

# Attitudinal and Academic Effects of Service-Learning

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**SUMMARY.** We examined perceived learning and attitude change in classes in Cognitive Psychology and Sensation and Perception in which some but not all of the students did service-learning with autistic children or in other settings. Attitudes toward people served became more positive based on questionnaire and journal entry data, and in one class, service-learning students felt they learned more about course material from their experiences. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-342-9678. E-mail address: [getinfo@haworthpressinc.com](mailto:getinfo@haworthpressinc.com)]

Service-learning, which overlaps experiential learning, community-based learning, experiential diversity education, and other kinds of learning, is growing in popularity in American education. A useful definition (T. Stanton, quoted in Cohen & Kinsey, 1994) is that service-learning is "a particular form of experiential education, one that emphasizes for students the accomplishment of tasks which meet human needs in combination with conscious

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educational growth" (pp. 5-6). In fact, at the college level, workshops on service-learning are frequent, journals are appearing (e.g., *Michigan Journal of Community Service-Learning*), service-learning electronic "bulletin boards" are emerging, and service-learning Web pages are developing. Some universities have offices specifically created to facilitate service-learning.

Recently, President Clinton proclaimed, "Commitment to community should be an ethic that our children learn as early as possible, so that they carry it with them throughout their lives. That is why I have called on every state to make service a part of the curriculum in high school or even middle school" (radio address, 7/26/97). Some theorists disagree with this view, taking the position that education should be strictly academic, not social or political (Finn, 1995). Others take a very different position: that a mission of a university IS to solve community problems (Brackley, 1992; Harkavy, 1996). Zlotkowski (1996) offers a pragmatic consideration: If service-learning is to become a lasting component in American education, it must have a clear link to "the academy." Advocates must focus on enhanced learning, in his view, with development of moral and civic values and benefits to the community seen as positive but secondary results.

Service-learning is being evaluated extensively at the middle- and high school level as part of Learn and Serve America, a federally-funded program. An interim report (1997) suggests, "Well-designed service-learning programs can strengthen civic attitudes, promote volunteer activity, and improve learning in young people. . . ."

At the college level, there has not been a great deal of evaluation of service-learning. Two studies of the academic value of service-learning have used students' Likert-type ratings of agreement with statements. Markus, Howard, and King (1993) compared data from students enrolled in course sections who were randomly assigned to do service-learning and those who were not assigned. Markus et al.'s (1993) service-learning students did 20 hours of service in one of various community agencies, discussed their experiences in section meetings, and wrote a short paper at the end of the course. Students indicated their agreement with statements such as "I learned to apply principles from this course to new situations"; "I developed a greater awareness of societal problems"; "I reconsidered many of my former attitudes"; "I developed a greater sense of personal responsibility"; and "I feel that I am performing up to my potential in this course" (p. 415). Results indicated a statistically significant difference between the profiles of means on . . . eight items . . . for students in the traditional versus service-learning sections . . ." (p. 414). Markus et al. (1993) reported a difference in final grades, but Miller (1994) claimed that drawing conclusions from service-learners' final grades is complicated by differing course requirements and the possibility that the service-learners' assignments were graded more leniently.

In Miller's (1994) study, students had the option of enrolling in a community service learning course, Project Outreach, in which they did 40 hours of service work, wrote journals, attended classes, and wrote a final paper. Miller (1994) reported that developmental psychology students who did service agreed significantly more with the statements "I learned to apply principles from this course to new situations" and "I developed the ability to solve real problems in this field" than students who did not do service-learning. However, he did not find greater agreement with "I gained a good understanding of concepts in this field" or "I learned about social factors that influence people's development," nor was there a difference in final grades.

By administering questionnaires at both the beginning and end of the semester, both Markus et al. (1993) and Miller (1994) established the clear expectation that the service-learning experience would affect the students' learning and performance in the course. This introduced the possibility that any rating differences between groups might be due to demand characteristics. Service-learners may have felt they were "supposed to" agree with statements like, "I learned to apply principles from this course to new situations." We avoided this problem by asking all students at the end of the course to rate how much they had learned on various topics.

We were also interested in our students' attitudes toward the recipients of their service. Theorists speak of the educational value of "subvert(ing) the dissociation process (of distancing ourselves from homeless people)" (Saltzman and Curtis, 1994) and of helping students "to experience the life of the poor—and reflect on that experience" (Brackley, 1992). Earlier, we had developed a seminar on homelessness and included a service-learning component: in addition to doing readings, watching videotapes, having discussions, and working on an individual project, students spent three hours per week in various sites including soup kitchens and shelters, then reflected on these experiences by keeping journals and writing reflection papers. In order to evaluate the effectiveness of this seminar in changing students' attitudes toward people who were homeless, students were asked to fill out a questionnaire at the beginning of the course and again at the end. We used Guzewicz and Takooshian's (1992) Survey on Social Issues, which includes five statements assessing People's Attitudes Toward Homelessness [PATH]). We intermixed items from the Crowne-Marlow Social Desirability Scale to assess the likelihood of students' answering in response to perceived demand characteristics. Seminar students' scores on the PATH scale changed significantly in the direction of becoming more "humanitarian" as the course progressed. Social Desirability scores did not change significantly; therefore the change in the PATH score of the seminar group could not be attributed to their having given more "socially desirable" responses in response to demand characteristics (Gardner, MacAvoy, & Carrier, 1996). All of the seminar students had

done service-learning, however. In order to test the effect of service-learning on student attitudes toward the people served, we would need to integrate service-learning into a course in which some students did service-learning and some did not.

We examined attitudinal and academic effects of service-learning. Rather than asking very general questions about learning which seem particularly susceptible to the influence of demand characteristics, we decided to assess students' perception of their learning of specific aspects of course content. We were careful not to draw attention to the existence of two different groups, and we gave the same questionnaire to all students at the end of the course only. Our prediction was that service-learners would report higher levels of perceived learning than non-service-learners, particularly on the topic of individual differences in cognitive processes, since each placement exposed service-learning students to people "different" from themselves in terms of cognition.

In Study 1 we qualitatively assessed service-learners' attitudes toward people served by counting themes in journal entries; in Study 2, we used a short questionnaire in an attempt to measure change in service-learners' attitude toward autistic children. Our prediction was that there would be a "subversion of the dissociation" between students and the people served.

### STUDY 1

Students were randomly assigned to a Service-Learning (S-L) or Non-Service-Learning (N) group in each of two sections of a Cognitive Psychology course. We tested the hypothesis that service-learning enhances academic learning. We assessed students' attitudes by content analyzing reflective passages from their weekly journal entries into themes.

### METHOD

#### Participants

Of 50 students, 21 (7 males, 14 females) were randomly chosen to do service-learning. An additional seven students (all female) who were not picked initially asked to participate, bringing the total to 28 students doing service-learning. Twenty-two students (10 male, 12 female) did not participate in service learning. Students, aged 19-22, were predominantly upper-level Psychology majors, Caucasian, middle- to upper-middle class, and Catholic.

### Measures

A questionnaire was constructed with the goal of assessing perceived academic learning while minimizing or eliminating demand characteristics. We presented questions about academic learning on the front page of our questionnaire. We did not ask students to indicate whether they had or had not done service-learning. (Students provided their ID number, used throughout the course, from which we could later decode who was in each group.) Specifically, we asked each student to rate (on a six-point scale) his or her knowledge of Attention, Memory, Language, Cognitive Development, Metacognition, Individual Differences in cognitive processes, and Thinking. Each topic had the numbers 1-6 or 6-1 typed beneath it, with end points labelled as "very well" (6) and "not at all well" (1). Subsequent pages asked general questions about the course, etc. The questionnaire was given to each student at the end of the course.

### Procedures

We announced that we would have a lottery to see which students would do service-learning as part of the Cognitive Psychology course. Although we had been concerned that students would be resistant to this idea, they accepted it readily. Two students dropped the course, not necessarily because of service-learning. One remaining student was adamant that she did not have the time for service-learning; she was excused from it. Students who were chosen for service-learning as well as the seven who had asked to participate spent two hours each week in their placement (ideally; some missed some weeks).

Sites were chosen on the basis of relevance to the class material. Student preferences were solicited and then students were assigned to sites, which included: Giant Steps (a program for autistic and learning-disabled children), Best Buddies (which pairs students with mentally-handicapped people), and Head Start, which places students as helpers in classrooms in inner-city Bridgeport, CT. Service-learning students were to hand in copies of their journals weekly. Reflection was stressed in the journal guidelines printed in the syllabus.

The questionnaire was handed out on the last day of class as part of the feedback solicited for the course. Students were assured that their responses would not be examined individually but that they would be pooled for analysis after all grades had been computed.

Students doing service-learning kept journals, copies of which they submitted weekly. Each reflective passage was photocopied for content analysis

by the instructor at the end of the course. Consistent themes emerged from the passages. Frequency of each theme was counted.

### RESULTS

We hypothesized that service-learning would enhance academic learning. This hypothesis was tested by comparing scores of those students doing service-learning (S-L) and those not service-learning (N) on their rating of knowledge of seven areas of course content. Service-learners reported greater knowledge in only one academic area, Cognitive Development ( $F(1,48) = 2.11, p = .04$ ; Table 1). Service-learners reported knowledge of Individual Differences was not significantly greater than that of non-service-learners ( $t[48] = 1.13, p > .05$ ). Final grades in the course did not differ ( $t[48] = .13, p > .05$ ). It should be noted, however, that seven students had self-selected into service-learning. If their scores were deleted, the Cognitive Development difference no longer reached significance.

Many passages from journals indicated learning and changes in students' attitudes toward the recipients of service-learning. The tally of themes is shown in Table 2. "I can learn from 'them'" and "'they' are unfairly discriminated against" were the two most frequent, with "'they' are like me"

TABLE 1. Ratings of Knowledge of Course Material

Topic	S-L M n = 28	S-L SD	N M n = 22	N SD
Attention	4.96	.74	4.96	.49
Memory	4.89	.83	5.05	.65
Language	4.64	.87	4.46	.74
Cognitive Dev.	5.04	.69	4.59	.80
Metacognition	4.36	.83	4.59	1.01
Individual Diff.	4.86	.65	4.59	1.01
Thinking	4.68	.72	4.46	.74

TABLE 2. Frequency of Themes from 55 Reflective Passages in Cognitive Psychology Students' Journals

This has changed the way think - 3
I see the world through their eyes - 4
It's not their fault - 3
They are like me - 9
I can learn from them - 13
They are unfairly discriminated against - 10
I am learning about diversity and a world wider than my own - 9
I can make a difference - 7

and "I am learning about diversity and a world wider than my own" closely following. Presumably the themes mirrored changing attitudes of service-learning students. An example of a journal entry is the following:

When I first found out that I was chosen for the service-learning component of the course, I thought to myself, 'Wow, this is great; just one more thing that I have to do.' Looking back now on those feelings I think to myself how lucky I am to have found such a wonderful friend in someone who I probably would have never met otherwise.

I was very nervous when I first met my Best Buddy. His spirit for life and his will to survive made me realize that handicapped people are no different than any other "normal" person. He welcomed me completely and befriended me like no one else I have ever met. I look forward to our daily conversations because unlike many of the conversations that we encounter I know that the person on the other end of the line is actually listening and caring about what I am saying. He and I have conversations like no other that I have ever had before. After our telephone conversation is over I think to myself about all of the discrimination that he must receive because of nothing more than a handicap. If only people would take the time to listen and learn from challenged people they will learn things about themselves and feel things that they never thought that they would feel. Why do we as a society confine these people more than they already are? We confine them through the simple act of discrimination whether it be in direct contact or through indirect contact (jokes, etc.). Since I have become involved in Best Buddies I have truly grown more sensitive to issues that regard people. I attempt to place myself in the role of a physically or mentally handicapped person and attempt to feel how they are feeling. When a situation arises now where a comment or joke is made I stand up for my beliefs because I feel as though I am standing up not only for myself but also for my Best Buddy. (J.S., 10/21/96)

(Three themes were counted in this entry: "They" are just like me, "they" are unfairly discriminated against, and I can learn from "them.")

### DISCUSSION

Service-learners reported perceptions of greater academic learning in one of seven specific aspects of course material, Cognitive Development. This is not surprising. Developmental differences from the students characterized the clients in all of the service-learning settings. We had hypothesized that

they would report more understanding of individual differences in cognition, but such was not the case. Final grades did not differ between service-learners and non-service-learners.

Students' attitudes toward the people served in service-learning appeared to show change during the semester. Although there was no comparison group and the assessment was non-objective, there seemed to be an increased appreciation for diversity, and a new understanding that one can learn from "the other." We attribute the change in our students' attitudes to the breaking down of "the other" stereotype accomplished during service-learning. As one student observed, "you have to get to know people before you can change your attitude toward them." Indeed, it was striking that the theme which appeared most often in the cognitive psychology students' journals was "I can learn from 'them.'" Gibboney (1996) also reported that service-learners "... develop(ed) a respect for "otherness" and reject(ed) stereotypes."

Although it seemed from reading student journals that there had been attitude change, there was the possibility of experimenter bias, and it was felt that a questionnaire would provide more objective data. In a Sensation and Perception course we had an opportunity to compare attitudes toward people who are autistic between a service-learning group and an "equally-motivated" control group. Since only one of seven measures of perceived learning had shown a difference between groups in Study 1, it was decided to investigate perceived learning as well in the Sensation and Perception class.

## STUDY 2

Service-learning was added to a course in Sensation and Perception on an optional basis. It was felt that autism was a relevant topic for this class, so only the program for autistic children was used as a service-learning site.

### Participants

Of 57 students in two sections of the course, only 16 opted to do service-learning. Because of scheduling difficulties with the program for autistic children, only 10 of those students could be accommodated. This created an "equally motivated" control group ( $N = 6$ ) against which the service-learning group ( $N = 10$ ) could be compared in attitude toward autistic people and rating of learning of course material.

### Materials

An attitude questionnaire was constructed by modifying that used earlier in the seminar on homelessness (Guzewicz and Takooshian's [1992] Survey

on Social Issues, including five statements called the PATH scale (People's Attitudes Toward Homelessness), intermixed with items from the Crowne-Marlow Social Desirability Scale). Only three of the statements in the PATH scale seemed appropriate for use, so these were adapted (changing "homeless" to "autistic") and interspersed with five items from the Social Desirability scale. The three statements then read:

"Though I know that their condition is not their own fault, I find autistic people unpleasant to be around;" "Kindness, generosity, and love are characteristics found more among autistic people than among non-autistic people;" and "Society is turning away and letting down autistic people." A "Feedback Questionnaire" was also given to each student, who was asked to rate how well they thought they knew the course material (titles of chapters from the textbook were listed). The format was the same as that used in Study 1.

Service-learning students submitted journals weekly. Because the focus was on objective evaluation of attitudes, however, no formal content analysis was performed.

### Procedures

The resulting short attitude questionnaire and the Feedback Questionnaire were given to all 57 students at the end of the course. To encourage honesty, no identifying numbers were used. After all the questionnaires were completed, questionnaires from students in the equally-motivated control group were collected individually and put into an envelope. The rest of the students were asked to put their questionnaires into the Service-Learning envelope or the Non-Service-Learning envelope, depending on whether or not they had done service-learning. Thus we could look at attitudes toward autistic people and perceived mastery of course material in those students who had done service-learning and those equally-motivated students who had not.

### Results

There was a difference in attitude toward people who are autistic between service-learners and the equally-motivated control group. Service-learners disagreed more strongly than did equally-motivated controls with "though I know that their condition is not their own fault, I find autistic people unpleasant to be around" ( $t(12) = 3.96, p < .002$ ). There was also a significant difference on "Society is turning away and letting down autistic people" ( $t(13) = 3.13, p = .008$ ). Scores did not differ on "Kindness, generosity, and love are characteristics found more among autistic people than among non-

TABLE 3. Attitude Questions, Social Desirability Questions, and Knowledge of Material

Question	S-L <i>M</i> n = 10	S-L <i>SD</i>	Eq. Motiv. <i>M</i> n = 6	Eq. Motiv. <i>SD</i>
Not Their Fault	5.90	.32	4.60	.90
More Kind, etc.	3.60	1.26	3.20	.84
Society	3.30	.95	4.83	.98
Social Desirability	4.46	1.36	4.50	1.43
Course Material	4.75	.84	4.95	.65

autistic people" ( $t [12] = .39, p > .05$ ; see Table 3). There was no difference in the scores on the Social Desirability questions ( $t [78] = .13, p > .05$ ). Grouping all 10 chapters together, the two groups did not differ in perceived mastery of course material ( $t[158] = 1.58, p > .05$ ).

### Discussion

The difference in attitude toward people who are autistic between service-learners and equally-motivated controls was striking. Students who had done service-learning strongly disagreed with the assertion that people who are autistic are unpleasant to be around. This question most clearly reflected a more positive attitude toward autistic people on the part of service-learners. The second question, "Kindness, generosity and love are characteristics found more among autistic people than among non-autistic people," may simply have been recognized as vapid by both groups. Service-learners agreed less than equally-motivated controls with the third question, "Society is turning away and letting down autistic people," probably because service-learners were spending time each week in a program in which a number of people were working very actively to teach autistic children and integrate them into local schools.

That there was no difference in perceived mastery of course material was not entirely surprising, given that autism was not specifically covered as a course topic. Although journal entries were not formally scored, at least some service-learning students seemed to have gained an enriched appreciation of the broader field and greater understanding of the difficulty in explaining even normal perception, much less why one child was said to feel as though he were in a wetsuit, and why another found eating crackers excruciatingly painful.

### GENERAL DISCUSSION

The recently-released (1997) interim report of the federally-funded program "Learn and Serve America" cites increased learning at the middle- and

high school level as one of the benefits of service-learning. College-level service-learners in the studies of Markus et al. (1993) and Miller (1994) agreed more strongly with "I learned to apply principles from this course to new situations" than did controls. Cohen and Kinsey (1994) reported that "the greatest strength of the community projects appears to be in helping university students to place classroom material into a meaningful context" (p. 8), and that ". . . service learning is more than *doing good*. It is an effective means of teaching that increases student understanding of complex material" (p. 13). The present study (Study 1) provided evidence of students' perception of enhanced knowledge of specific course material at the college level. It is clear that service-learning does not produce a strong, across-the-board magnification of knowledge of course material, however. Service-learners' and non-service-learners' final grades did not differ, and a comparison of service-learners' and non-service-learners' test scores in a subsequent semester of Cognitive Psychology yielded a trend in the expected direction but failed to reach significance.

If we were to ask very specific questions (e.g., "How much do you know about autism?"), we might find differences between service-learners and controls, but would that be of value? Very specific questions are open to the criticism that student service-learners, if answering differently, are responding to demand characteristics—the expectation that they should know a lot about autism. There is also the criticism that service-learners, who inevitably put in more time as a result of service-learning than students who do not, may experience a cognitive dissonance effect: "if I spent this much time for this course, it must have been of benefit to me." Given these considerations, it is difficult to unassailably demonstrate enhanced academic learning from service-learning, even if such be the case.

Markus et al. (1993) suggest that service-learning extends academic learning. It exposes students to worlds that otherwise they might not know exist. Is this not what higher education is about? Brackley (1992) writes

The university does not fulfill its function today unless it allows its students to break out of their narrow world, to broaden their horizons and formulate the questions they really need for a university education worthy of the name. . . . Far from distracting students from studies, this experience stimulates the kinds of profound questions, courses and term papers that represent real education. (p. 13)

Measuring attitudinal change appears to be a useful approach. In the Markus et al. (1993) study,

students in the service-learning sections . . . provided higher mean ratings of the degree to which they thought that participation in the

course had increased or strengthened their "intention to serve others in need," "intention to give to charity," "orientation toward others and away from yourself," "belief that helping those in need is one's social responsibility," "belief that one can make a difference in the world," and "tolerance and appreciation of others. . ." (p. 413)

Miller (1994) reported that students in the service-learning sections agreed significantly more than students in traditional sections with "I reconsidered many of my former attitudes" and "I developed a greater sense of personal responsibility" (p. 415).

To be sure, enhanced learning of course material is important, but our experience with service-learning has caused us to broaden our idea of learning and of what is important for students to learn. When students in the Cognitive Psychology course wrote on the theme of learning from "the other," they did not mean learning about course material as much as about life, people, and values. Miller (1994) says:

traditional in-class graded assignments and tests do not generally tap what successful community service learning experiences seem most positively to affect: *first-hand knowledge of the real world* (emphasis added), abilities in areas directly related to the field experience, and capacities for applying concepts to the world outside of the classroom. (p. 34)

Students clearly think the experience is valuable. In our Seminar on Homelessness we asked students what percentage of what they had learned about homelessness was from service-learning. Responses indicated that more than a third of their learning, twice as much as from any other course component, had been from service-learning. Even in more traditionally academic courses such as Cognitive Psychology and Sensation and Perception, students felt they learned a great deal from service-learning. For example, a Cognitive Psychology student wrote,

I remember the day in class when I volunteered to pick the names for the service learning component. I was just trying to be helpful but to be honest, I wasn't really awake yet and did not even know what I was doing. Anyway, I ended up choosing my own name and was not happy about it. At that time I was overwhelmed because I'm a senior, my classes had a tough work load, I was applying for a Fulbright grant and on top of all of this my family life was a mess. I am a firm believer in fate, that everything happens for a reason. I am so grateful that I was picked to do the service learning component because it turned out to be one of the greatest experiences of my life. P. S., 11/24/97

This is strong affirmation. We subscribe to the ideal that students will serve, reflect on that experience, educate others, and ultimately advocate for the people they have served. Attitudinal change and real-world knowledge acquired from service-learning seem at least as important as enhanced academic learning.

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