The benefits of including service-learning in courses were studied with 35 students enrolled in each of 2 classes in child psychology, 15 students in each of 2 courses on substance abuse, and 16 first-year students in 1 introductory psychology class. Service-learning placements for the psychology courses included school tutoring programs for disadvantaged children, and students in the substance abuse class taught a 6-hour unit on drugs to eighth graders. The extent to which students benefited from service-learning was assessed by evaluating reflection essays submitted by the students and evaluating student responses to an end-of-semester service-learning evaluation instrument. Students indicated that the service experiences and the learning of course materials were mutually supportive. Findings point to the value of service-learning in terms of increasing students' levels of understanding of academic course content and changing students' attitudes toward the importance of service. These findings suggest that service-learning is likely to lead individuals toward socially responsible citizenship. (SLD)
Enhancing the Benefits of Service-Learning in Undergraduate Psychology Courses

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Beginning in the mid-1980s, educators (e.g., Boyer, 1987; Newman, 1985) began to call for a greater commitment from colleges and universities to help students assume more civic and social responsibility through the curriculum. Higher educational institutions have responded by incorporating curricular and co-curricular programs, the majority of which have adopted as their mission to develop students' awareness of public issues and community needs, to foster the development of ethical leadership, and to encourage students to assume a lifelong commitment to social responsibility (Kendall, 1990). Service learning has become a popular curricular innovation that has responded to the challenge of such goals.

Psychology departments began to acknowledge a link between performing volunteer service in the psychology curriculum and the development of students' sense of personal and social responsibility in the 1980s (Raupp & Cohen, 1992). Still, there has been little in the literature to guide the process of incorporating service-learning into the college curriculum. A recent edited volume by Jacoby and Associates (1996) has contributed much to the understanding of how service-learning can enhance educational goals in the postsecondary curriculum. The proposed paper extends the work of Jacoby and others by presenting perspectives from the fields of education and developmental psychology that can enhance the value of incorporating service into the curriculum.

The first of these perspectives that I have incorporated into my curriculum is Bloom's (1954) Taxonomy of Educational Objectives, which distinguishes two basic levels of cognitive understanding of course material. In addition to supporting lower level of understanding, namely knowledge and comprehension, Bloom encourages the development of understanding at higher levels, that is, analysis, application, synthesis, and understanding. The second perspective that serves the goals mentioned is the ecological theory of human development (Bronfenbrenner, 1979, 1989). These two perspectives are incorporated into all phases of the service-learning process that include preparation, action, reflection, and evaluation.

Service-learning has the potential of helping to bring about higher levels of student thinking and understanding. Through the service-learning process that involves preparation, action, reflection, and evaluation, students are provided opportunities to apply principles learned in class to service work with children in diverse contexts and evaluate the validity of theories of human behavior that form the content of the course. In addition, service-learning provides
opportunities for students to engage in the higher-order thinking activities of analysis, a
deductive process, and synthesis, an inductive process, by which their understanding of various
theories and their service experiences can give rise to students' constructions of their own
theories of human behavior and human development.

The ecological perspective (Bronfenbrenner, 1979, 1989) provides a useful mechanism
for understanding various layers of influence on human behavior and is particularly useful in
aiding students' understanding of the social, economic, and political influences on the lives of
disenfranchised members of society who are encountered in the service experiences.
Bronfenbrenner (1979, 1989) distinguishes among four levels of influence that include the
microsystem, the level of one-on-one interactions between individuals and significant others in
their lives, and macrosystem, the level of influence at the larger societal or cultural level. Two
other levels include the mesosystem, the level at which different members of an individual's
microsystem, such as a child's mother and teacher, interact with one another to better influence
the child's development, and exosystem, the level at which events in one person's life, such as a
child's friend who is introduced to illicit drug use, affects the child herself or himself, even
though the child was not involved in the friend's initiation of drug use.

These and other perspectives and theories are introduced in the preparation phase of the
service experience to provide students with some tools for structuring their understanding of the
service experience and relating the experience to course work. Students are also challenged to
reflect on their service experiences in light of higher order thinking principles and ecological
perspectives on behavior. In this paper, the extent to which service-learning experiences
benefited students in terms of their level of understanding of course material, development of
higher-order thinking abilities, and increases in commitment to service were examined from
student papers and course evaluations.

Method. Data for this analysis came from the papers and course evaluations of 35
students enrolled in each of two fall courses in child psychology (1997, 1998), 15 students in
each of 2 spring courses in substance abuse and its effects (1999, 2000), and 16 students in a
special fall freshman seminar class in introductory psychology (1999) at a religiously-affiliated
liberal arts college on the east coast. All students were traditional-aged college students with
mostly second-year students enrolled in child psychology, 26 fourth-year and 4 third-year
students enrolled in the substance abuse course, and 16 first-year students enrolled in
introductory psychology. Most students in the substance abuse and introductory psychology
courses knew before the semester began that service was a required part of the course.

Placements for child psychology and introductory psychology included after school
tutoring programs for at risk urban children, urban day care centers, urban elementary and middle
schools--including special education schools, medical and psychiatric hospitals, and Head Start
programs throughout the area. All students in the substance abuse course taught a 6-hour unit on
drugs and their effects to eighth-grade students in urban Catholic schools (and another small
private urban school), which lacked such a course. The number of hours that the students spent at
their service placements differed somewhat for each of the three courses: 12-15 hours for the
semester for students studying child psychology, 10 hours of teaching 8th-graders during the
semester for the substance abuse students (who also taught in teams of three), and 20 hours
during the semester for the introductory psychology students. The students in the introductory psychology course received the most extensive preparation from the service provider and the students in the substance abuse course had the greatest amount of in-class preparation for their particular teaching project. The students in the child psychology had the least amount of preparation for their experiences both in the classroom and at the service sites.

The extent to which students benefited from service learning was assessed by evaluating reflection essays that were submitted at the end each semester and analyzing student responses on an end-of-semester service-learning evaluation instrument. This instrument, used for all service-learning classes at the college contains both forced-choice items and open-ended questions that provide students with opportunities to respond with their own words. The essays of the most recent introductory psychology and substance abuse courses were analyzed for the extent to which they demonstrated an understanding or application of the four aspects of Bronfenbrenner's (1979, 1989) ecological theory and utilized each of the four aspects of higher-order thinking identified in Bloom's (1954) taxonomy. The assignment given to the students in each of these classes was nearly identical. Students were asked to write a 4-to-5 page essay, resembling an op ed piece that could appear in a newspaper, that identified a problem observed in their service work and which was addressed in the course (in the case of the substance abuse course, the problem had to be identified with drugs) and expressed an informed opinion about how to address the problem. Students were told that they were to demonstrate an understanding of Bronfenbrenner's systems and to utilize the principles of higher-order thinking in their essays. In the present study, the extent to which students carried out the latter two directives are reported and compared. The comparison was expected to demonstrate a developmental difference in the level of higher-order thinking and cognitive complexity between introductory psychology students, all of whom were traditionally-aged first-year students, and substance abuse students, 14 of whom were fourth-year traditional students (and one a third-year student).

Results and Discussion

Course evaluations. Results of student responses on the end-of-semester evaluations showed that students in all classes rated the service experience highly and benefited by the experience. Between 89% and 100% of students in the five courses rated the service component of the courses as "very good." In addition, between 59% and 88% of students indicated that the experience increased their interest in doing community service. Also, 94% of all students indicated that it was "extremely important" that "society takes steps to address issues affecting people who are disadvantaged," a belief that became more important during the course of the semester for 77% of students. These results support the notion that students' sense of social and personal responsibility increased as a result of the service experience.

Service-learning students overwhelmingly indicated that service experiences and the learning of course material were mutually supported. On a 5-point scale (1=not at all, 3=some, 5=quite a lot), the mean student score in the child psychology courses on the extent to which the service contributed to course learning was 3.8 and for the extent to which the course material helped them make sense of their community work they were performing was 3.9. For the drug abuse courses, the means were 4.2 for both items and, for the introductory psychology course, the means were 4.0 and 4.1, respectively.
Reflection essays. Essays written by 15 members of the substance abuse class showed considerable evidence of the understanding of ecological principles related to drug use and demonstrated strong evidence of higher-order thinking. With respect to ecological principles, a strong majority of students developed themes related to microsystem (93%) and macrosystem influences (73%) on drug abuse, while fewer students addressed mesosystem (47%) and exosystem (53%) influences. These findings suggest that students have somewhat less of a tendency to consider the, perhaps, more complex and less familiar concepts of mesosystem and exosystem influences on human behavior. The essays written by the sixteen first-year students indicated similar levels of attention to microsystem influences on human behavior (100% of students) as compared to the older students, but fell short of the older students in terms of the attention they gave to macrosystem (44%), mesosystem (13%), and exosystem (19%) influences.

Essays written by most of the substance abuse students incorporated all four aspects of higher-order thinking in their essays. All 15 students demonstrated problem analysis and an evaluation of methods in use to control drug abuse. In addition, 80% of students addressed the application of theories or principles derived from their readings to the problems of urban drug abuse and 67% demonstrated the ability to synthesize ideas from different theories or research findings, along with what they learned from contact with young adolescents through their service experiences of teaching students in urban middle schools about drugs and their effects. Among introductory psychology students, 100% of students demonstrated the ability to apply course concepts to their service experiences. However, other aspects of higher-order thinking were less evident. One-half of the students incorporated analysis, one-half evaluation of theory or other course material, and 38% evidence of synthesis in their essays.

Discussion. Results point clearly to the value of service-learning in terms of increasing students' levels of understanding of academic course content and in changing students' attitudes toward the importance of service. Whether students enrolled in a course that they clearly knew would incorporate service as a part of course requirements, a majority reported that the service experience increased their interest in continuing to be involved in service activities and that their belief in the importance that society takes responsibility for meeting the needs of disadvantaged persons. These findings suggest that service-learning is likely to lead individuals toward socially responsible citizenship.

Students also reported that the service experiences increased their level of understanding of course material, certainly an important consideration for professors who are considering introducing service-learning in their classes. Caution must be taken to acknowledge that these findings come from students' self-reports and not from experimental research.

The results of the analyses of student reflection essays suggest that, with respect to Bronfenbrenner's (1979, 1989) ecological system, microsystem influences on behavior are easiest to understand followed by macrosystem influences. As could be expected, mesosystem influences and exosystem influences are, perhaps, not only more difficult to understand but, in a related notion, not as present in most students' thinking about influences on human behavior. For those instructors interested in challenging the level of the complexity of students' understanding of human behavior, these findings point out the need to spend more time with students on these
more complex and less frequently discussed influences.

With respect to aspects of higher-order thinking, results of the present study suggest that younger and older students appear to easily take the step of applying course material and theories of human behavior to setting outside of the classroom in their writing. However, findings also suggest that clear differences related to age may be evident with respect to other aspects of higher-order thinking and that younger students may require considerable coaching on developing the ability to analyze, synthesize, and evaluate.

The finding of this age (and presumably developmental) difference is consistent with research and theory (e.g., Perry, 1970) that suggests that younger undergraduates think more dualistically and less relativistic. Younger students may not be familiar with the notion of the skeptical scholar that insists on evaluating information before accepting such information as valid. Whether service-learning can serve as a vehicle for helping students develop their skills as critical and higher-order thinkers has not been tested in the present study. Learning more about the effects of service-learning on the development of these thinking skills would be an important direction for future research on service-learning to take.
References


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