5.22$, $p < .05$) than tutors (χ = 18.75). The second hypothesis was partially supported.

TABLE 4. Learning, Personal, and Social Outcomes for Service Learning Students (N = 142) Before and After Service

	Pre-service		Post-service		
Service Learning Outcomes	*M*	*SD*	*M*	*SD*	*t*
CASQ Subscales					
Course Value	37.87	4.27	34.22	4.29	10.04***
Civic Action	26.61	4.40	26.11	3.41	1.72
Problem Solving	41.07	4.72	40.71	5.57	.78
Political Awareness	14.13	2.52	17.32	3.26	–12.60***
Leadership	13.26	1.71	13.61	1.71	–1.67
Social Justice	25.94	3.56	26.10	3.40	–.32
Diversity Attitudes	12.07	1.92	13.91	2.64	–5.54***
Social Desirability	36.77	3.97	36.62	5.44	.78
Academic Application	20.80	3.56	19.70	3.70	3.24***
Community Application	20.14	3.79	19.34	3.28	2.30*
CISPI Subscales					
Experimentation	45.14	5.52	45.46	5.30	–.60
Exploration	31.79	3.60	31.15	3.70	1.68
Assimilation	44.22	6.91	44.55	4.80	–.55
Affiliation	30.24	4.64	36.58	7.55	–5.09***
Community Self-efficacy	38.66	4.93	43.33	5.22	–10.04***
Texas Social Behavior Inventory	61.13	10.80	57.97	6.75	2.08*
Civic Engagement	3.92	2.72	5.41	3.04	–6.11***

Note. A negative *t* indicates that the area in the distribution where the score falls that is necessary to reject the null hypothesis. ***$p < .001$, *$p < .05$.

What Did Students Get Out of Service Learning?

Eyler and Giles (1999) suggest that service learning enhances students' understanding and application of course material. Almost all (96 percent) of the coded data identified academic learning as a benefit of service learning. For example, one student commented on the impact the service had on application ability: "I was able to apply the lessons from class into a real classroom . . . stereotyping and diversity, Piaget's stages, operant and classical conditioning, intrinsic and extrinsic motivation, developmental disorders, and classroom management techniques."

More than three-quarters (82 percent) of the coded data identified career development as a second benefit of the course, consistent with previous research (Eyler and Giles 1999; Payne 2000) that suggests service learning is a vehicle for confirming and modifying students' career decisions. Two observations conveyed the impact the course had relative to career development: "Before participating in service learning, I thought I wanted to work with pro athletes. Now I've realized that I want to work with children," and "I am confused . . . I now want to work with children in an urban, impoverished environment as a teacher. I did not realize the impact that one person can make on a child's life and teachers have this profound ability."

Eyler and Giles (1999) found that service learning contributes to students' personal development in that they acquire greater self-efficacy and self-knowledge. Almost all (97 percent) of the coded data identified self-efficacy or self-knowledge as a third service learning benefit. As one student wrote, "I was worried that my tutoring would have a negative effect. . . I worried so much about what I was going to say and how I was going to say it. I was afraid that the kids wouldn't accept me and the parents would resent me. This experience was wonderful . . . I realized that I didn't have to worry about what I said or the manner in which I spoke."

Eyler and Giles (1999) and Jacoby (1996) suggest that program characteristics such as placement quality, reflection activities, and application of service further impact students' personal development. More than three-quarters (80 percent) of the coded data identified the impact of the program on personal development as a fourth benefit of service learning. One student's reflection conveyed the impact that the placement had on fostering diversity: "Service learning made me understand that I can work with people from different backgrounds and saw with my own eyes the impact I had on the children by spending only a few hours a week."

Service learning researchers propose that service learning contributes to students' ability to work well with others and an appreciation for other cultures (Eyler and Giles 1999; Moely, Mercer et al. 2002; Moely, McFarland et al. 2002). The majority (84 percent) of the coded data identified interpersonal development as a fifth service learning benefit. Students reported that service learning allowed them to work well with others and identify with the teachers and children. One student wrote, "I could relate to the children and the school, because I am from a similar neighborhood. I could identify with the things that they were going through . . . some of the children do not get the help that they need at home and others are much 'older' and 'wiser' for their age. I was glad to be there, to encourage and reinforce them to stay in school, since I really know what it takes to be resilient."

Gallini and Moely (2003) and Reinke (2003) suggest that service learners take ownership for community problems after establishing relationships with community recipients, and more than three quarters (78 percent) of the data coded from open-ended and closed-ended questions identified developing connections to others as a sixth service learning outcome. One student's comment conveyed the impact the course had relevant to community connection: "Before this class I might not have thought of Chester as part of my community but now I do . . . we live in a community that suffers from extreme economic and racial differences . . . My friend was shot dead a year ago on campus for no reason so I stopped going into Chester

until now." The majority (76 percent) of the students reported that they participate in community service activities such as volunteering and coaching, and half also reported that they registered for either another service learning or multicultural course next semester. Service learning not only contributes to community relationships and engagement, but it also provides students with an opportunity to observe the benefits of helping others. A second student's observation demonstrated finding a reward in helping others. "I notice that I take things for granted and these children do not take anything for granted . . . I have learned that I can make a difference . . . we need to create opportunities for these children and service learning is only the beginning to reach that end."

More than half (61 percent) of the data coded identified reduced stereotyping and the development of tolerant attitudes as a seventh benefit of service learning. This finding is consistent with service learning multicultural research (Boyle-Baise and Kilbane 2000) that suggests students modify their preconceived notions about community through social bonding and interpersonal interactions with community recipients. For example, one student's comment spoke to the impact the course had on stereotyping: "I have learned not to stereotype. . . I saw a different life that people live and it changed my views . . . I have learned that the children are more capable than I thought and by getting involved with them makes a difference . . . I need to give more of my time." A final comment conveyed the impact of the course relative to developing tolerant attitudes. "These children are poor and have a lot of barriers to overcome because people stereotype them and think that they won't make it in life . . . now I want to work in an impoverished urban school . . . I am thankful for this experience."

Eyler and Giles (1999) suggest that service learning fosters students' ability to understand social problems and identify solutions to resolve social problems. More than half (61 percent) of the data coded identified problem-solving skills as an eighth service learning outcome. One student commented, "This was a surreal experience . . . the situations and lifestyles of people are scary and sad. I felt helpless at times, but I learned that every person needs to have someone who cares . . . someone who is rooting for them. It is easy to recognize those less fortunate and to feel sorry for them, but to make a difference is what is important. I have learned to reframe from judgment and adjust my behavior to make a difference in their lives."

What Are the Processes through Which Service Learning Occurs?

To understand how students learn while engaged in service, the coders independently identified social, emotional, cognitive, and multicultural learning as processes through which academic service learning occurs. Gardner suggests that personal learning (interpersonal and intrapersonal) is an individual's capacity to assess one's feelings and the ability to notice and make distinctions among other individuals (2004, 239). All of the coded data identified interpersonal learning as a major process of academic service learning. In addition, more than three quarters (83 percent) of the coded data identified intrapersonal learning as a second major process associated with academic service learning. As one student asserted, "I have impacted a child's life and helped the teacher. . . my involvement with this school effected [sic] the culture of the classroom and the learning environment in general."

Salovey et al. suggest that emotional learning is an individual's ability to "perceive, appraise and express emotions accurately" (2004, 25). The majority (81 percent) of coded data identified emotional learning as a third and final major process linked with academic service learning. As one student stated, "I felt empathy for the students because they have so many obstacles to overcome . . . I have developed a passion for working with those less fortunate." High frequencies were found for interpersonal learning, and moderate frequencies were found for intrapersonal and emotional learning as learning processes. Cognitive and multicultural learning were also identified as learning processes, but cited less often.

Discussion

There has been a tremendous amount of research on the impact of service learning. Despite these developments, few studies have used rigorous research methods to evaluate learning, social, and personal outcomes. This is one of the first studies to use an exploratory methods design to demonstrate that participation in service learning affects academic learning and personal and social development. Incorporating qualitative and quantitative methods allowed us to test for preservice and post-service differences and assured us the reliability of findings beyond those possible if only a single method had been considered.

Service learning students showed expected changes in political awareness, diversity attitudes, community self-efficacy, affiliation preferences for community service, and community engagement from the beginning to the end of the semester. Service learners acquired knowledge about local and national politics, developed an appreciation of the diverse backgrounds and characteristics of community recipients, and increased their confidence in their ability to make a difference in the community. Service learners' preference for short-term community involvement and levels of civic engagement increased throughout the semester and is partially congruent with the findings of Payne (2000), who found that service learning students make short-term commitments and then transition to long-term commitments to community service.

A possible explanation for inconsistent findings between previous and current research are methods and measurements. Previous research assessed students' community involvement with a single measure (Payne 2000), and in this study we evaluated students' attitudes and behaviors with multiple methods. Our study controlled for good-subject effects and halo effects (Rosenthal and Rosnow 1991) associated with previous research. In addition, service learning provided students with opportunities to work in groups with peers and engage in interpersonal interactions with culturally diverse children at a school and a program located in the poorest neighborhood in the community. Unfortunately, this project also exposed the students to some of the worst aspects of the local political process, including the closing of the school where they were placed and the

misuse of funds and supplies by leaders in the after-school program. Such exposure may have influenced students' awareness of local politics, civic engagement, and preference for short-term community involvement.

The placement site activity influenced students' personal and social development. Mentors acquired a deeper understanding of social institutions and their influence on community recipients, and the act of mentoring gave students an opportunity to develop relationships with children and administrators of different races, social classes, and family dynamics, thus increasing the students' interest in learning about the community and their comprehension of institutional inequities and injustices. It is possible, then, that the nature of the service activity may change student attitudes in ways that are unforeseen and desirable. This is an avenue that demands further research.

Another objective of this study was to use the qualitative data to explain the missing links in students' attitudes and behaviors before and after service. Almost all of the students described a deeper understanding and application of theoretical concepts in their reflections. However, students' grade point averages did not change as expected and are partially consistent with previous studies (Fredericksen 2000; Strage 2000; Vogelesgang and Astin 2000). Inconsistent findings in qualitative and quantitative data may be attributed to the different assessment methods that were used to measure academic learning, and academic learning may be better assessed with qualitative methods. In addition, more than half of the students' reflections illustrated their comprehension of the social problems that plague the community and described solutions for community problems is inconsistent with students' self-reports on surveys of problem-solving skills. A possible explanation for this inconsistent finding is that the problem-solving subscale measured students' ability to communicate and work well with others, rather than finding solutions to community problems (Moely, McFarland et al. 2002). Almost half of the students reported that they continued to volunteer at the placement after required hours and before the school was closed as a method to solve the problem of overcrowded classrooms. The students' ability to take ownership for social problems may be more indicative of their problem-solving ability than their problem-solving skills on self-reported surveys.

Students' reflections indicate that they learned about themselves, acquired knowledge about the demands of teaching, and learned to make objective career decisions. In addition, their reflections indicate that they changed their preconceived notions about the community, learned to interact with people who are culturally different and discovered commonalities, and developed tolerant attitudes toward cultural differences. Students formed relationships with community recipients and sustained these relationships and their involvement beyond the initial service. The consistent data on students' surveys and reflections make us feel confident asserting that students benefit from engaging in this form of pedagogy.

A final objective of this study was to inquire into the learning processes that occur while students engage in service learning. The majority of students describe understanding the course content and acquiring self-knowledge and social competencies through social-emotional learning. This kind of learning is a process through which people learn to recognize and manage emotions, care about others, and make responsible decisions to solve problems (Fredericks 2003; Wang and Gordon 1994; Zins et al. 2001). Social-emotional learning contributes to service learning and, at the same time, service learning provides students with an opportunity to demonstrate values and skills derived from social-emotional learning (such as respect and responsibility). The qualitative data provides a procedural framework of service learning through social-emotional learning, and the integration of both qualitative and quantitative data furthers our conceptual framework of a service learning model and its influence on learning, personal, and social outcomes.

Implications for Course Development

Our findings may be of particular interest for faculty developing service learning courses. First, faculty should have a working knowledge of the local politics surrounding educational institutions and community agencies, because the organizational politics are likely to influence the students' level of community and civic engagement. Faculty should prepare students to deal with local politics in a way that prevents students from ending their service.

Second, faculty should select short-term rather than long-term projects because students will be able to view their impact on community recipients. It appears that when students are able to view their accomplishments, they gain greater levels of satisfaction with the service experiences. The faculty will also need to negotiate activities with placement sites that allow students to work in groups and foster relationships with community recipients. Specifically, faculty should select activities that balance the students' level of autonomy with supervision to promote community and civic engagement.

Finally, faculty should avoid giving credit for time spent at the placement site. Students are likely to develop a deeper understanding of the course content, modify their thoughts about the community, and take responsibility for social problems in the community through their relationships with community recipients. This type of academic learning and student development cannot be assessed through a set amount of time, but rather through social-emotional learning that is fostered by the service activity and course assignments. Faculty must collaborate with agencies and organizations to design assignments that foster this kind of learning, thus allowing students to apply the course material, acquire personal growth and self-efficacy, and develop an understanding of their influence on community recipients.

The current study adds to the research on service learning by evaluating learning, personal, and social outcomes with an explanatory methods design. There are probably homogeneity and sample-selection limitations associated with the students who volunteered for this study. Students from public institutions are likely to have different views of service learning because of their personal characteristics, educational experiences, and service opportunities. Participants

reported on their attitudes and behaviors with multiple questionnaires and open- and closed-ended questions, and there are likely social desirability and self-report biases associated with our results. More research is needed to identify a clear and consistent pattern of service learning outcomes with a triangulation mixed methods design. This would make an interesting future study.

Key words: personal and social outcomes, service learning, social-emotional learning

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APPENDIX
Reflection Questions

Open-ended Questions

1. What did you gain from your service learning experience?
2. Did service learning influence your career choice? If so, explain.
3. Did service learning help you understand the course content? If so, explain.
4. Identify benefits and limitations to the service learning experience.
5. Identify how service learning contributed to the community/children/school or program.
6. What similarities and differences did you detect between you and the children/staff who you worked with?
7. Did your perceptions, attitudes, beliefs, and levels of empathy change through your service learning experience?
8. What did you learn about children placed at-risk and how have your views changed since the beginning of the semester?
9. What did you get out of this course by participating in service learning?

Closed-ended Questions

10. Do you consider Chester a part of your community?
11. Do you participate in any other leadership or civic endeavors (such as voting, student organizations, or neighborhood groups)?
12. Have you enrolled in a service learning, multicultural, or experiential learning course next semester?

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