Exploring Student Outcomes from a Service-learning Experience

In Community Nutrition

Using Qualitative Research Techniques

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Chapter 1

Review of Literature
in
Service-Learning

by

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EXECUTIVE SUMMARY OF LITERATURE REVIEW

This review of the literature in the field of service-learning was conducted to meet the requirements for a master’s thesis in the Department of Nutritional Sciences at the University of Connecticut and as part of a program evaluation of Husky Reads, a community-based nutrition education program. Husky Reads, which is one component of the University of Connecticut Food Stamp Nutrition Education (FSNE) program, utilizes undergraduates from the University of Connecticut to deliver nutrition education integrated with literacy activities to children and their families who are waiting in pediatric clinics in Hartford, Connecticut to see their medical and WIC providers.

From the program’s inception four years ago, students have had a choice of participating in Husky Reads solely as volunteers, as work-study employees, or by enrolling in a service-learning course, Nutritional Sciences 281, titled Experience in Community Nutrition. Since the service-learning option of participation requires much more planning, supervision and feedback from program staff than the other options, this literature review was undertaken in part to assess whether the literature in the field supported sufficiently positive student outcomes from service-learning experiences to merit the extra effort it entails.

Service-learning as an instructional method has been embraced by academia during the past 15 years. In theory and practice it allows institutions of higher education to work on social, political, economic and moral challenges in collaboration with community partners by renewing their historic commitment to service (Boyer 1994). It is also consistent with new emphases within higher education on the application of knowledge (versus acquisition), team and community focused learning (versus an individual focus), and active learning (versus passive) [Billig and Waterman]. Within health professions education it has been embraced as a means to prepare future health care providers with skills in collaboration, teamwork and communication in community-based settings (Seifer 1998a, Connors et al.).

While there is a long tradition of community service activities in nutrition education, service-learning pedagogy does not appear to be commonly employed judging from the limited amount of literature published in professional nutrition journals. Most
articles to date have been of a “how-to” nature, providing background, program
descriptions, and ideas for how other practitioners can get started in the area (Ash, Kim
and Canfield, Mitchell).

Although the amount of research on service-learning published within the field of
nutrition is small, the literature on service-learning is otherwise vast, since the practice is
found in most other disciplines. Yet challenges and criticisms of prior research cloud the
results that have been obtained. The problems that limit generalizations of past studies
include the lack of consistent definitions for service-learning, enormous program
diversity, unclear and diverse theoretical foundations, inferior research design and
methods, and multiple or limited outcomes (Waterman 2003, Furco). One chronic
criticism is that researchers do not differentiate between the effects of service versus the
effects of service-learning (Furco).

Student outcomes research in the service-learning has focused on three areas:
cognition, citizenship, and personal development. Probably the most critical link for
researchers to substantiate is that service-learning produces significant learning
outcomes, but the evidence, while favorable, is not yet conclusive. Self-reported
measures of learning produce the most consistently positive results, yet they represent
students’ beliefs rather than objective evidence of learning (Eyler 2000). For citizenship
outcomes, the literature generally supports the assertion that service-learning during
college does have the potential to impact civic participation. However, the strongest
support for the positive impact of service-learning on students comes from the research
on outcomes associated with personal development. The evidence is especially strong in
outcomes related to diversity. Consequently, researchers in both fields are recognizing
the commonalities between multiculturalism and service-learning and are promoting the
integration of the two movements (Langseth, Marullo, Vogelgesang).

Overall, this literature supports maintaining the service-learning option in Husky
Reads. The impact of service-learning experiences on students is clearly beneficial.
What is not clear is whether the results are due to community service alone or to the
whole package of service-learning. While the preliminary evidence indicates that
service-learning has an advantage over community service, especially if “best practices”
in the field are followed, more research in this area needs to be conducted.
INTRODUCTION

This review of the literature in service-learning was developed to meet one of the requirements for a master’s degree in the Department of Nutritional Sciences at the University of Connecticut. The literature review is a component of the program evaluation of Husky Reads, a community-based nutrition education program conducted by the University of Connecticut Food Stamp Nutrition Education program and the Department of Nutritional Sciences. Husky Reads utilizes undergraduates from the University of Connecticut to deliver nutrition education integrated with literacy activities to families waiting to see their medical providers in pediatric clinics in Hartford, Connecticut. Service-learning, a form of experiential education that couples community service with academic learning, is one way students participate in Husky Reads.

PROGRAM DESCRIPTION

Background

In 1996-97, during frequent visits to the public pediatric primary care clinics in Hartford, Connecticut, to perform medical chart reviews, Dr. Ann Ferris and colleagues from the Department of Nutritional Sciences at the University of Connecticut observed that families were waiting for extended periods of time in the waiting rooms. Believing that this captive audience would welcome some diversions, they developed a nutrition education program modeled on the American Academy of Pediatrics program, Reach Out and Read (ROR). ROR is a multifaceted literacy program which utilizes volunteers to read aloud to children in pediatric waiting rooms while their medical providers give families “prescriptions” for reading and an age-appropriate children’s book during each well-child visit (ROR website).

The idea for Husky Reads was similar; undergraduate volunteers recruited from UConn would read aloud to children in the waiting rooms and play games and activities with nutrition and food themes. The program was successfully developed and pilot-tested during Fall Semester 1999 by University of Connecticut Department of Nutritional Sciences undergraduates Stephanie Hardy and Jamie Grass, and in January of 2000 the
first program staff was hired. In the ensuing four years, a total of 257 students have volunteered four hours a week for approximately ten weeks every semester to provide nutrition education and literacy activities to more than 6,000 children and their families.

**PROGRAM DEVELOPMENT**

**Student Participants and Requirements**

Students are recruited early in each semester in a series of “Info Meetings” held in a central location on campus. Flyers advertising these meetings are posted in key locations on campus and distributed in undergraduate classes in nutritional sciences. At the informational meetings students learn about the requirements for the program and whether their schedules will allow them to become involved.

Husky Reads was originally envisioned as an experiential learning experience for majors in the Department of Nutrition Sciences. However after the first semester of recruitment, it became obvious that many other majors were also interested in the opportunity to work with children in a clinic or hospital environment. The majors most typically represented are those from nutrition and dietetics, other health profession majors, education, family studies, psychology, and students undecided about their choice of major (ACES).

From its inception, students have had a choice of participating in Husky Reads as volunteers in an extracurricular activity, as work-study employees, or by enrolling in Nutritional Sciences 281, Experience in Community Nutrition, taught by Dr. Ferris and Meredith Poehlitz. During a typical semester, most students (75-80%) participate as volunteers, a smaller percentage (15-18%) enrolls in Nutritional Sciences (Nusc) 281, and a few (2-5%) are employed in federal work-study positions. All participating students visit their clinic for two hours each week plus they must allow two hours of travel time for the 52 miles roundtrip to Hartford. Students enrolled for credit in Nusc 281 must also complete weekly journal entries reflecting on their experiences, participate in a six-hour Hartford-based community service project, and attend five training seminars and discussion group meetings. Over the past seven semesters, Nusc 281 has evolved
into a stand-alone service-learning course with explicit learning objectives, preparation, and multiple opportunities for guided reflection.

In order to participate in Husky Reads, all students are required to complete lengthy orientations at their site. They are also strongly encouraged to attend the series of five discussion groups we conduct every semester to provide additional opportunities for training as well as a chance for reflection about the experience. Topics for trainings and discussions often address diversity issues since for many students this is their first opportunity to work with people of other racial, cultural and economic backgrounds. Historically 95% to 98% of the students who participate in our program identify themselves as Caucasian and many come from affluent small towns or suburbs in New England.

Time is not the only donation that students make to the program; they are transported the 52 miles roundtrip to Hartford via a combination of university (provided by Community Outreach) and personal vehicles. Students receive no reimbursement for any costs they incur from program participation, such as for transportation, immunizations or the purchase of appropriate attire, and unless they receive federal work-study funding, they do not receive wages.

A high percentage of undergraduate majors in Nutritional Sciences participate in Husky Reads, particularly those who are preparing to apply for dietetic internships. Students who have been involved in at least one semester of Husky Reads are eligible to participate in more advanced opportunities in community nutrition through Nusc 281. These opportunities tend to attract the Nutritional Sciences majors, rather than students outside of the department. These advanced experiences require greater independence and nutrition knowledge, and provide students with material for strong dietetic internship or graduate school applications.

**Audience, Activities and Sites**

Overall, Hartford residents are 70% nonwhite, with great diversity in that population. The majority of Latinos are of Puerto Rican descent, but large numbers of this group are from the Dominican Republic, Peru, Mexico and Central America. Similarly, the African-American group consists of substantial representation of Caribbean
blacks and native Africans in addition to American-born blacks (2000 U.S. census). According to an article published in the New York Times in August, 2002 (Zielbauer), Hartford is second to Brownsville, Texas, as the city with the highest rate of poverty among residents (30%); second to Newark, New Jersey, as the city with the lowest home ownership rate (24.5%); and 80% of the children born in the city are born to single mothers. Thus, the students from UConn and the families from Hartford typically come from very different backgrounds; Husky Reads provides volunteers with opportunities for personal and professional growth through interaction with people they would not encounter during an average day on campus.

At sites students work one-on-one or with small groups of children to engage them and their parents in nutrition education and literacy activities while they wait to see their medical providers. The majority of children are of preschool age, but the audience in the waiting rooms encompasses children from birth to adolescence and their parents. All program materials focus on nutrition education or health, and literacy activities are integrated with these themes. Whenever possible program materials are selected to represent the diverse audiences served by the clinics. Since many families in our target population are Spanish-speaking, materials and handouts are also available in Spanish. Volunteers with Spanish skills are placed in the clinics where their abilities can be best utilized. Our sites now include the original three pediatric clinics in Hartford (at Connecticut Children’s Medical Center, St. Francis Hospital, and the Burgdorf Clinic) plus Hartford’s Women Infants and Children (WIC) clinics on Park and Coventry streets.

**Staffing**

One part-time (.5 FTE) professional staff person administers the program, assisted by an undergraduate student coordinator (10 hours per week) and a graduate student in Nutritional Sciences (20 hours per week).

**Structure and Funding**

Husky Reads is funded by the University of Connecticut and the U.S.D.A. Food Stamp Nutrition Education (FSNE) to provide nutrition education to families receiving food stamps. It is one component of the Hartford–based Husky Nutrition Program, one
of six FSNE programs in Connecticut. Although the program operates and is funded independently of other community service programs at the University of Connecticut, Husky Reads staff work closely with staff from the university’s office of Community Outreach. They have been instrumental in arranging transportation of students to Hartford, assisting with recruitment, and in providing information useful to organizational efforts.

Program Objectives
This program was developed with multiple objectives.

- For University of Connecticut FSNE, the student participants reach approximately 2,000 additional underserved individuals on a yearly basis with nutrition messages in a cost-effective manner.
- Participation in Husky Reads introduces students at an early stage in their college education to the field of community nutrition and potentially may influence them to choose this area for their career. Community nutrition is a field of nutrition practice in which employers such as the University of Connecticut often find it difficult to recruit and employ skilled practitioners.
- For the Department of Nutritional Sciences, the College of Agriculture and Natural Resources, and the university as a whole, this program fulfills our mission of community service and generates enormous goodwill.
- For student volunteers, it provides an experiential learning opportunity that allows them to apply classroom-based learning while building their resumes for future employment or graduate school.

DEFINING SERVICE-LEARNING

Defining service-learning presents a challenge due to the broad range of experiences known as service-learning, as well as the variable ways to interpret two complex processes such as service and learning (Stanton et al., Furco 2003). In 1996, Jacoby found more than 200 definitions in the service-learning literature (Jacoby 1996a), but since then a consensus appears to be emerging about the essential elements of the
practice. Readers of the service-learning literature are most likely to encounter the following definition, which is consistent with our practices in Husky Reads: service-learning is a form of experiential education that includes community service accompanied by specific learning objectives, reflection, and reciprocity of learning between students and recipients of the service (Seifer 1998a, Tai-Seale, Jacoby 1996a, Morris). However, this definition is by no means uniform; it is not uncommon to see service-learning described as what is essentially community service, without any of the following elements: learning objectives, reflection, and/or reciprocity (Burns). In reviews of the service-learning literature, a wide spectrum of experiences such as youth service, field education, and community service have been described as service-learning (Furco 2003).

The hyphen between service and learning is symbolic of the balance between the two activities in service-learning, namely service to the community and academic learning (Eyler and Giles 1999). As described in much of the literature, in authentic service-learning the service to the community provided by the student has value equal to the student’s learning objectives. In contrast, during traditional experiential education experiences such as internships and field placements the learning objectives of the student are the most important component, and during community service, the service outcomes are usually primary and learning is incidental (Furco, Ciaccio, Seifer 1998a).

In terms of implementation, service-learning experiences are by their nature diverse, idiosyncratic and situational if they address the needs of both students and sites (Furco). Some colleges will describe a half-day of service conducted as part of another campus activity, e.g., freshmen orientation, as service-learning while other institutions have integrated multiple year service-learning programs with ascending levels of responsibility and a connected series of courses (Eyler and Giles 1999). Between these two ends of the spectrum are opportunities such as Husky Reads, where volunteers can elect to enroll in a one-credit stand-alone service-learning course. In an attempt to clarify the definition, Howard distinguished “academic service-learning” as those service experiences that are connected to an academic course. In contrast, “co-curricular service-learning”, such as a spring-break community service experience, is the combination of service and learning outside of the formal school curriculum (Howard).
Philosophically, service-learning is considered a pedagogy to some—“a teaching strategy that uses community service to teach students about the academic curriculum (Furco)”---while to others, service-learning is a way to revolutionize higher education through social change. As Stanton et al. describe their service-learning colleagues, “…some want to help students come to know the world, while others seek to help students change the world (Stanton et al.).” If community needs truly have value equal to students’ needs and if subjective raw experience is valued as highly as something read in a textbook, then service-learning diverges from the tradition of academia. Again, from Stanton and colleagues: “Most academics assume that answers to society’s problems will be found in classrooms, laboratories, and libraries as opposed to communities off-campus (Stanton et al.).”

The question of definition is important, since how service-learning is defined has ramifications for the research, teaching and evaluation process. For instance, service-learning defined as “…providing charitable services and how that promotes community and learning about life, society, and responsibility” (Tai-Searle) would be assessed differently than “…learning course content through performing service related to that content in the community” (Tai-Searle). As Furco emphasizes, it is also critical that the field begin to differentiate between studying the effects of service versus the effects of service-learning on the education development of students; only then will the outcomes specific to service-learning be identified (Furco).

**HISTORY OF SERVICE-LEARNING**

Before describing the theories that underlie service-learning, it is useful to discuss the history of the movement in order to understand the various influences on its development. While the term “service learning” was first used in 1966 by Oak Ridge Associated Universities to describe an internship program that linked college students with community development organizations in Eastern Tennessee, scholars in the field date its roots to long before the experiential education movement of the 1970s (Pollack 1999, Kraft, Vogelgesang, Jacoby 1996a). Various movements, including land grant colleges and universities, settlement house education, the Progressive labor movement, public work programs of the 1930s, the Peace Corps and VISTA, student activism of the
1960s, and the civil rights movement have influenced the field. Many of these influential people and programs in turn were shaped by the theories of experiential and democratic education proposed by John Dewey in the early 1900s. Dewey was one of the first to link service to education, but the effort to do this continues today, as many institutions of postsecondary education have a three-part mission of teaching, research, and service (Pollack 1999). Dewey’s theories are described in greater detail under the service-learning theory section below.

In reviewing the service-learning literature, the following dates and developments occur repeatedly as milestones:

1950s
- The Citizenship Education Project (CEP) at Columbia University Teacher’s College provided the framework for much of the experiential education and social and political action programs that appeared in the 1970s (Kraft).

1960 and early 1970s
- Many universities developed service-learning programs as a result of student community activism (Bailey).
- 1965--College work-study programs were established (Bowley and Meeropol).
- 1968--National Service Secretariat Conference was held (Titlebaum et al.).
- The National Student Volunteer Program (1969) and the Domestic Volunteer Service Act of 1973 were passed to establish service-learning programs (such as the Peace Corps and VISTA) to engage students in community problem solving (Pollack 2000).

1970s
- 1971—The National Society for Experiential Education was founded to promote the development and improvement of experiential education programs (Titlebaum et al.)
- Many official state and national reports on education reform were published to emphasize the need to make education more active and relevant to life (Kraft). Some of the better known publications were:
• Youth: Transition to Adulthood by James Coleman (1974)
• National Manpower Institute Report (1975), and

• By the middle to late 1970s, the movement declined on college campuses due to lack of institutional support (Jacoby 1996a, Bailey).

1980s

• 1982—In an influential speech, Derek Bok, the president of Harvard, called for academia to assume a leadership role in addressing society’s needs and problems (Jacoby 1996a).

• While the educational pendulum swung back to teaching basics, many publications still advocated for the inclusion of community service in education, including:
  ➢ A Nation at Risk by the National Commission on Excellence in Education (1983)
  ➢ The Transition of Youth to Adulthood by the National Commission on Youth
  ➢ Two Carnegie Foundation reports (by Newman in 1985 and Boyer in 1987) were especially influential (Markus et al. et al.).

• 1984--Campus Outreach Opportunity League (COOL), a grass-roots level student organization, was formed to promote student involvement in community service (Markus et al., Jacoby 1996a).

• 1985--Campus Compact, a national coalition of college of university presidents, was formed “to foster in students the values and skills of citizenship through active involvement in collegiate-based public and community service (Zlotkowski 1996).”

• 1989--Wingspread Principles of Good Practice in Combining Service and Learning were written and published, a product of the 1989 Wingspread Conference (Titlebaum et al.).
1990s

- 1990—The National and Community Service Act of 1990 was passed, which inspired President Bush’s Points of Light Foundation and the White House Office of National Service (Titlebaum et al.).
- Ernest Boyer promoted higher education reform in two influential publications published in 1990 and 1994. He coined the terms “scholarship reconsidered” and the “New American College” to “link thought to action and theory to practice” and to “respond to the challenges that confront our children, our schools, and our cities, just as the land-grant colleges responded to the needs of agriculture and industry a century ago (Boyer 1990, 1994).”
- 1992—Maryland becomes the first state in the nation to require community service for high school graduation (Titlebaum et al.).
- 1993—The National and Community Service Trust Act of 1993 was passed to create the Federal Corporation for National and Community Service, which funded the AmeriCorps National Service Program and service learning programs in K-16 via Learn and Serve America (Titlebaum et al.).
- 1993—The National Service-Learning Listserv sponsored by the University of Colorado was formed on the Internet (Bowley and Meeropol).
- 1994—The Pew Higher Education Roundtable criticized higher education for poor undergraduate teaching, over-focus on obscure research, failure to provide civic and moral education, and narrowly preparing students for the job market (Jacoby 1996b).
- 1994—The Michigan Journal of Community Service Learning was founded, the first peer-reviewed journal for research devoted to service-learning (Stanton et al.).
- 1995—The Colloquium on National and Community Service, the first national conference on service-learning, was sponsored by Campus Compact, the Invisible College and the American Association of Higher Education (Titlebaum et al.).
- 1995—The Health Professions Schools in Service to the Nation program, which founded Campus Community Partnerships for Health, was funded (Titlebaum et al.).
- 1997—The American Association of Higher Education published the first of many volumes of the Service-Learning in the Disciplines monograph series, which is designed to improve service-learning practice in many disciplines (Titlebaum et al.).
2000s

- 2001---The Learn and Serve America National Service-Learning Clearinghouse was funded to gather and disseminate materials on service-learning at all levels (Titlebaum et al.).
- 2001---The First International Conference on Service-Learning was held (Titlebaum et al.).

THE CURRENT STATE OF SERVICE-LEARNING

With the exponential growth in service-learning literature, we know that use of the pedagogy is growing, but by how much? Some basic statistics on the practice of service-learning have been assembled to document the growth.

The most recent numbers are from the annual survey done by Campus Compact in 2003 (Campus Compact). The survey included 922 institutions of higher education with a response rate of 44%. Here are the relevant results: 36% of students on member campuses were involved in community service activities, including service-learning—this translates into more than two million students if all member and nonmember four-year institutions are taken into account. Eleven per cent of member institution faculty integrates community service with academics or research, for an average of 37 service-learning courses per campus. Eighty-eight per cent of responding institutions offers service-learning courses, but only 69% of them give academic credit for the experience.

The most common campus-based projects are the following: tutoring (94% of colleges), mentoring (89%), housing/homelessness (84%), environmental issues (84%), health (84%), reading/writing (83%), and hunger issues (82%). The most common types of service programs include: work-study (90%), discipline-based service-learning courses (71%) and non-profit internships (71%) [Campus Compact].

Participation in service-learning is also growing in grades K-12. According to a report from the Education Commission of the States, seven states (Arkansas, Connecticut, Delaware, Minnesota, Oklahoma, Rhode Island, and Wisconsin) allow counting of service-learning activities toward high school graduation requirements, while Maryland requires community service as a high school graduation requirement (Education Commission for the States). The introduction to service-learning in high school may
form the basis for a continued commitment in college; students who perform community service during high school were more likely to perform it during the first two years of college than of students who did not report participation in high school (65% versus 36%) [Pritchard].

The Annual Freshman Survey for 2000 done by U.C.L.A.’s Higher Education Research Institute found that 81% of college freshmen reported volunteer work in the past year, and 56% had performed it as part of a class (Astin et al. 2000). Additionally, according to data from the National Center for Education Statistics in 1999 (Pritchard), 68% of all U.S. public schools has a community service-learning program, which breaks down to 55% of elementary schools, 77% of middle schools, and 83% of high schools. In private schools the numbers are even higher: 88% have community service programs. However, the typical amount of involvement service is fairly brief: 24% of 6th to 12th grade students spend 31 hours or more per year in service activities, 29% participate for 3 to 30 hours, and 47% participated once or twice (Pritchard, Shumer and Belbas).

In a comparison of service-learning data from 1984 to 1997 done by the National Service-Learning Clearinghouse, participation in K-12 service learning increased dramatically while the total population of students stayed relatively stable. In 1984 more than 900,000 high school students participated in service related programs, while the numbers increased to 6,181,797 students in 1997, a 686% increase. Participation in service-learning programs has increased even more: from 81,000 students in 1984 to 2,967,262 in 1997, a 3,663 % increase (Shumer 1999).

DEVELOPMENT OF THEORY IN SERVICE-LEARNING

If service-learning theory were a river, it would have three principal tributaries: learning theory, human developmental theory, and higher education reform, all of which intersect and intertwine as they merge into a single channel. For the purposes of clarity, the contributions of various learning theorists will be discussed first, followed by developmental theories, and then theory as it pertains to reform in higher education. In the literature, however, the threads are often difficult to disentangle. Barbara Jacoby describes service-learning as program and pedagogy and philosophy; these multiple
contexts explain the difficulty in tracing the roots of service-learning theories (Jacoby 1996a).

**Learning Theories**

While John Dewey is consistently considered the foremost theoretician on the learning side of service-learning, Harkavy and Benson (Harkavy and Benson) trace the roots of service-learning even further back in time to two philosophers from the 17th and 18th centuries, Francis Bacon and Benjamin Franklin. Bacon, the originator of “knowledge is power,” believed that knowledge should be pursued “…for the benefit and the use of life,” not “…for pleasure of the mind, or for contention, or for superiority to others, or for profit, or fame, or power, or any of those inferior things.” His philosophy was in marked contrast to the elitist Platonic theories that dominated Western education and philosophy of the time. Harkavy and Benson attribute to Benjamin Franklin the idea of creating a college to put Bacon’s ideas into action. Franklin’s inspiration was that this college, the University of Pennsylvania, would train scholars to gain knowledge for the “benefit and use of life.” While Franklin was not able to realize his vision, Seth Low, the president of Columbia University from 1890-1901, adapted them “by encouraging faculty and students to focus their intellectual work on helping New York solve its problems” (Harkavy and Benson).

Meanwhile, at almost the same time at the University of Chicago, John Dewey was proposing a democratic educational system in order to create a democratic society. Giles and Eyler, in their analysis of Dewey’s influence on service-learning theory, first discuss his relevance to the learning side of service-learning (Giles and Eyler 1994). Dewey believed that “all genuine education comes about through experience” and that learning is derived from previous experience as well as the current situation. He also inextricably linked thinking and action in “reflexive thinking” (Giles and Eyler 1994, Rhoads 1997).”

In explaining Dewey’s relevance to the service side of service-learning, Giles and Eyler also use his social and political theories, especially those focusing on democracy (Giles and Eyler 1994). A central concept of his social philosophy was the establishment of the “Great Community,” which reflected the intellectual, moral, democratic and
emotional aspects of life. Schools were to be organized as a form of social life to resemble a “miniature community,” with the same components. Students would model community in school and thereby become citizens: “When the school introduces and trains each child of society into membership within such a little community, saturating him with the spirit of service, and providing him with the instruments of effective self-direction, we shall have the deepest and best guarantee of a larger society which is worthy, lovely, and harmonious.” Education thus has a responsibility to teach moral and civic ideas along with intellectual ones (Steinke and Buresh, Kahne, Hepburn, Kraft, Harkavy and Benson).

Another theorist, whose work has the ideas of Dewey at its heart, is Kurt Lewin, the father of participatory action research. This research strategy deliberately involves community members as researchers; “academic researchers learn from and with members of the community, do their research with and not on people, and contribute simultaneously to the solution of significant community problems and significant scholarly problems (Harkavy et al.).” It has since been used as a model of service-learning as well as both a “pedagogy and method to engage undergraduates and communities” in community problem solving (Harkavy et al). Many scholars (Harkavy et al., Kolb, Schon) note the commonalities between Dewey and Lewin: “action research derives from the best Deweyan tradition of democratic problem solving (Harkavy et al.).”

Jean Piaget’s theories form another base of service-learning theory, particularly of models utilizing stages of development. Piaget proposed a key concept, constructivism, related to service-learning. During constructivism, people construct their own ideas and principles of reality through interaction with the environment. Service-learning thus provides ways for students to construct meaning and resolve conflicts from challenges to their “old” way of thinking, and allow them to progress to a higher level of development (Brandenberger, Bradley 2003).

David Kolb combined the theories of Dewey, Lewin, and Piaget to create his experiential learning cycle, which has become a critical model for service-learning. It is a constantly repeating four-step cycle: 1) concrete experience, 2) reflection about the experience, 3) synthesis and generalization of the experience, and 4) testing these concepts or ideas in a new situation. The cycle begins again with the new experience
(Kolb, Jacoby 1996a, Eyler 2002a, McEwen). Kolb is also responsible for describing four different learning styles that have implications for the design and implementation of service-learning courses; in order to complete all four steps of the cycle, learning opportunities must be provided which are appropriate for all learning styles (Kolb, McEwen).

Another educator whose work is often cited in service-learning literature is Paulo Friere, particularly that related to social change/justice and service-learning. Friere believes that learning is dependent on reciprocity and equality, and his strategy is to involve members of the community in defining and solving their own problems. Service-learning is thus a pedagogy in which one can implement his theories (Waldstein, Harkavy et al., Harkavy and Benson, Brandenberger).

Developmental Theories

The developmental theories that underlie service-learning can be divided into theories reflecting 1) cognitive development, 2) psychosocial development, and 3) identity development (Bradley 2003, McEwen). Cognitive developmental theories explain the process by which people perceive and make meaning out of what they experience. Psychosocial developmental theory explains the kind of issues and tasks that people face at certain critical points in their development. Identity developmental theory is concerned with the development of individual characteristics, such as culture, race, class, gender, age, etc.

- Cognitive developmental theories

Richard Rhoad’s theory of self, other, and community proposed in his book, Community Service and Higher Learning: Explorations of the Caring Self, integrates the learning theories of Dewey with cognitive development theory: “Dewey’s vision of democracy challenges all citizens to take part in a form of decision making that balances the interests of oneself with those of others. Democracy seen in this light demands that individuals understand the lives and experiences of other members of a society (Rhoads 1997).” Rhoads calls this attribute of Dewey’s an “ethic-of-care” philosophy that he and others (Delve et al., McEwen, Bradley 2003) also trace to the work of feminist scholar
Carol Gilligan, another theorist whose work is frequently cited in cognitive development theories as they pertain to service-learning. According to Gilligan, “…women often make moral decisions based on a sense of connection with others;” they have an “ethic of care.” Rhoads synthesizes the work of Dewey and Gilligan in the term, “the caring self.” “The caring self is intended to convey the idea of a socially oriented sense of self founded on an ethic of care and a commitment to the social good (Rhoads 1997).”

The “ethic of care” philosophy can be contrasted to the cognitive development theories of Lawrence Kohlberg, which are based on an ethic of justice and rights. He proposed three levels of moral development: pre-conventional, conventional, and post-conventional. Each level consists of two stages, with each stage representing more complex and abstract moral reasoning until stage six, the highest-order stage, which is achieved by less than one per cent of the population. Kohlberg’s research indicated that people could understand moral reasoning only one stage beyond their own, but that the following conditions could raise one’s level of reasoning:
1) “exposure to the next higher stage of reasoning, 2) exposure to situations posing problems and contradictions for the current moral structure, and thus leading to dissatisfaction with the current level, and 3) dialogue combining the first two conditions, in which conflicting moral views are compared in an open manner (McEwen, Bradley 2003, Brandenberger, Delve et al., Rhoads 1997).” According to this theory, service-learning programs may have a profound impact on moral development if they are able to build in reflection and dialogue (McEwen).

William Perry is another cognitive developmental theorist whose work explains the development of abstract and complex ways of thinking from earlier concrete and simple thought. He developed a scheme of intellectual and ethical development, which consists of nine positions arranged in four groupings to represent the different modes of thinking. Each new level builds on the previous one. His research suggests that college students of traditional age typically enter college in position two and leave at position four or five. The relevance to service-learning is in the importance of designing programs that allow students opportunities for growth through advancement between positions (Brandenberger, Bradley 2003, Delve et al., McEwen).
Based on Perry and Kohlberg’s theories, King and Kitchner have developed a reflective judgment model to explain how students learn reflectively about complex problems where solutions are not clear-cut. Again, this is a multiple stage model, seven stages in this case, where each stage builds on the previous one and is associated with a different strategy for solving an ill-structured problem (King, Steinke et al., King and Kitchner, Eyler 2002a). Eyler and Giles have used this model to describe the evolution in students’ thoughts about causes and solutions to complex social problems such as homelessness that they encountered during service-learning experiences (Steinke et al., Eyler and Giles 1999). Many authors published in the service-learning literature stress the importance of reflective practice (Eyler 2002a, Eyler and Giles 1997 and 1999, Schon).

- **Psychosocial development theories**

  Most psychosocial theories linked to service-learning have the work of Erik Erikson as a foundation. Erikson delineated the role of culture and social relationships in development. He theorized that certain psychological characteristics must be in place before a person can move to higher levels of development. He was also responsible for the phrase “identity crisis,” a period in the life cycle coinciding with adolescence and young adulthood in which people seek to resolve important aspects of life, such as vocation and a general outlook about life (Brandenberger, McEwen, Rhoads 1997). Arthur Chickering used Erikson’s theories to develop a model of psychosocial development for young adults through seven “vectors,” as well as to propose key elements in the collegiate environment that encourage student development. Individual vectors rise to prominence at certain point in young people’s lives and take one to five years to resolve. Resolution is enhanced if students have opportunities to explore tasks associated with each vector, as may happen during a service-learning experience (McEwen).

  The relevance of psychosocial developmental theories to service-learning is:

  - that program designers need to be aware of psychosocial issues that students may be struggling with in their lives as they participate in service-learning, and
that programs offer opportunities which relate to developmental tasks (Bradley 2003, Brandenberger, McEwen, Rhoads 1997).

• **Identity development theories**

  According to developmental psychologists, young adulthood is the time of life when basic parameters of identity, such as gender, race, culture, class, etc. are solidified. Service-learning experiences have the potential to help clarify these developmental issues. Here, in the words of Valerie McKay: “Clearly, by better understanding the sociocultural context of the communities in which they (practice service-learning), students are likely to increase their awareness and understanding of themselves, their biases, the origins of cultural stereotypes and prejudices, and ultimately, the effects of power and authority in our society (McKay).” Much of the work on identity development related to service-learning is in racial identity, since service-learning sites often serve racially diverse audiences. According to McEwen, the theories of Janet Helms are relevant to the development of a white racial identity. Helms theorizes a six-status model of white racial identity based on racism: the first step is to acknowledge racism, then to understand it, and then to work toward ridding oneself of it (Helms). For racial identity development in persons of color, McEwen focuses on the five-stage minority identity development theory of Atkinson, Morten, and Sue (Atkinson et al.). The first stage begins with implicit acceptance of the socially prescribed status as part of an oppressed group and ultimately progresses to the stage five experience of a sense of pride and identification with one’s own culture and a sense of self-worth (Atkinson et al.).

  Richard Rhoads considers the theories of Carol Hoare relevant to identity development. Hoare postulated that a sense of personal identity is linked to public identity and that sense of identity is positioned within the larger culture. This situation presents a challenge to marginalized individuals who must reconcile their public identities with their sense of self. Hoare’s perspective is that the social world sends a pervasive message of inferiority to individuals of color that must be rejected as irrelevant in order to develop a positive identity (Rhoads 1997). Rhoads, in a lengthy discussion of identity development in his book, locates the development of self within the context of
culture and identity in the “politics of identity,” which are concerned with the social hierarchies and inequalities surrounding cultural identity. In his opinion, the educational process (i.e., service-learning) has the potential to reshape culture and thus to reconstitute self and re-establish a new identity as students come into contact with diverse others within the context of a caring encounter. In turn, he would have higher education reconstructed around an ethic of care in which community service is seen as central, rather than peripheral (Rhoads 1997).

Higher Education Reform Theories

The primary philosophical underpinnings that link service-learning with higher education reform can be attributed to Ernest Boyer. Boyer, in two publications from the early 1990s (Boyer 1990, 1994), advocated a “scholarship of engagement,” where universities can work on social, political, economic, and moral challenges in collaboration with community partners by renewing their historic commitment to service (Boyer 1990; Marullo and Edwards 2000b; Zlotkowski 1996, 1997, and 1998; McMillan; Kraft; Jacoby 1996a; Eyler and Giles 1999). While he did not explicitly name service-learning as one answer to these challenges, here is what he said about the possibilities:

“What I’m describing might be called the ‘New American College,’ an institution that celebrates teaching and selectively supports research, while also taking special pride in its capacity to connect thought to action, theory to practice. The New American College would organize cross-disciplinary institutes around pressing social issues. Undergraduates at the college would participate in field projects, relating ideas to real life. Classrooms and laboratories would be extended to include health clinics, youth centers, schools, and government offices. Faculty members would build partners with practitioners who would, in turn, come to campus as lecturers and student advisers (Boyer 1994).”

Marullo and Edwards (Marullo and Edwards 2000b), in their introduction to the 2000 issue of American Behavioral Scientist that focuses on service-learning pedagogy, list some of the social, political, economic, and moral challenges facing higher education and how institutions are responding:
• Changes in the global economy have led U.S. colleges and universities to emphasize educational methods that encourage development of critical thinking, complex reading and writing skills, interpersonal interactions skills, and problem-solving and conflict resolution ability in future workers.

• Due to a crisis in civil society, higher education is attempting to prepare students to participate in a free and democratic society.

• The deterioration of inner-city communities in which many institutions of higher education are located often gives the institution some self-interest in community building.

• As a college degree has become the minimum credential for entry into most jobs that pay a living wage, student diversity in terms of race, class, social background and academic ability has increased (Marullo and Edwards 2000b).

Billig and Waterman link service-learning to the relatively new emphasis within higher education on learning, rather than on teaching; they see higher education’s function moving from the provision of instruction to the production of learning. In this new model of higher education, the emphasis is on the application of knowledge versus acquisition, team and community focus for learning versus individual focus, collective (faculty, community and students) instruction and curriculum definition versus faculty having sole responsibility, integrated sequencing of courses versus prescribed courses, and active student learning versus passive (Billig and Waterman).

Much of the service-learning literature captures the attempts of educators and institutions to deal with these changes and challenges, as well as the expectation that service-learning can provide the solutions (Eyler and Giles 1999, Langseth and Troppe). Langseth and Troppe (Langseth and Troppe) capture the potential of service-learning in the following quote: “We believe that when implemented thoughtfully, service-learning holds perhaps the greatest potential of any current innovation in higher education to bring Boyer’s ideas to life. Specifically, in its potential to address immediate and longer-term community challenges, to enhance and deepen academic understanding, and to train a future generation of committed and skilled citizens, service learning is simply unsurpassed.”
Supporters of higher education reform particularly want an expansion of the role of universities in addressing social problems. As Russell Edgerton, president of American Association for Higher Education said in 1994 in announcing a new AAHE theme, “The Engaged Campus”: “We hope to signal a more vigorous interest in, and commitment to, this task of reconnecting higher education to the needs of the larger society.” Further, he stated, “The challenge is not simply to do---at a higher level of quality, with more productivity and with more accountability---the tasks we have always done. We also need to rethink which tasks are most essential for us to perform (Edgerton).” In a similar vein, Jacoby (1996b) discusses Hirsch and Lynton’s call for a redefinition of faculty professional service to mean ‘work based on the faculty member’s professional expertise which contributes to the outreach mission’ of the institution. These authors also conceptualize faculty professional service and outreach as a bridge between the worlds of service-learning and faculty scholarship. Thus research, teaching and service become interconnected in ways that make each more effective. Service-learning then becomes a practical and effective way to address changes in students and learning environments: ‘It is a form of active learning that responds to the preferred learning style of increasing numbers of students, and it is compatible with the evolving role of faculty as group project leaders and designers of educational experience (Hirsh and Lynton in Jacoby 1996b).’

All of these current proposals build on a historical tradition of service in higher education. The Land-Grant Act of 1862 specifically linked higher education and service. Other institutions were created specifically to meet societal needs (i.e., Rensselaer Polytechnic Institute was founded to train builders of physical structures such as railroads and bridges). And during the Great Depression and World War II, the government recruited scholars to solve societal problems (Jacoby 1996b). As Kraft points out, “…service-learning is the most recent manifestation of what is now almost a 100-year history of American education reform attempts to bring the school and community back together, to build or rebuild a citizenship ethic in our young people, and to bring more active forms of learning to our schools (Kraft).”
Service as Philosophy

One cannot leave the topic of service-learning theory without tackling a recurrent and controversial theme in the literature, that of the philosophy of service. This theme also relates to the previous topic, that of service-learning as a solution to problems in higher education. For background, an article by Seth Pollack is particularly useful (Pollack 1999). He examines the diverse views that higher education has of service, and of its relationship to social problems. He divides postsecondary institutions into four categories based on how each type of institution resolves the inherent dilemma in a three-part mission of teaching, research, and service, and in how they view service:

- Liberal arts colleges traditionally prioritize teaching. Service is viewed as a means to build moral character.
- Research universities emphasize research. Their service mission is typically defined by “the creation and application of knowledge.”
- Professional schools prioritize training, and service acts to develop and apply professional skills.
- Community colleges also emphasize training. Their service mission includes all three of the other institutional objectives, which they typically adapt to meet the needs of the local community.

In addition to institutional type, Pollack attributes conflict over the role of service to the essential debate over the definitions of service, education, and democracy. In his own words: “The crux of the debate is whether education should provide students with the skills and knowledge base necessary to fit into the existing social structure or prepare them to engage in social transformation” (Pollack 1999).

In the literature of service-learning, the definition of service is vigorously debated. Even the word “service” can have negative connotations; for some historically oppressed people service connotes involuntary servitude. When it is used in a sanctimonious way to mean that affluent people are ‘doing things’ for those less materially privileged it also goes against the supposed mutuality and reciprocity of the service-learning experience (Jacoby 1996a). Caroline Clark says it this way: “Learning in conjunction with service is critical if we are to avoid positioning others as helpless or needy against their own constructions of self” (Clark). The service in service-learning is
understood as charity in many instances, with a goal of addressing immediate needs. Other times however, its goal is to resolve social problems and to create structural changes in the status quo, especially when service-learning and social justice are linked (Marullo and Edwards 2000a).

For many educators in the field, service traditionally implies noblesse oblige, power and control (Clark; Jacoby 1996a; Kahne; Maybach; Radest; Langseth and Troppe; Marullo and Edwards 2000a). As Radest points out, by “…demeaning the other as a receiver of services, we confirm our alienation from him or her, reinforce our sense of power and our state of privilege.” According to Carol Maybach, some “…students are encouraged to engage in service provision without a clear understanding of how their service is affecting the communities around them. Without an accountability for or an understanding of the needs of the individuals in the urban community, the effects of service-learning projects may indeed be viewed as malevolent by the very individuals whose lives the service was intended to enhance, despite the best of good intentions.” She distinguishes between two models, traditional service-learning projects and alternative models. In the former, projects are designed to teach altruism, how to provide services to the community, and how to address symptoms of need. In the latter model, service-learning stresses how to investigate what the community defines its needs to be, how to be involved in service in a mutually empowering relationship with a diverse group of people, and how to address the root causes of need. In her opinion, “The unspoken agenda behind a symptom-only focus may be to help the needy, but not enough to threaten the status quo (Maybach).”

In his article titled, “In Service of What?” Joseph Kahne points out that the emphasis on altruism and charity which is so common in service-learning initiatives is often used to promote a conservative political agenda that proposes voluntary community service as an alternative to government programs (Kahne). These same individuals would probably define service-learning as apolitical, while those who are proponents of Maybach’s second model described above would embrace the importance of political activity. Rahima Wade distinguishes service-learning with a social justice focus as that in which “…the emphasis is placed on examining larger structural issues and the role they play in creating local needs and problems (Wade).” Cruz and Giles say it this way:
“Charity and philanthropy have a place in the world, but to conflate charity and philanthropy with solving social issues is not the same (Cruz and Giles).” Langseth and Troppe maintain that if we as educators and institutions are looking for long-term solutions to problems, “We must educate students about larger issues and equip them with a range of civic participation skills, including and beyond traditional charitable activities (Langseth and Troppe).”

As Kahne concludes, the choice of service-learning activities has political dimensions and service-learning practitioners “…need to think carefully about the many values that we do not share, about what a radically improved world might look like, and about the different ways one might pursue this goal (Kahne).” Barbara Jacoby cautions against making service-learning into a political movement. While acknowledging that service-learning is not value-free due to its goal of social justice, she believes that politicizing the pedagogy can negatively affect an institution’s willingness to integrate service-learning into its mission and practices (Jacoby 1996b). To resolve these divisive issues, Dick Couto developed the three-ring Venn diagram shown below, “Contextual Map for Service-Learning”, to reconcile the conflicting, but not necessary mutually exclusive, objectives of service-learning (Stanton et al.).
CHALLENGES AND CRITICISMS OF PAST SERVICE-LEARNING RESEARCH

There is an extensive service-learning literature on the challenges facing researchers in the field and the failure (for the most part) of the research to address these challenges. Furco describes the literature in this way: “…the field is a mass of disconnected investigations that have focused on a variety of issues related to a broad array of idiosyncratic service activities (Furco).” The problems include the following.

Lack of a consistent definition of service-learning

In the literature, and as discussed above (page 8), a single consistent definition of service-learning does not exist. Furco and others point to the need for a clear understanding of how service-learning is different from other forms of experiential education such as internships, and suggests that it is important to distinguish between the effects of integrating service and learning that occur in service-learning from the effects of service only (Furco, Billig and Furco, Howard).

Program diversity

The nature of the service-learning experience is affected by a wide number of variables and depends on the student, the site, the instructor, the community, the academic discipline, the educational institution, etc. As Furco describes it, “Service-learning activities involve a complex interaction of students, service activities, curricular content, and learning outcomes. Thus they are highly idiosyncratic and unpredictable.” Prior research has shown that the outcomes are affected by the students’ individuality (personal interests and abilities, developmental readiness, prior service experience, peer relationships, gender, culture, motivation, collateral events that occur in their lives, etc.), the length of involvement, the degree of personal investment and reflection required, the degree of choice in project selection, and whether the project is individual, small group or large group (Furco, Waterman 2003, Shumer 1997). Since experimental research requires equal and consistent treatment across individuals in treatment groups, the
diversity of program experiences presents challenges to this type of research design (Howard).

**Unclear theoretical foundations**

Since so many disciplines are represented in the literature, different theories are applied depending on the researcher’s field (Billig and Waterman, Furco and Billig, Eyler 2002b). In addition, many of the discipline-related theories have not been tested in the context of service-learning and are randomly applied. This has resulted in many disconnected and independent studies that rely on disparate theories (Furco and Billig). Furthermore, as of 2002, Eyler was unable to find any examples of theory testing in the literature (Eyler 2002b). She blames this on the failure of the field to develop an integrated body of knowledge, which in turn, she and Giles attribute to several factors, including:

- service-learning practitioners are typically more interested in action than scholarship and at times have resisted theorizing, and
- the field has been marginal to academia until recently and thus, educational theorists have ignored its potential (Eyler 2002b, Giles and Eyler 1994a).

**Research design and methods**

The literature on this aspect is extensive. Few studies utilize experimental design; most studies lack control groups and the randomization of subjects is extremely rare. Replication of prior studies and instruments is almost nonexistent and the idiosyncratic nature of service-learning experiences makes it difficult to generalize many of the findings. Generalizability is also difficult since most published studies are program evaluations or anecdotal information, not research (Furco and Billig, Howard, Billig and Waterman). The multidisciplinary nature of service-learning and researchers’ unfamiliarity with other fields makes it essential to provide a detailed explanation of methods used in service-learning studies and their rationale for use; yet, few papers in the literature are thorough in this aspect (Furco and Billig, Eyler 2002b).

Criticisms of research instruments used in the past include: 1) most instruments have been program specific, thus common data collection instruments are rare and few
are validated, 2) the concepts to be studied (for example, civic responsibility) have been poorly defined and thus produce instruments with little internal or external validity, and 3) many “off the shelf” instruments have been developed for psychosocial development, attitudes and value studies which are unrelated to service-learning program outcomes. While these latter instruments have previously established validity and reliability, they are likely to be more appropriate for some age groups than others (Kezar, Waterman 2003).

Furthermore, there have been few longitudinal studies in a field where impacts are likely to occur after a semester-long experience is completed (Howard, Furco and Billig, Shumer 1997). By and large, the research relies upon self-report to measure impacts on students, or on faculty report, a potentially biased source (Eyler 2000, Giles and Eyler 1998). Additionally, few researchers use a variety of data sources and methods; thus to find evidence of triangulation is rare (Billig and Waterman).

The literature is also dominated by investigations into the student outcomes of service-learning, but little has been published on the effects of service-learning on recipients of the service, a critical aspect if reciprocity between students and recipients of service is truly the goal (Cruz and Giles, Giles and Eyler 1998, Eyler 2002b). In addition, more research is needed on the effects of service-learning on faculty, the institution, and society as a whole (Giles and Eyler 1998).

**Multiple outcomes**

The complexity of service-learning means that traditional research designs and methodologies can not always capture all the aspects of the service-learning experience (Furco, Bringle and Hatcher, Shumer 1997); service-learning research requires design flexibility and sensitivity to individual experiences (Shumer 2000). Furthermore, researchers often measure only one or two constructs, such as civic engagement, moral development, or cognitive outcomes, of interest in their own discipline and in which they anticipate their sample will show gains (Howard). However, by limiting the number of outcomes, they may miss the opportunity to measure both intended and unintended impacts of service-learning beyond their own discipline’s scope. Thus, program effectiveness may be underestimated (Furco, Waterman 2003).
Defining the role of service-learning in academia

Since service-learning is not a content-specific field, there is no natural home for research in the area, nor are there formal conventions to define the research (Waldstein). This makes it difficult to build a body of literature in the field (Giles and Eyler 1994a). This limitation in turn keeps scholars from studying service-learning and researchers from replicating studies (Billig and Waterman). Little available research funding also inhibits researchers from conducting studies in the field. While the Corporation for National Service and the U.S. Department of Education fund many service-learning initiatives, they do not fund service-learning research (Billig and Waterman, Billig and Furco). In addition, many past studies have been done as dissertations whose authors do not produce further research, and the field has few researchers with long-term research plans involving multiple studies (Eyler 2002b).

A complication of the multidisciplinary nature of the field is that the different disciplines may have different norms for research, which creates difficulty in establishing research norms specifically for service-learning (Eyler 2002b). Additionally, until recently there were few options for publishing, networking or presenting research in the field. That has now changed with the creation of The Michigan Journal of Community Service-Learning, the Advances in Service-Learning Research Volume Series, an annual conference focusing on service-learning research, the publication of research agendas, and special issues of journals in various fields devoted to the topic of service-learning: Journal of Adolescence (1994), Phi Delta Kappan (1991 and 2000), Education and Urban Society (1994), American Behavioral Scientist (2000), Journal of Public Affairs (2002), and the Journal of Social Issues (2002).

STUDENT OUTCOMES OF SERVICE-LEARNING EXPERIENCES

Student characteristics

Before examining the specific outcomes of service-learning, some background in the differences between college students who participate in service versus those who do not would be useful, since self-selection into service-learning courses has the potential to
cause bias. While not extensively studied, the research to date indicates that differences in the two groups do exist.

Eyler and colleagues, in the Comparing Models of Service-Learning Research Project, found those students who voluntarily selected service-learning differed from non-service-learning students on every outcome measure even before participating in the service experience, with the exception of valuing attainment of great wealth. The outcome measures they examined included citizenship confidence scales, citizenship values, citizenship skills scales, and perceptions of social justice. In addition, they found that many differences between the groups were greater initially than changes that occur subsequent to a semester-long service-learning exposure, concluding that voluntary service-learning experiences will not touch students who can gain the most, and that long-term service-learning experiences are necessary for increased impact (Eyler et al. 1997).

Astin and Sax in their nationwide studies have consistently found that entering freshmen who subsequently participate in community service during college show a positive relationship on the following measures at the college entry pretest (note that these surveys do not distinguish between community service and service-learning experiences, nor does the article make clear whether the service-learning was voluntary or not):

- Experience as a volunteer in high school
- Self-rated leadership ability
- Involvement in religious activities
- Commitment to participate in community action programs
- Experience tutoring other students during high school
- Being a guest in a teacher’s home
- Female

The only negative association was with a high ranking on the importance of attaining wealth (Astin and Sax).

In their evaluation of Learn and Serve America Higher Education (LSAHE) Astin and colleagues found evidence of self-selection in service-learning courses, with service-learning participants more likely to be female (78% versus 68% in the comparison
Female gender is a characteristic that is frequently sited in the literature as a predictor of service participation. Students in Fredericksen’s course in American government who selected an optional service-learning project instead of traditional exams had positive associations with gender—62.3% was female, versus 42.2% of the nonparticipants—and lower estimated family income—parental income of $39,999 or less for 61% of the service-learning participants versus 53.7% of the nonparticipants (Frederickson). Fitch surveyed 285 students total from 10 different academic majors to determine if there were differences between three groups of students: those who volunteered for community service, those who participated in extracurricular activities that were not service-related (e.g. judiciary councils, student government, social Greek organizations), and those who were not involved in any extracurricular activities. He found that the service group had a higher percentage of women (71% versus 60% of the total sample), was more likely to live in residence halls, had a higher representation of “social” majors, had the highest levels of religiosity, and tested higher on scales of benevolence and conformity and lower on the independence scale than the other two groups (Fitch).

Serow and Dreyden compared students who performed varying amounts of service and found a higher percentage of female participants (40% female versus 30% male) in the highest service participation level (service more than once a month), as well as a positive association with students who highly valued religious and spiritual fulfillment and a negative association with students who highly valued professional
satisfaction. Socioeconomic status (SES) did not seem to affect frequency of community service participation (Serow and Dreyden). In contrast, Waterman found approximately the same percentages of males and females in the group of 165 students with frequent volunteer experience that he surveyed for a study of motivation in volunteer service (Waterman 1997).

Several researchers have reported anecdotally on the demographic make-up of service-learning participants at their universities. Marullo, in a comparison of two 40-person sections of his Race and Ethnic Relations class, attempted to control for self-selection bias in the service since he had observed in previous offerings of the course that students with higher GPA tended to choose the service-learning option (Marullo). Chesler and Scalera comment that female and African-American students have been overrepresented in past service-learning courses in sociology at the University of Michigan, so they point to the importance of assessing outcomes of service-learning projects on an individual basis (Chesler and Scalera). However, at Marquette University, Coles reports that white and middle-class students are disproportionately represented in her service-learning courses focusing on race and ethnicity. While overall participation of nonwhite students has been high in these courses (22-50%), only 6.6% of students from this group typically participates in optional service-learning projects (Coles). The institutional variation in race and GPA of service-learning participants, and the anecdotal nature of the data in the reports by Marullo, Chesler and Scalera, indicate the need for more study in this area, as well as for accurate record-keeping and reporting.

**Student Motivation for Participation**

The reasons students chose to participate in community service and/or service-learning have been examined by multiple researchers. In their LSAHE evaluation, Astin and colleagues surveyed 725 students in service-learning classes (24% of the sample self-selected into service-learning classes) about why they chose to enroll. Listed below are the reasons they gave followed by the percent that enrolled for those reasons:

1. I thought it would be interesting (59%),
2. I was interested in the subject matter (54%),
3. It was required (46%),
4. The instructor is a good teacher (34%),
5. It fulfilled a general education or breadth requirement (25%),
6. It fit my schedule (17%),
7. My friends were taking the course (6%), and
8. I thought it would be easy (5%).
Self-selectors cited interest in the subject matter most often as their reason for enrolling, while students who were required to participate in service-learning were more likely to enroll because the course fit their schedule or because it fulfilled a requirement for their major (Astin et al. 1996).

Astin and Sax have also studied the effect of community service (including service-learning) on 2,309 undergraduates (this group included the service-learning students from the previous study.). The following motivations ranked as “very important” to these students:
1. To help people (91%),
2. To feel personal satisfaction (67%),
3. To improve my community (63%),
4. To improve society as a whole (61%),
5. To develop new skills (43%),
6. To work with people different from me (38%),
7. To enhance academic learning (38%),
8. To fulfill civic/social responsibility (30%), and
9. To enhance my resume (13%).

The authors point out that three of the top four ranking motivations were related to civic responsibility and service, while the motivations ranked “very important” by lower percentages of students were those that could be described as self-serving. The only negative correlation between the motivations was found between item number one (“to help other people”) and number nine [“to enhance my resume”] (Astin and Sax). This finding corresponds to those reported by Serow and Dreyden, who similarly found that participation in community service was negatively associated with highly valuing professional satisfaction, and positively associated with spiritual and religious values. Other values assessed—which showed no association---were family, material success,
recreation/leisure, community service, social justice, and culture/travel (Serow and Dreyden).

Other researchers also point out that there are typically combinations of altruistic and egotistic motivations for participation. Waterman used alternative terms, “intrinsic motivation” and “extrinsic motivation”, to categorize motivations for participation in community service. His undergraduate and graduate subjects ranked the following as important motivators:

<table>
<thead>
<tr>
<th><strong>Intrinsic</strong></th>
<th><strong>Extrinsic</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-exploration</td>
<td>Course credit or requirement</td>
</tr>
<tr>
<td>Expressing religious or ethical beliefs</td>
<td>Parental encouragement</td>
</tr>
<tr>
<td>Making use of one’s talents*</td>
<td>Creating contacts for future employment</td>
</tr>
<tr>
<td>Feeling good about oneself*</td>
<td>A way to fill time and prevent boredom</td>
</tr>
<tr>
<td>Making contribution to others*</td>
<td>A way to be with friends+</td>
</tr>
<tr>
<td>Enjoying challenge of community service*</td>
<td>For building a resume</td>
</tr>
</tbody>
</table>

*These intrinsic categories were ranked higher than an average of five on a seven-point scale.
+Highest ranked of the extrinsic factors, but ranked less than four on a seven-point scale, below mid-point.

Since subjects scored four intrinsic factors higher than five on a seven-point scale, but only one extrinsic factor ranked this high, he points out that intrinsic factors, whether they are altruistic or egotistical, are more important motivators than extrinsic ones (Waterman 1997).

Two different studies used the Volunteer Functions Inventory (VFI) developed by Clary and colleagues (Clary et al.) to examine the motives of volunteers in voluntary service-learning classes. In this inventory, personal and social reasons for volunteering are categorized into six categories of motivations: 1) understanding (to gain knowledge and to practice skills), 2) values (to express concern for those in need), 3) enhancement (personal growth and self-esteem), 4) career, 5) social, and 6) protective (to alleviate guilt over societal injustice). Using the VFI, Switzer and colleagues surveyed forty medical
students who participated in a voluntary service-learning experience and found that medical students ranked understanding, values, and career motives higher than other categories. Again however, gender differences exist; the male subjects ranked the motives as just described, while female medical students rank values, understanding and enhancement as most important. These authors conclude that female medical students are therefore more like undergraduates and adult volunteers, whose rankings correspond to theirs, and thus are more likely to volunteer in the future (Switzer et al.).

Chapman and Morley also utilized the VFI to survey 58 undergraduates to find out if their motives are the same or different before and after the service experience and whether motives selected initially are predictive of satisfaction with the experience. They found that values (54% of total sample), understanding (32%), career (20%), and self-esteem (12%) were the highest ranked motives overall, but that gender differences exist. Females ranked values, understanding and self-esteem motives significantly higher than males and females had higher rankings overall, indicating stronger motivation to volunteer. Motives did not change as a result of the service experience, while positive associations with values and protective motivations and a negative association with social motives were most predictive of satisfaction with the experience (Chapman and Morley).

Payne and Bennett also considered the question of whether the actual service experience affected motivation and the students’ involvement preference. In a survey of 59 students who participated in a service-learning experience, they found that three of four categories of involvement preferences—described as reflecting: a) exploration, b) affiliation, c) experimentation, and d) assimilation motives—were altered by the experience. Affiliation, experimentation and assimilation categories showed statistically significant increases, indicating that a volunteer experience can have an impact on motivation factors for future experiences (Payne and Bennett).

Finally, in a study of the impact of students’ interpersonal relationships on their motivation to volunteer for community service, McKinney compared three groups: 1) 31 undergraduate students currently enrolled in a service-learning class, 2) 40 students from the same university who had volunteered for community service (but not necessarily a service-learning experience) in the past, and 3) 39 students from the same institution with no community service ever. She found those students in the past and present community
service group had higher attachment scores to personal friends than did the non-community service subjects. This finding, according to the author, “suggests that motivation grows out of a richer social life that includes nurturance and the desire to help.” It also points to the importance of peers in service-learning recruitment and program development (McKinney).

**Academic Outcomes (See Appendices A and B for additional details on studies)**

- **Introduction**

  As more than one service-learning researcher has pointed out, if academic outcomes can not be attributed to service-learning experiences, then what is the point of further development of the field within higher education (Eyler 2000 and 2002b, Steinke and Buresh, Osborne et al.)? For this reason, the discussion of outcomes from service-learning will commence with this topic. Yet before beginning that analysis it is imperative to point out the importance of carefully defining and measuring cognitive outcomes, since traditional (classroom-based) definitions and measures may not reflect the “deeper understanding of subject matter, the practical knowledge of how community decision-making processes work, and the strategies for transferring knowledge and problem-solving skills” that Eyler suggests service-learning may provide. She further claims that “insofar as traditional grades measure ‘replicative learning’ or memory of content, they are also weak measures of the outcomes we expect to see enhanced by service-learning (Eyler 2000).”

  Kezar makes the same point in slightly different words: service-learning “outcomes assessment often focuses on traditional outcomes through a narrow set of methods,” resulting in “privileging of a narrow set of cognitive outcomes” that make it appear as though service-learning has less impact on learning than classroom-based pedagogical methods. Kezar further argues that new pedagogies such as service-learning, collaborative learning, and problem-based learning, require new assessment methods, a topic the final paragraph of this section will address (Kezar). Eyler and her colleagues point out an additional limitation of the current research on cognitive outcomes. Most service-learning studies rely on self-report of learning, and thus self-report is not an adequate measure of the “complex cognitive outcomes” we expect
from service-learning and that further, it “confuses satisfaction with learning (Eyler-2000, Eyler and Giles 2002).” In the subsequent paragraphs, it is important to note that almost all the measures of cognitive outcomes described are traditional ones such as grades and GPA, and to consider whether that is appropriate.

Eyler and Giles and colleagues have extensively surveyed the service-learning literature to find studies that demonstrate learning outcomes from service-learning experiences (Eyler et al. 2001, Eyler and Giles 1999). In Where’s the Learning in Service-Learning?, they have broadly defined learning outcomes to include the following:

- personal and interpersonal development,
- understanding and applying knowledge
- engagement, curiosity and reflective practice,
- critical thinking and problem-solving,
- perspective transformation, and
- citizenship development.

While all of those categories could certainly be defined as learning outcomes, this section will focus on outcomes directly related to academic performance; developmental outcomes and civic outcomes will be discussed extensively in sections below. However, it is difficult to separate these outcomes from each other, since they are not distinct and can overlap, creating synergistic effects. For instance, interpersonal development such as the reduction of stereotyping can cause perspective transformation that ultimately can impact critical thinking and the ability to understand and apply knowledge (Eyler and Giles 1999).

- Large-scale surveys assessing the impact of service-learning on measures of learning
  - Astin, Sax, and colleagues have completed several large surveys of the impact of community service on college students. In their 1998 study they found that student retention and degree completion, as well as GPA, interaction with faculty, time spent on studying and homework, and self-reported knowledge gain were significantly influenced by service (including but not limited to
service-learning) participation, even when freshmen year pre-tests, academic major, race, ethnicity, gender and institutional characteristics were controlled for (Astin and Sax). In their 1999 publication, they surveyed college students three times: as entering freshmen in 1984, 4 years later, and then five years after that. Nine years after the original survey, volunteerism (including but not exclusively service-learning experience) was significantly associated with attending graduate school as well as highest degree earned and degree aspirations (Astin et al. 1999). In a study published in 2000, they compared the effects of service-learning and service participation. Participating in service-learning (versus community service) added significantly to the benefits associated with service for all 11 outcomes, and was especially strong for the academic outcomes including GPA, writing skills, and critical thinking skills (Astin et al. 2000).

Survey results from the Comparing Models of Service-Learning Project conducted by Eyler and colleagues indicate that 58 % of the service-learning students said that they learned more or much more in service-learning classes than in traditional classes, 20% felt they learned less, and 24% reported learning the same amount (on a five-point scale). When asked to assess the impact of the service-learning experience on five learning outcomes, results included the following:

1. 62% agreed that “a deeper understanding of things I have already learned about in my classes” was either very important or the most important outcome of the experience (on a five point scale), and
2. 61% indicated that they had learned “to apply things I have learned in class to real problems” by ranking that outcome as either very important or the most important one of the experience (on a five point scale).

In the survey results, service-learning and non-service-learning students did not differ on self-reported pretest measures of other skills related to academic outcomes (such as communication, critical thinking and issue identification). Additionally, no relationship was demonstrated between these skills before and after service-learning experience. The authors hypothesize that the failure
to find impact on the latter measures may be due to students not understanding terms such as “thinking critically,” as well as the possibility that measurement of skills like these requires more precise measures which are closely linked to course material (Eyler et al. 1997, Eyler and Giles 1999).

For the LSAHE Program evaluation, Gray and colleagues compared students enrolled in service-learning courses to those who did not have service-learning experience. Courses were matched by subject, class size and level. Based on self-reports, service-learning courses were distinguished in the following ways: 1) they required more time, 2) they involved more writing, and 3) students were more satisfied with the service-learning courses. However, no differences were found in average course grades between service-learning and traditional courses, and no differences were demonstrated on criteria such as course difficulty, overall value of the course or overall amount of work. In addition, no relationship was found between participation in service-learning courses and development of academic or professional skills, such as writing, quantitative reasoning, or analytic thinking. For the service-learning subjects, experience with certain service-learning course characteristics---reflection, training, supervision, strong connections between course content and the service experience, and volunteering for more than 20 hours a semester---was found to produce stronger effects. The authors describe this survey as a “quantitative case study” due to the low response rate of 41% and the probable self-selection response bias. The self-report nature of the data also limits the generalization of the results (Gray et al.).

• **Experimental studies assessing the impact of service-learning on measures of learning**

  Conrad and Hedin published a landmark paper on the impact of service on adolescents in 1982. They studied 27 experience-based programs nationwide to determine the impact of experiential education programs on secondary students and to identify the program factors that enhance development. Four types of experiential education programs were studied: volunteer community
service, career internships, community study/political action, and adventure (outdoors) education. Program outcomes were divided into three major categories, social, psychological, and intellectual, and 4,000 students were given a variety of tests to measure them, including parent/teacher/supervisor observation, student journals, case studies, and surveys based on self-report. Students were given pre- and post-tests, and at least one experimental group per program type was matched by age, grade, geography, GPA, SES, and pretest scores to a comparable student in a non-experiential classroom for control purposes (there were six control groups total). In the intellectual realm, student self-reports overwhelming indicated that students had learned more than in regular classrooms (73%). On a problem-solving inventory, students in experiential settings were significantly more likely to advance to a more complex pattern of thought than students in the control groups. Student characteristics (age, GPA, SES) did not affect outcomes in any significant way, nor did program features, with the exception that reflection opportunities produced the most positive change in the intellectual measures. It also did not matter which of the four types of program---service, outdoor adventure, etc---it was. While this is considered a seminal study in the field of experiential education, it has its limitations for the purposes of this analysis; only one of the four program types was a community service experience, the study methodology was described very sketchily, and the subjects were all of high school age, thereby limiting its generalizability to college age students (Conrad and Hedin).

- Markus and colleagues assigned students randomly to two service-learning sections or to six control sections in a political science class. Instead of community service, the control groups were required to write a research paper. No transfers between sections were allowed, and no significant differences in demographic factors were found between the groups. At the end of the semester, students in the service-learning sections reported (based on a self-report survey) that they had learned to apply principles from the course to new situations and performed up to their potential significantly more
than students from control groups. In addition, course grades were marginally
higher (B+/A- versus B/B+) by a statistically significant amount in the
service-learning sections compared to the control groups (Markus et al.).

Batchelder and Root used a pre- and post- “Responses to Situation” written
instrument to determine whether responses to social problems from self-
selected service-learning students differed from those in similar courses that
did not incorporate service-learning. The responses were scored on eight
dimensions designed to evaluate the ‘higher-order,’ complex thinking
expected to occur as a result of service-learning. Their analyses of the
responses found that service-learning students demonstrated greater awareness
of multiple dimensions and variables in social problems, as well as a greater
likelihood to act when confronted with uncertainty. Instructional quality
improved awareness of obstacles and ways to address the obstacles and on-
site supervision positively influenced the complexity of thought and
awareness of variability. Both of these latter characteristics of program
quality were also found to positively influence uncertainty/resolve (Batchelder
and Root).

Reeb and colleagues examined whether students who self-selected into a
service-learning opportunity in an Abnormal Psychology class had different
academic outcomes than students who declined the experience. They found
that the two groups had similar grades on the first exam, but that as the
semester progressed (and service experiences were implemented), the three
subsequent exam scores in the service group were significantly higher. The
service group also had significantly higher scores on self-administered survey
items assessing the level of learning and the ability to apply course concepts
to new situations. However, the researchers did not control for self-selection
bias in this study; the service group differed in gender (91% female versus
65%) and race/ethnicity (97% European American, 3% African-American
versus 87% European American, 5% African-American, 2% Asian American,
and 1% other) from the control group (Reeb et al.).
Fredericksen used performance indicators solely determined by the instructor (in other words, no self-report) in her study of whether service-participation had an impact on academic outcomes. Students self-selected into service-learning for this study, and the service-learning participants were found to differ from the control group in gender (62.3% female in the service-learning group versus 42.2% female in the control group) and family income (61.6% of the service-learning group had annual family income of $39,999 or less in 1997-1998 dollars versus 53.7% of the control group), but not in age or ethnicity. Since gender was also significantly associated with course performance (as was age and race/ethnicity), the author controlled for gender and service participation using ANOVA and found that service is not significantly associated with course performance for female students. While ethnicity and gender did not influence service participation for the total sample, it was significant in terms of academic outcomes for male service participants of Hispanic background compared to Hispanic students in the control group (Fredericksen).

Osborne and colleagues examined various outcome measures between pharmacy students who were randomly assigned to either a service-learning project or a traditional laboratory project in a pharmacy communications course. The two groups were found to be similar upon enrollment, but after completion of a service-learning project, the service participants showed significant improvement in self-rated cognitive complexity, but not in complexity of written work as evaluated by naïve (blinded) raters. However, written work of the service participants was rated significantly better on other outcome measures related to course objectives, including awareness of diversity and integration of practical examples (Osborne et al.).

Kendrick studied students who self-selected into either a service-learning or control section of his Introduction to Sociology class; one class required 20 hours of service experience, while the other class required essentially (in principle) the same workload in additional reading. Both sections were comparable demographically--age, gender, race, class year, high school GPA,
SAT scores --and in self-reported motivation to learn. Upon course completion, however, the service section was significantly more likely to agree with the statement that “this course is more work than others.” The service section showed no significant differences in both multiple choice test scores and self-reported academic outcomes, including application of principles from the course to new situations and knowledge acquired. Yet, on essay questions designed to test concept application, students from the service-learning section demonstrated better quality of thought significantly more often than students in the control section (Kendrick).

- **Other studies of learning outcomes associated with service learning**
  - Steinke and colleagues investigated the relationships between five outcomes including cognitive learning, and five predictors of service-learning quality. Pre-test and post-test surveys collected self-reported data on cognitive learning, and an open-ended questionnaire with essay-type questions assessed intellectual development. These essays were independently scored by trained raters to determine the subject’s position on one of Perry’s stages of development. Positive predictors of cognitive outcomes were reflection and student voice, indicating that reflection and feedback help students apply concepts and process information. The authors theorized that student voice most likely increases motivation by providing choices during the service experience. Intellectual development was associated with community engagement, indicating in this case that multiple perspectives can enhance intellectual development (Steinke et al.).
  - In an observational study of experiential learning’s impacts on 25 high school and community college interns titled “Behind the Wizard’s Curtain,” David Moore challenged ‘true believers.’ He utilized interviews with the students, their teachers, and work-site supervisors, as well as participant-observers to determine if students in exemplary programs were actually engaging in activities that would promote the various forms of knowledge gain proposed by advocates of experiential education. The study results were disappointing.
Students typically did not use school-based content knowledge in the workplace. They also did not gain skills in reading, writing, and math—contrary to what was expected—since those skills were usually not part of their work activities. They also did not often participate in activities that required creativity and decision-making, and while they may have gained some interpersonal competencies by working with the public or in teams, in general they did not acquire other workplace competencies such as management of resources, understanding of systems, or use of new technologies. Overall, the students did not have discretion in what to work on or how—they did what they were told and their work was circumscribed. If problems arose, they were given predetermined methods for solving them. Essentially, with only a few exceptions, they performed the same work at the beginning of the semester as at the end, so their learning curves were flat. The author utilizes the results of this study to point to the need for high(er) standards in experiential learning situations and new pedagogical practices that increase the learning from direct experience. The study also vividly demonstrates the value of participant observation and triangulation to determine if students are actually performing expected tasks (Moore).

In a study based on student self-report, Primavera surveyed 112 undergraduates who had volunteered two or more semesters as language tutors for children in Head Start classrooms. Students (81%) indicated a positive connection between classroom-based learning in various disciplines and their volunteer experience; not only were they able to apply academic coursework in their community experience, but the experience also enhanced their academic understanding and performance. This outcome is especially interesting, since this service-learning program was a “stand-alone” one, not directly connected to a specific course, just like Husky Reads. A limitation of this study is obviously the self-selection inherent in questioning only students who participated for two or more semesters in the program, since students who did not find the experience to be valuable would have self-selected out.
after one semester (or sooner). A response rate for the questionnaires was also not indicated by the author (Primavera).

Eyler and colleagues have been particularly active in attempting to find new and better measures of learning outcomes, such as improvements in problem solving and transfer of learning. “The ability to analyze ill-structured problems (i.e., those without clear definitions or correct solutions) and to come up with well-considered solutions entails advanced levels of cognitive development. ...Reflective service-learning in which students have their assumptions challenged and need to work through conflicting points of view about difficult social issues is the kind of experience that encourages development of more advanced cognitive abilities (Eyler and Giles 2002).”

In a 1997 study using pre- and post-interviews of 55 undergraduates, they found that service-learning that was well-integrated with an academic course and intensive (20 hours per semester minimum) had a positive impact on complexity of problem analysis, the ability to place problems in a systemic context, and on the quality of the problem-solving strategies (Eyler et al. 1998). In a later study, they interviewed 24 students from four institutions to assess whether “novice” (those with no service experience or involved in their first service-learning experience) and “expert” (those with long-term involvement in service-learning) service-learning students differed in community problem solving. After the interviews were analyzed, they found that four dimensions differentiated the expert and novice students: 1) the complexity of the representation of the social problem and whether the problem was represented historically, 2) whether the problem was attributed to an individual or the interaction of complex social processes, 3) the depth and breadth of the solution, and 4) the sophistication of their knowledge of how to become personally involved in the solution (Eyler et al. 1998).

Eyler and Giles most extensive work in this area has been published in a book titled Where’s the Learning in Service-Learning? (Eyler and Giles 1999). The authors challenge the traditional techniques of learning assessment, link the affective and cognitive aspects of the learning process,
and report results of their national study titled Comparing Models of Service-Learning. For this research they interviewed 66 students from six institutions in intensive pre- and post-problem-solving interviews. Subsets of subjects were a) students who self-selected no service in a class where it was optional, b) students whose service was not well integrated with course work, and c) students whose service was intensive and thoroughly integrated into a specific academic course. Students were evaluated on seven variables—problem finding, causal and solution complexity, locus of problem and solution, personal action strategy, and application of knowledge in the analysis—to assess their complexity of thinking about problems and their strategies for action. Age was found to affect pretest scores of critical thinking, as would be expected with a developmental construct. Understanding of issues, practical action planning, complexity in problem causes and solutions, and critical thinking were found to be most affected by highly reflective and well-integrated service-learning. This research suggests that a problem-solving interview may be one method to assess how service-learning may lead to improved academic performance (Eyler and Giles 1999, Eyler et al. 1997).

In another set of post-experience interviews with a different 67 students from seven institutions designed to assess the impact of reflection on service-learning, Eyler, Giles and Schmiede (Eyler et al.1996) found that students attributed the increased learning in service-learning courses to: 1) greater engagement and curiosity on their part about issues they encounter in community (versus classroom) settings, 2) the ability to learn and remember material they learn in complex community contexts, and 3) the personal relationships they form in the process of community service which allow them to connect learning to personal experience (Eyler et al. 1996).

- **Summary of Research on Learning Outcomes**

Eyler (Eyler 2000), and then Steinke and Buresh (Steinke and Buresh) in an article several years later, have reviewed the service-learning research literature on cognitive outcomes. Both reviews conclude that self-report measures produce the most
consistently positive results, yet present methodological problems since they represent students’ beliefs, not necessarily objective evidence of learning. Measurement of grades as a course outcome has not consistently produced results that service-learning students achieve higher outcomes (Markus et al., Miller et al., Kendrick), and grades also present methodological issues. For example, in comparing grades of service-learning and non-service-learning students in the same class, the grades will be based on different assignments (Eyler and Giles 1999). Grades will also be based on students’ motivation to obtain them, and do not necessarily reflect improvement in cognitive skill-based outcomes (Steinke and Buresh). Coding of open-ended measures of course content has produced more favorable results. Kendrick (Kendrick) and Strage (Strage) both found that service-learning students performed better on essay exam questions (but not on multiple choice questions), and Osborne and colleagues (Osborne et al.) found greater complexity in service-learning students’ writing than in that of non-service-learning students. While service-learning is expected to improve critical thinking and creativity, currently there are no measures of either skill that are specific to course content; hence, all authors above identify these areas as ones on which future service-learning research should focus (Eyler and Giles 1999, Kendrick, Strage, Osborne et al.).

Currently the most innovative technique for assessing whether students can apply course content to new situations is the problem-solving protocol utilized by Eyler, Giles and Schmiede (Eyler et al. 1996). These protocols are flexible in that they can be utilized during interviews, focus groups, or open-ended questionnaires, as well as integrated into classroom-based reflection. Steinke and Buresh (Steinke and Buresh) also discuss other assessment techniques from cognitive science that show promise, including those drawing on novice/expert research on how people organize knowledge structures, those which test the ability to use content appropriately in new situations (transfer), and those using ‘Goal-Based Scenarios’ to assess metacognitive skills (how much you know and don’t know—and thus must find out—about something). It is clear, given the high aspirations of service-learning proponents, that new measures of cognitive outcomes are necessary to demonstrate the potential outcomes from service-learning experiences. As Eyler succinctly puts it, “A primary task of service-learning research is to refine our
definition of appropriate intellectual outcomes and to design measurements that are convincing (Eyler 2000).”

Civic Outcomes

- Introduction

The field of service-learning has developed concurrently with a movement in higher education to produce thoughtful and committed citizens who actively support democracy, perform their civic duty, and have a sense of social responsibility. The potential links between the social sciences, service-learning and civic engagement are obvious, but what relevance do service-learning experiences have in other fields? Battistoni has analyzed citizenship education in service-learning in many disciplines and has suggested ways to integrate civic education into most fields. Within the social sciences, themes such as social capital, constitutional citizenship, communitarianism, participatory democracy, and public work correspond to outcomes in civic engagement. In other disciplines where discussion of civic engagement is rarer, he believes that certain conceptual frameworks will encourage the integration of a civic engagement curriculum into service-learning experiences.

For instance, in many professional schools of law, medicine, and business, there is the tradition of “civic professionalism,” in which civic responsibility is the price professionals pay for social and economic recognition. Another familiar concept in many of these fields in “social responsibility,” which could lead directly to civic engagement if students study public problems associated with their field of work. “Social justice” is a way to connect civic engagement, course-based subject matter, service, and an institution’s mission, especially in faith-based higher education. “Ethic of care,” discussed on page 18 in the developmental theories section, is a feminist philosophy of knowledge and caring that may help students move from the personal to the civic, especially when many of the female-dominated ‘caring professions’ perform a great deal of community service work during professional training and afterwards. “Public leadership” programs, becoming more common on college campuses, are a way to link civic education with fields that teach community building and communication skills.
And finally, in literature and the visual arts, which face perhaps the greatest challenge in linking civic engagement and their curricula, there is a tradition of the “public intellectual” who has creatively imagined and contributed ideas, art and vision to solutions to public problems (Battistoni 2002a and 2002b).

Proponents of service-learning maintain that it has the potential to develop citizenship in various ways and have supported this assertion by measuring a vast array of constructs that represent citizenship. As Steinke and colleagues put it, “…the perception of service-learning advocates is that normative values associated with civic engagement and democracy, learning, and meeting specific community needs converge and are mutually reinforced in the service-learning pedagogy (Steinke et al.).” Past measures of civic outcomes have included personal, social, and civic responsibility, “values, knowledge, skills, efficacy, and commitment” (Eyler and Giles 1999), indicators of personal and social responsibility, social capital (Campbell), commitment to an ethic of service, sense of agency as a community leader, acceptance of diversity, complexity of problem-solving a social problem, and degree of preference for participatory democracy.

From this lengthy list it is apparent that the concept of what constitutes a good citizen has not been well established, nor is it consistent from author to author. However, Kahne and colleagues have condensed this list into three concepts of citizenship in which service-learning experiences have the potential to influence students’ futures:

- A “responsible citizen” is someone who votes, pays taxes, has a job, obeys laws, and gives blood.
- A “participatory” citizen is one who is active in community affairs such as town government.
- A “social reformer” is someone who tries to understand the causes of societal problems and addresses them at their roots (Kahne et al.).

The studies below describe some of the measures and outcomes to date in the area of civic engagement from service-learning.

- **Large-scale surveys of impact of service-learning on citizenship**
  Several large-scale surveys already described above have studied civic outcomes of service-learning.
In their 1998 study Astin and Sax found that students who participated in service experiences (including but not limited to service-learning) during college had an increased sense of civic responsibility as measured by twelve different civic outcomes including interest in helping others, serving their communities, promoting racial understanding, doing volunteer work in the future, and working for nonprofit organizations. While these students did self-select into service programs, a subset of subjects were freshmen who were tested before college and afterwards; these student showed greater change between pre-test and post-test than did the non-participants, indicating that more than self-selection was at work. However, there was a relatively low response rate (21%) to the freshmen follow-up survey; hence, response bias may limit the generalizability of these findings (Astin and Sax 1998).

In a subsequent study to assess the long-term outcomes of volunteer experience (including but not limited to service-learning experience) during the college years, their outcomes measures included five civic values outcomes—degree of commitment to a) participate in community action programs, b) help others, c) participate in environmental clean-up programs, d) promote racial understanding, and e) develop a meaningful philosophy of life. Results of this survey indicate that even up to five years after graduation, volunteering during college is significantly positively associated with all five civic values outcome measures. However, when immediate post college outcomes are controlled for, the significance does decline. Further controlling for volunteering nine years after college reduces two of the five outcomes, (a) and (d) above, to non-significance, indicating that the effects of undergraduate service participation can be partially but not wholly explained by post college volunteer work. The authors conclude that overall, undergraduate service participation has direct effects through the first five years after graduation (Astin et al. 1999).

In another study, Astin and colleagues (Astin et al. 2000) examined the impact of service on citizenship outcome measures including commitment to activism and to promoting racial understanding, choice of a service career,
and plans to participate in service in the future. Service positively impacted all citizenship outcomes, and performing service as part of a course added significantly to the benefits associated with service. A smaller qualitative study involving in-depth case studies was also done with some of the participants from three different campuses; the results of this indicate that service-learning is more useful than other service because it promotes increased awareness of the world and of one’s personal values, an increased sense of personal efficacy, and increased engagement in the classroom, as well as a heightened sense of civic responsibility and personal efficacy (Astin et al. 2000).

The LSAHE program evaluation also measured civic responsibility by using student self-report to assess commitment to helping others, promoting racial understanding, and influencing social values and political structures. They found that even when demographics and self-selection were controlled for---thereby reducing the likelihood of finding statistically significant effects of service-learning---the differences between the service-learning and comparison groups on civic participation were significant. The expectation of participation in future service was the outcome that showed the strongest association with service-learning, while current and future political activity showed the weakest (but still statistically significant) association (Gray et al.).

In the Comparing Models of Service-Learning study conducted by Eyler, Giles and Braxton (Eyler et al. 1997), civic engagement was assessed by 21 measures: self-reported citizenship confidence skills, citizenship values, citizenship skills scales, and perceptions of social justice. Results indicate that service-learning, even after pre-test and background factors were controlled for, was a statistically significant predictor of: 1) all five citizenship confidence skills, 2) all five citizenship values, 3) all six social justice measures, and 4) political participation and tolerance under citizenship skills (two of five measures). The authors point out that the most significant implication of this research is the consistent pattern of impact across a large
number of different citizenship outcomes, indicating that service-learning during college does have the potential to impact life-long civic participation.

- **Other studies of the impact of service-learning on citizenship outcomes**

  In *Where’s the Learning in Service-Learning?*, Eyler and Giles (1999) used qualitative (student interview) and quantitative (survey) data to examine the effects of service-learning on citizenship. They found that a strong sense of connection to the community resulted from the service-learning experiences, which when accompanied by beliefs in social justice and political action, could potentially lead to active citizenship. Service-learning increased students’ belief in the importance of volunteering. The students’ increased understanding of social issues and their ability to apply this information resulted in the advanced cognitive capacity necessary to problem-solve complex social problems—in both surveys and analysis of students’ problem solving, students who participated in service-learning demonstrated that they can apply what they learn in the community. Participants in service-learning also knew better which organizations in the community were already working for change, they were able to better identify practical strategies for change, and they had an understanding of how to proceed by working within the community---rather than as an outsider.

  In the area of efficacy, service-learning and the quality of that experience impacted both personal efficacy and community efficacy. Reflection and diversity especially affected the latter—when those were present, there was a greater likelihood that students would believe that the community was able to solve its own problems. And finally, in the area of commitment, the authors examined students’ intent to continue community service and found that most of the 1,100 service-learning participants (75%) were planning to continue in the next semester. However, the authors also emphasize that in the area of citizenship, a longitudinal study is needed to examine all elements of citizenship over time to determine if they are related
to participation in service-learning; at this point, the long-term effects are all conjecture (Eyler and Giles 1999).

Marullo found that two of the citizenship items—likelihood of voting in local elections and more frequent discussions of political issues with friends—were (statistically) significantly different for the service-learning sections than the control sections that performed traditional assignments. Service-learning participants were also statistically more likely to report an increase in their rate of participation in community affairs than the control group. The researcher considered a total of 40 outcomes in the citizenship, empowerment, diversity awareness, and leadership realms, but only 14 were statistically significant; he attributes this to the relative homogeneity of the overall undergraduate population at his institution (Georgetown University), the overall self-selection bias of the students who choose to take a Race and Ethnic Relations class, and the overall high rate of students—2/3 in each section—who had previous community service (Marullo).

Mabry examined the connections between pedagogical variations in service-learning and student outcomes, including civic values and civic attitudes. The author found that an increase in the number of service hours and an increase in direct contact with beneficiaries had the greatest effect on civic values and greatest impact on civic attitudes, indicating not only that service-learning impacts civic participation, but that the amount of time spent with beneficiaries and the type of service do matter. A limitation of this study is its cross-disciplinary design, which undoubtedly produced significant variation in the types and quality of service experiences, making generalization difficult (Mabry).

In contrast, Hunter and Brisbin found that service-learning experiences did not affect students’ political attitudes, especially related to their thoughts about democracy or their role as a citizen. The authors assessed 1) political knowledge, 2) academic and social skills related to political and civic engagement, and 3) attitudes toward political engagement of students in service-learning courses. Although they found small positive differences
between pre- and post-tests on willingness to participate in public meetings and the importance of paying attention to politics, none of their results were statistically significant. Major limitations of this study include a failure to report the total number of courses and subjects surveyed, and the outcomes of statistical tests. Just as in the previous study by Mabry, the cross-disciplinary nature of the study may also have biased the results, since types and quality of service experiences may have varied greatly (Hunter and Brisbin).

Steinke and colleagues have also assessed the interrelationships between service-learning predictors (reflection, placement quality, community engagement, diversity, and student voice) and five outcomes including civic engagement in 12 service-learning courses from a variety of disciplines taught at 12 different private colleges in Iowa. To assess civic outcomes, pre- and post-test surveys using a five-point scale asked questions such as importance of political involvement and personal efficacy. A statistically significant positive correlation was found only between civic engagement and student control over projects. A significant negative correlation was actually found between diversity and civic engagement, indicating the importance of “multicultural training” and empowerment of community members in service-learning projects so that stereotypes are not reinforced. While the results of this study did not demonstrate outcomes consistent with earlier research, study limitations could have played a part. Again, since this was a multidisciplinary study, specific course goals were not consistent, nor were types and quality of service experiences (Steinke et al.).

Personal Development Outcomes

- **Introduction**

Some of the strongest support for the positive impact of service-learning on students comes from the research on outcomes associated with personal development. Outcomes such as leadership, spiritual growth, moral development, career development, and retention rates or other effect on the relationship with the institution will be included
in this category. Social/personal outcomes related to cultural and racial diversity merit a separate section and will be described below after the developmental outcomes section.

- **Large-scale surveys assessing personal developmental outcomes**
  - The various studies by Astin and Sax and colleagues have demonstrated some of the strongest associations between service-learning and developmental outcomes. In their 1998 study on the impact of service participation in college, they found that participation, compared to nonparticipation, significantly affected all self-reported life skills measures, including leadership ability, social self-confidence, interpersonal skills, conflict resolution skills, ability to work cooperatively, and satisfaction with the way college had prepared them for their future career (Astin and Sax 1998). In another nationwide survey designed to compare service-learning and non-course-related service, they found that service participation showed significant positive effects on self-reported leadership activities and ability, interpersonal skills, and choice of a service career in addition to the civic and learning outcomes previously reported. Performing service as part of a course (service-learning) added significantly to the benefits for all outcomes measured except interpersonal skills, self-efficacy and leadership. The strongest effect of service was on the student’s choice of a career in a service field (Astin et al. 2000).

  Finally, in their study of the long-term effects (nine years after college entry) of volunteerism during the last year of college, they found that volunteering then was positively associated with the following behaviors: attending graduate school, earning higher degrees, donating money to the one’s college, and performing volunteer work in the community. In the values realm, college volunteer activity was positively associated nine years after entry with valuing the importance of 1) helping others in need, 2) participating in environmental clean-up and community action programs, and 3) developing a “meaningful philosophy of life.” Nine years later the other positive associations with volunteering during college were higher degree aspirations
and the students’ perceptions that college had prepared them for their career. No associations were found after nine years between college volunteer experience and satisfaction with graduate school, students’ perceptions that college had prepared them for graduate school, income, overall job satisfaction, and political orientation (Astin et al. 1999).

- The LSAHE evaluation compared service-learning and nonservice respondents on a variety of outcome measures after controlling for gender, age, race, student status, employment status, degree sought, and institution type. Self-reported interpersonal skills were rated significantly higher for service-learning participants, but in the career realm on measures such as clarifying their major or making career plans, no differences were found between the two groups (Gray et al.).

- **Other Studies of Developmental Outcomes**

  - The path-breaking study on the effects of experiential learning on high school students by Conrad and Hedin produced significant psychological and social outcomes. Of the four types of experiential programs they studied—community service, career internship, outdoor education, and political action—outdoor programs produced the most consistent gains in self-esteem, although in general, all program types had this effect compared to students in the control groups in traditional classrooms. In addition, students in two experiential programs and one control group were measured on moral reasoning; the students in the experiential groups also showed significant gains over the control group.

    On a scale of social and personal responsibility developed for this study, students in the experiential groups demonstrated significant positive movement, while five of the six comparison groups in traditional classrooms decreased on this measure, two of them significantly. On measures of attitudes towards adults and other people with whom they interacted during their experience, students in the experimental groups showed significant improvement again, while the control groups showed a decline. Finally,
certain program practices did matter. Increases in self-esteem were more likely to occur when students were given autonomy in their placement, and social growth was promoted if students interacted with adults in a collegial way (Conrad and Hedin).

- In their comparison of the differences in ego identity and moral development between service-learning and non-service-learning students (enrolled in courses with similar content but different instructors), Batchelder and Root evaluated student journals and pre- and post-experience “Responses to Situations” essays on dimensions of prosocial decision-making, prosocial reasoning, and occupational identity. Results indicated that service-learning students were significantly more likely to employ prosocial decision making, use advanced types of prosocial reasoning, and to explore occupational identity than the nonservice learning students. The gains in higher order thinking were positively associated with the quality of both site-based and classroom support and instruction (Batchelder and Root).

- In the comparison of service-learning and non-service learning students in undergraduate political science classes conducted by Markus and colleagues, self-reported social beliefs and values were assessed via a pre- and post-experience questionnaire. In the control groups, only three of fifteen items changed significantly, while in the service-learning group, eight of the fifteen items changed at a significant level. The authors concluded that service-learning courses, in comparison to courses taught by traditional methods, could have a positive impact on personal values and community orientation (Markus et al.). However, the technique of evaluating values and social beliefs on a short 15-item questionnaire appears to illustrate one of the criticisms of service-learning research; it severely limits the possible outcomes, and thus unintended consequences of the experience might have been missed.

- In Eyler and Giles’ study of 72 undergraduates enrolled in a stand-alone service-learning class they found that service-learning can impact students’ sense of social responsibility, their views of social service clients, and their
commitment to volunteering in the future. Results were based on a self-administered pre- and post-experience survey and on open-ended questions about social problems that were content coded. The authors describe the study as limited in its generalizability however, since there were no control groups, results were based on self-report, and the service intensity was low (Giles and Eyler 1994).

This study, however, was used to plan their Comparing Models of Service-Learning Project in which they administered pre and post surveys to 1,544 undergraduates as well as conducted pre and post-experience in-depth interviews with 66 of the students. Consistent outcomes from the surveys included self-knowledge (78% ranked it as very or the most important outcome), spiritual growth (46% ranked it as important or very important), reward in helping others (85% ranked it important or very important), developing skills and experience helpful in a career (78% ranked it most or very important), and learning to work with people (81% ranked it most or very important). Additional outcomes that emerged from thematic analysis of the interviews were that service-learning led to development of leadership skills and to development of connections with other students and faculty. Both of the latter outcomes were linked to placement and reflection quality as well; the more challenging and responsible the service situation and the more reflection students are required to do, the greater the leadership skills that develop and the stronger the personal relationships are that form between fellow students and students and faculty (Eyler et al. 1997, Eyler and Giles 1999).

- Richard Rhoads’ six-year qualitative study exploring how “caring citizens” develop through service-learning included participant observation of 200 students, and thematic analysis of interviews with 108 students, an unspecified number of student journals, and 66 open-ended surveys. Three themes/outcomes emerged from the analysis that reflected how community service “challenges students’ understanding of citizenship and the social good”: 1) self-exploration (also described as identity clarification), 2)
understanding others from backgrounds different from their own, and 3) constructing a definition of the common good. He found three practices crucial to achieving these outcomes: 1) reciprocity between the students and community members, 2) a reflection component, and 3) the personalization of service, meaning that students and community members must have meaningful interaction (Rhoads 1998).

- The work of many authors described in previous sections also included developmental outcomes from service-learning experiences. Kendrick found that service-learning students had statistically significant differences from students enrolled in a traditionally taught section of his sociology class on five of fifteen indicators of social responsibility on a pre- and post-test survey. On a post-experience survey of values and beliefs, they also demonstrated significant differences from non-service-learning students on all nine indicators. However, since students were able to self-select in or out of the service-learning section, self-selection bias may have confounded his results (Kendrick).

Marullo also found developmental outcomes when he compared students in service-learning and traditionally taught sections, however these students were not allowed to enroll in a different section of his course once it was revealed that one was a service-learning section. He found that one of four measures of leadership was statistically different for the service-learning students on the post-test, while the students in the traditionally taught section did not change over the course of the semester. In addition, service-learning students claimed to see the consequences of their own actions and to feel more responsibility for others---two measures of moral development---significantly more than the control group at the end of the semester. At the end of the semester, compared to the beginning, service-learning students were also more likely than students in the traditionally taught section to say that individuals do not control whether they are poor or wealthy, an indication that they attribute structural rather than individual causes to social problems (Marullo).
Osborne and colleagues compared students enrolled in two service-learning and two traditionally taught sections of a pharmacy communications class on pre- and post-measures of self-esteem and social competency. Students did not change sections once the semester began. While the social competency of service-learning students showed significant positive improvements compared to those in the control sections, service-learning students actually declined significantly in self-esteem over the course of the semester compared to the control groups. The authors hypothesize that the decline represents the service-learning students’ more “realistic” assessment of their worth due to real-world exposure (Osborne et al.).

Other studies did not employ control groups in their assessment of the impact of service-learning. Jurgens and Schwitzer used service-learning experiences to prepare 57 students enrolled in an undergraduate program in human services counseling. Outcomes were measured on an instrument that employed both open-ended questions and seven-point Likert-type scales to assess whether students achieved their goals and acquired information, skills, and self-knowledge. Goals realized were in four areas: skills development, career decision, personal-professional development, and altruism. Self-knowledge was gained in three areas: career-decision, professional growth and personal growth. The authors recognize that the study is limited by the reliability and validity of the instruments used and by the ability to generalize from the participant sample (Jurgens and Schwitzer).

Moore used participant observation and interviews of 25 students and their instructors and site supervisors to assess what students involved in work-based learning actually learned. In the personal realm, students appeared to gain in responsibility and appreciated being treated like adults, but other expected developmental outcomes such as growth of integrity, ethics and self-esteem were not observed. The author also found that the career-preparation claims of experiential education are over-rated; while he believes that interns are able to observe working conditions and activities, they typically do not learn about career paths, educational preparation, or long-term opportunities and
constraints of specific careers (Moore). Primavera found that the volunteers in a stand-alone service-learning program noted gains in self-esteem (44%), self-knowledge (65%), and understanding of social issues (57%) as measured on a semi-structured questionnaire at the end of the academic year (Primavera).

- Two different studies employed similar techniques to assess outcomes of service learning. Mabry conducted pre- and post-course surveys of 144 students enrolled in 23 different service-learning courses from different disciplines at a mid-Atlantic university to determine the impact of frequency of reflection and intensity of service experience on student outcomes. She found that significant positive change in personal social values such as the importance of helping others and social justice occurred if: (a) students had continual contact with beneficiaries during the service experience versus little or no direct contact, (b) students reflected in-class at least weekly versus once or twice a month, (c) students reflected out-of-class (written) at least weekly versus monthly or semi-monthly, and (d) students talked with instructors, site supervisors and other students about the experience (versus talking only with other students (Mabry).

Steinke and colleagues also conducted an interdisciplinary study of the impact of various service-learning practices on five outcomes of service-learning in 12 courses from 12 different institutions in Iowa. In the developmental realm, the authors examined spiritual and ethical development using pre and post-test surveys and post-course responses to open-ended questions asking how the service experience had affected their spiritual and/or ethical development. The definition of these terms was left up to the students. Responses to the open-ended questions were analyzed thematically and the following themes emerged: 1) no change, 2) enhanced connectedness with the community, 3) affirmation of the importance of diversity, 4) awareness of one’s own privileged position, and 5) deeper understanding of the rewards of service. Significant spiritual and ethical development post-experience was found to be positively correlated with reflection and negatively correlated with
diversity, but to have no association with placement quality, student voice, or community engagement. While at first glance the diversity finding is surprising, the authors attribute it to the inability of the diversity measures to get at relevant aspects of diversity, and to the potential for confirming stereotypes that service-learning experiences can produce (Steinke et al.).

Diversity Outcomes

- **Introduction**

Increasing tolerance and appreciation of other cultures, reducing stereotypes, and recognizing the importance of social justice all certainly fall into the personal development realm, but so much recent service-learning research and theory has focused on this area that it merits its own section. Increasingly, researchers in the field are recognizing the commonalities between multiculturalism (also known as diversity education) and service-learning and are promoting the integration of the two movements (Vogelgesang, Langseth, Hondagneu-Sotelo and Raskoff, O’Grady, Rhoads 1997, Green, Wade, Jones, Marullo). Service-learning offers an opportunity for students to practice multiculturalism in a specific context, and provides students with relevant and real experiences which can provide discussion material and diversity training in what is typically a lower-risk environment than that of a student’s future job (Langseth, Arthur, Battistoni 1995, Hayes, McKay).

Both movements challenge the traditional curriculum and ways of doing things in higher education and have roots in the social movements of the 1960s and 1970s. And both can enhance student learning and contribute to the public good. But while social justice issues are a consistent focus of multiculturalism, in service-learning they have not been the primary goal of most practitioners (Vogelgesang, Wade, Maybach, McKay, O’Grady); in practice this means that the service-learning outcomes that are examined in this area may fall short of social justice and instead focus on preliminary steps such as increased tolerance and reduction of stereotyping.
• **Large-scale surveys of diversity outcomes**

Eyler, Giles and colleagues, Astin and colleagues, and the LSAHE evaluation have all documented outcomes in the diversity realm from service-learning or volunteer experiences. In the Comparing Models of Service-Learning Project (Eyler et al. 1997), service-learning participants reported more frequent interaction with people from ethnic groups other than their own and increased tolerance for others, as well as increased social justice indicators than did nonparticipants. Sixty-eight per-cent also reported greater appreciation of other cultures as either the most or a very important learning outcome (Eyler et al. 1997, Eyler and Giles 1999). The service participants in Astin and Sax’s 1998 survey indicated greater statistically significant positive change on knowledge of different races/cultures and acceptance of different races/cultures than did non-participants (Astin and Sax 1998). The LSAHE evaluation survey data on 1,322 students from 28 institutions found that service-learning participants reported significantly higher measures of acceptance of other races and cultures and interest in promoting racial understanding than did non-participants (Gray et al.).

• **Diversity outcomes of other studies**

Many of the studies described above in earlier sections found relevant outcomes to multiculturalism from student participation in service-learning. In a comparison study by Markus and colleagues of students in service-learning and traditional sections of a political science class, service-learning participants had higher ratings on measures of tolerance and appreciation of others and importance of working toward equal opportunity for all citizens (Markus et al. et al.). Marullo, in a similar comparison of students in traditional and service-learning sections of his sociology class, found that service-learning participants scored significantly higher on three measures of diversity awareness (Marullo). Osborne and colleagues’ comparison of students in traditional and service-learning sections of a pharmacy communications course found that service-learning students scored significantly higher on “perceived ability to work with diverse others” (Osborne et al.).” The results of Primavera’s study of outcomes for a stand-alone service-learning program were similar: a) 93% of participants indicated that the experience had exposed them to new cultures and ways of life, b) 49% indicated that they had gained
increased awareness of diversity and appreciation for multiculturalism, and c) 47% indicated that the experience challenged and eliminated negative stereotypes about low income, minority, inner-city children and their parents (Primavera).

- **Other studies linking diversity and service-learning**

  Much of the focus of the discussion linking the topics of service-learning and diversity education is on whether service-learning experiences reinforce racial and cultural stereotyping, racism, and prejudice, or reduce it (Myers-Lipton, Erickson and O’Connor, Langseth, Coles, Green, Hondagneu-Sotelo and Raskoff). As one author describes the dilemma, “In a service-learning setting where most of the clients are minorities, the inequities are vivid, and the inequities or symptoms can appear to be the cause rather than the effect of underlying socioeconomic dynamics (Coles).” In another author’s words: “We often gloss over the difficulties that students have performing service in places where they are uncomfortable, where poverty is not pretty or idealized... Finding ways to talk about race and class is in some ways more difficult when students are confronted with lived race and class differences than when facing race and class differences as represented in textbooks and readings (Green).” Yet a third author points out the importance of reflection in this situation: “For students ...who are of traditional age, come from affluent backgrounds, and live on a residential campus, the best thing we can do is to introduce them to new settings, to give them a sense of the human dimension of problems they read about. The problems are not abstract. Get them out of what they know, what they’re comfortable with. Get them into a structured disequilibrium---something that unsettles them. But make sure there’s a structure so they can reflect and learn from it (Couto in Stanton et al.).

  In an effort to go beyond speculation about the subject, Myers-Lipton compared scores on a modern racism scale (MRS) of students involved in a two-year service-learning program (six hours per week minimum) to students involved in service alone and to students involved in no service of any kind. To decrease self-selection bias, the author used multivariate analysis to control for independent variables such as gender, race, political orientation, and SES. Results indicate that the service-learning students showed significantly greater decreases in MRS scores over the two-year period than did
students in the two control groups. In fact, the mean MRS score for students who did not participate in service actually increased over the two-year period (Myers-Lipton).

SERVICE-LEARNING IN HEALTH PROFESSIONS EDUCATION

Changes in Health Professions Training

Advocacy for changes in health professionals training has recently come from several sources. Beginning in the late 1980s, stakeholders in the health care system in the U.S. began to predict a shift away from individual care of patients in specialized inpatient settings with fee-for-service practice, to a more community-focused, preventive approach working in interdisciplinary teams under a managed care model. In response, in 1989, The Pew Health Professions Commission, whose members were a national group of leaders from all health care fields, published a core set of 16 competencies that all health care professionals (HCP) should achieve in order to meet the health needs of the country over the next century. These included care for the community’s health, emphasize primary care, practice prevention, participate in coordinated care, participate in a racially and culturally diverse society, and involve patients and families in the decision-making process.

Simultaneously, the “Continuous Quality Improvement” movement in health care suggested that the following clinical skills were needed: the ability to work in teams, skills in collaborative exchange with patients and skills in working collaboratively with lay managers. Meanwhile, practicing HCPs identified the following deficiencies in training: responding to the needs of different cultural and ethnic groups, understanding and supporting the role of community service agencies, working in teams with professionals from other health care disciplines, practicing prevention, and ensuring access to health care for the whole population (O’Neil, Richards, Seifer 1998a and 1998b, Connors et al.). As a more recent Pew Health Commission report from 1998 phrases it, “Most of the nation’s educational programs remain oriented to prepare individuals for yesterday’s health care system (Kinder).”
The Role of Service-Learning in Health Professions Training

Service-learning has been identified as the answer to many of the identified needs. It provides students with skills in collaboration, teamwork and communication in community-based settings. “Service-learning experiences enable students to define the community and its health care needs, providing research of and service to their community, working within a new framework of patient-provider care which is culturally competent, and delivering health care education and promotion in team settings (Connors et al.).” While it is similar to traditional clinical education, it is different in significant ways:

- Service-learning balances service and learning objectives. Traditional clinical education would prioritize learning on the part of the student clinician.
- It emphasizes reciprocal learning. Traditional clinical education assumes that the HCP is the person with the most knowledge to share; in service-learning, it is assumed that the students will learn as much or more from the service recipient as the recipient learns from them.
- In service-learning social justice and citizenship skills are key components; in traditional clinical training, the focus is much more narrowly defined.
- Reflection is a critical component of service learning, but in traditional clinical education, the emphasis is on observing and doing and reflection is not typically incorporated.
- In service-learning, community-identified needs and the involvement of community partners are both critical; in traditional clinical education, even in community-based settings, university-based faculty usually designs the curriculum (Seifer 1998a).

As a consequence of the recognition of the potential role of service-learning in HCP training, in 1995 the Pew Charitable Trust and the Corporation for National Service funded Health Professions Schools in Service to the Nation, 20 demonstration projects designed to integrate service-learning into the full range of health professions training (Gelmon 1998 a and b). These demonstration projects in turn influenced many other practitioners in health professions to experiment with service learning, especially in physician and nursing training. As a reflection of the use of a new pedagogy, most of the literature that has appeared subsequently consists of program descriptions or evaluations.
(Cleary et al.; Bailey et al.; Ciaccio et al.; Cohen et al.; Condo et al., Wright, Narsavage et al., Schamess et al., Simoni and McKinney, Sternas et al., Stockhausen; Waskiewicz; Nora et al.; Redman and Clark) rather than research, with a few exceptions (Osborne et al., Waskiewicz, Switzer et al.). In the literature on dietetics training however, service-learning has been promoted by just a few practitioners, indicating that it is used much less frequently as a teaching methodology than in other health professions. The three papers in the field of dietetics or nutrition all provide background information on service-learning and summarize examples of service-learning programs, but are not experimental studies (Ash, Kim and Canfield, Mitchell).

### MODEL PROGRAMS AND LITERATURE ON BEST PRACTICES

**Best Practices**

The literature in the field of service-learning has clearly demonstrated that certain program practices matter and that all service-learning programs are not equal. Eyler and Giles (1997, 1999), the LSAHE evaluation (Gray et al.), Conrad and Hedin (Conrad and Hedin), and Mabry (Mabry) all found that the quality of the placement, especially the amount of supervision at the site and discussion with site staff, can have a positive impact on outcomes. Other components of placement quality include site orientation and training (Mintz and Hesser).

The work of numerous authors (Eyler 1996 and 2002a; Eyler and Giles 1997 and 1999; Parker-Gwin and Mabry; Conrad and Hedin; Mabry; Rhoads 1998; Steinke et al.; Gray et al.) also indicates that the quality and quantity of reflection matters; generally results have supported a minimum of weekly in-class reflective activities for best outcomes. The amount of time spent in service is also important; results support a minimum of 15-20 hours per semester at the service site (Mabry, Astin and Sax, Astin et al. 1999, Kendrick, Markus et al.), with programs of greater intensity producing higher levels of outcome variables (Eyler 1993, Eyler and Giles 1997) as well as higher participant satisfaction and self-reported intellectual stimulation (Eyler et al. 1997, Mabry).

Another crucial program characteristic is whether students are able to apply their service to the academic content of a class and vice versa; the work of multiple authors
Batchelder and Root, Eyler and Giles 1999, Mabry) demonstrates the benefit of application, especially for learning outcomes. Finally, the other key program characteristic that has an impact on outcomes is diversity exposure. Eyler and Giles (1999), Kendall (Kendall), and the LSAHE evaluation (Gray et al.) all found that developmental outcomes, such as racial identity development and cultural understanding, are enhanced when students are exposed to the racial, cultural, and economic diversity of their placements.

**Model Programs**

While strong evidence supports the importance of these aspects of program quality in service-learning outcomes, discussion of model programs is still for the most part theoretical. However, based on developmental and cognitive theories, practitioners in the field have made suggestions about program models that are likely to be successful. One of the models is that of different levels of service-learning, depending on the outcome desired. A sequence of service-learning courses over several semesters allows students to build on previous experiences and better integrate their service activities with academic objectives (Parker-Gwin and Mabry, Jacoby 1996c) as well as addresses the criticism that community organizations repeatedly have: that as soon as students arrive at their service site, they have to leave again due to the academic calendar (Wallace 2000b).

One strategy community organizations use to deal with the rapid turnover is to simplify the jobs that students do so that the training and orientation processes require so little effort on the site’s part that turnover does not present a problem; this however, is not ultimately beneficial to either the students or the site (Wallace 2000a and b). The other alternative is to find a way to keep students involved even after the semester is over, which is what Wallace and colleagues at the Jane Adams School of Democracy at the University of Minnesota have done. They have found that a critical mass of continuing students of at least 50% is necessary to provide continuity in the community-based setting. In order to encourage it, they have instituted the following strategies: 1) a six credit service-learning course is offered every semester that allows in-depth exploration of theory related to the community-service practice, 2) an interdisciplinary cadre of faculty associates have committed to linking their courses to the school and the service
experiences it offers, 3) purchase of a residential house for student participants to live in the neighborhood of the service sites, 4) a second level of participation in which experienced students coach other students for a minimum of ten hours per week and are paid for their work, 5) and some faculty participate in more depth as service providers alongside their students (Wallace 2000a and 2000b).

Likewise, Erickson and O’Connor discuss strategies to promote engagement, versus mere exposure. “Engagement is a level of intensity of service that requires not only student engagement both physically and intellectually, but also the engagement of the sponsoring institution.” They utilize contact theory to propose a minimum set of conditions required for attitude change to occur: common goals, equal status contact, contact that contradicts stereotypes, long-term contact, and social norms favoring contact (Erickson and O’Connor).

The levels of service-learning are described variously as a continuum, spectrum, or from an expert-novice perspective. Maybach’s perspective is that service-learning “must be built on a continuum.” She also says, “it takes a great deal of time, structured experience, attention to social and emotional growth, and incremental skill building (emphasis added) to arrive at this type of relationship (Maybach).” Eyler and colleagues view service-learning from an expert-novice perspective; they have proposed that students with multiple semesters of experience in service conceptualize and solve social problems in different ways from students with more limited service experience (Eyler et al. 1998). Based on a developmental model proposed by Delve, Mintz and Stewart, (Delve et al.), Jacoby proposes that colleges should offer a wide range of service-learning experiences designed for students at different stages of development and at different points in their education (Jacoby 1996c).

THE FUTURE OF SERVICE-LEARNING

The headings from Stanton and colleagues’ paper titled “Passing the Torch” have been borrowed for the following discussion of future directions for service-learning as discussed in the literature (Stanton et al., Eyler 2002, Giles and Eyler 1998, Giles et al.1998, Jacoby 1996b).
Clarify and Debate the Multiple Definitions and Purposes of Service-Learning

In order to remedy the problems described in the service-learning research section above (page 28), as well as to unify practitioners in the field, the development of a consistent definition of service-learning is essential (Stanton et al., Jacoby 1996b).

Strengthen the Practice

Improve the quality of the experience using the “best practices” literature (Stanton et al., Eyler and Giles 1997). Focus on unanswered research questions discussed in articles on the service-learning research agenda (Giles et al., Giles and Eyler 1998, Jacoby 1996b). Many types of studies are needed to answer the major research questions, especially longitudinal studies which would address the long-term effects of service-learning experiences, as well as more carefully controlled experimental studies which would allow for testing alternative models of service-learning (Giles and Eyler 1998, Eyler 2002b).

Strengthen the Community’s Role in Service-Learning

Reciprocity with the community in the case of many service-learning programs is a theory, not a practice. The community often does not function as a full partner in service-learning development and practice. Establishing service-learning programs that provide for long-term relationships with community partners is one critical way to address this issue (Cruz and Giles, Langseth and Troppe, Stanton et al., Wallace 2000a and 2000b).

Diversify the Field; Make It Inclusive

Many of the current efforts to bring diversity efforts at institutions of higher education together with service-learning appear very promising (Jacoby 1996b). However, service-learning students and faculty should also be representative of U.S. society as a whole (Stanton et al.).
To Be or Not to Be Institutionalized

This title reflects the mixed results that come from institutionalization. While it certainly promotes sustainability, for political reasons it may dilute the agenda for social change that many practitioners hold. Expanded funding also comes with accountability pressures that some faculty would prefer not to address. However, the institutionalization of service-learning also has the potential to achieve the results the higher education reform movement desired (Stanton et al., Jacoby 1996a and 1996b).

SUMMARY AND CONCLUSION OF LITERATURE REVIEW

From this review of the service-learning literature, it is apparent that participation in either or both community service or service-learning leads to positive student outcomes in the academic, civic, diversity and developmental realms. Judging from the significant benefits that have been shown in the past, it would behoove institutions of higher education to include many community service and service-learning opportunities in curricular and extracurricular activities and to provide adequate financial support for these activities. However, the literature also suggests that it would be premature to promote the benefits of service-learning rather than of community service alone. Since only a few studies in any field have attempted to sort out the effects of service versus service-learning (Astin et al. 2000, Myers-Lipton) we do not have adequate information to differentiate the benefits of one over the other. New studies investigating this issue must be conducted before the field of service-learning can persuade the students, faculty and administrators of institutions of higher education of the superiority of this pedagogy.

Implications

The implications of this conclusion for Husky Reads are as follows:

- On a programmatic level, students should continue to have the options of participating in Husky Reads as volunteers in an extracurricular community-service activity and by enrolling in the stand-alone service-learning class of Nutritional
Sciences 281. To optimize the experience, the service-learning component should be structured taking the “best practices” literature into account, especially the components of training, application, intensity and reflection. Without the latter element it is unlikely that students participating in Husky Reads will move beyond the traditional understanding of the provision of charity to comprehending and solving the larger issues at stake. In addition, based on cognitive and psychosocial developmental theories, it is appropriate to structure our community service opportunities on multiple levels that require less or more knowledge and experience in both nutrition and life. Novice and expert levels would also provide experiences that address students’ varying stages of development, allow for incremental skill building, and give them opportunities to complete developmental tasks.

- Looking at a bigger picture, the literature in the field demonstrates that community service and/or service-learning should be encouraged by all stakeholders: the students, the faculty, the department, the college and university, the nutrition profession, and higher education as a whole. Here is a quote that speaks to the potential benefit of these kinds of experiences: “Effective programs that fully involve participants in service and learning will develop individuals who will go on to use the important lessons they have learned to create and sustain institutions and environments that, in turn, will lead future generations of citizens to seek solutions to social problems and opportunities to engage in service and learning (Jacoby 1996b).”
Chapter 2

Utilizing Undergraduate Volunteers in the Delivery of Nutrition Services

by

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Abstract: Utilizing Undergraduate Volunteers in the Delivery of Nutrition Services

Husky Reads is a community nutrition program utilizing undergraduates to deliver nutrition education to food stamp recipients waiting to see medical providers in public pediatric clinics. Volunteers read aloud and conduct games and activities using materials with food and nutrition themes. Approximately 45 students volunteer per semester, allowing FSNE to reach more than 1,200 children and their families with nutrition education.

Service-learning is the instructional method used to structure the program for the students. It requires learning objectives, reflection, and reciprocity between students and service recipients. Challenges to program implementation include transportation to sites, student schedules, cultural differences between students and service recipients, liability issues, and communication with large numbers of volunteers.

Husky Reads is readily replicable by other land-grant institutions and/or FSNE programs. Providing students with experiences in community-based programs with diverse audiences allows universities to satisfy critical ADA foundation knowledge and skills requirements while concurrently supplying the variety of educational experiences encouraged by the ADA. For future nutrition professionals, service-learning experiences such as Husky Reads give them the opportunity to apply classroom-based knowledge, make decisions about their futures, achieve personal growth, and build cultural competence. Programs such as Husky Reads can also attract students to the profession.
Husky Reads\textsuperscript{1} delivers interactive nutrition education to food stamp recipients\textsuperscript{2} who sit for long periods in the waiting rooms of publicly funded pediatric and WIC clinics in Hartford, Connecticut. At the clinics, undergraduate volunteers from the University of Connecticut integrate nutrition education with literacy activities, targeting children and parents waiting to see their medical providers.

**Background**

Husky Reads was inspired by the observation that waits to see medical providers at many of the clinics in Hartford were quite long, creating “captive” waiting room audiences who might enjoy diversion in the form of nutrition education. Concurrently, Reach Out and Read (ROR), the national, multifaceted literacy program that enlists volunteers to read aloud to children in waiting rooms of pediatric clinics, received national attention (1). An additional spark was the realization that involving undergraduates in community nutrition integrated the land-grant institution’s mission of service with undergraduate education.

\textsuperscript{1} Named for the University of Connecticut canine mascot

\textsuperscript{2} This program is one component of Connecticut Food Stamp Nutrition Education (FSNE).
The synergy of these ideas led the second author (AF) to recruit several undergraduates during Fall, 1999, to develop a kit of nutrition education materials to take to pediatric clinics in Hartford to test program feasibility at sites. When this initial effort proved successful, professional staff was hired the following semester to administer the program, and 12 students were recruited from undergraduate nutrition classes to further test and refine the model.

**Program Description and Evolution**

Teams of two to four students visit publicly funded pediatric clinics once a week for two hour shifts to read aloud and play games and activities with children waiting to see their medical and WIC providers. All program materials have food and nutrition themes. The fundamental message to the children and parents, conveyed through modeling and dissemination of flyers and brochures, is that nutrition and literacy are critical for child development.

While it was originally envisioned that participating students would be nutrition majors, in actuality working with children in a clinical setting attracts students from all health professions, education, psychology, family studies, as well as students still undecided about their major. Students have the option of participating in the program as volunteers, enrolling for credit, or being paid if they are eligible for the federal work-study program. The majority, typically about 75%, chooses to participate as a volunteer. After the first semester’s (Spring, 2000) enrollment of twelve students at two sites, the program has grown considerably. Since then a total of 257 students have volunteered at one of three medical clinics and two WIC sites.
The interest of non-nutrition majors in participation, the variability of students’ prior experiences, as well as the racial, economic and cultural diversity of the target audiences absolutely necessitate training of program volunteers. Service-learning has proved a useful pedagogical model for structuring the program for all student participants, not only those enrolled for credit. Service-learning is a form of experiential education that includes community service accompanied by specific learning objectives, reflection, and reciprocity of learning between students and recipients of the service (2). Health care professions training, including dietetics, has recently embraced service-learning as a means to provide students with skills in collaboration, team-work and communication in community-based settings (2-5). As much as possible, the “best practices” literature in the service-learning field has been followed in program design and implementation. Optimal program components include a minimum of 15-20 hours in the field every semester, on-site training and supervision, high quality and quantity of reflective activities, and the ability to apply the service to the academic content of a class (6).

In order to provide a continuum of experience, students who have completed one semester with Husky Reads (Level One) are eligible to participate in more advanced community nutrition opportunities. Level Two students, typically nutrition majors, design curriculum and teach a nutrition and cooking class for an after school program, or are placed for a semester with staff in FSNE programs for special projects. Level Three students are completing professional training (dietetic interns in community nutrition rotations or medical students in community-health rotations) and typically spend more than 50 hours per semester engaged in FSNE projects. Again, this model of service-
learning reflects recommendations found in the literature to provide for incremental skill building in community service experiences (7).

**Program Implementation**

Recruitment is accomplished during the first two weeks of the semester through posting of flyers on high-traffic bulletin boards, by visiting undergraduate nutrition courses, through displays at student government sponsored activity fairs, and by word-of-mouth from past volunteers. The two critical factors for student recruitment are opportunities to work with children and to work in a clinical setting. Students are initially recruited to attend one of the informational meetings held on campus during the third week of classes. There students find out about program requirements and enroll, while program staff collects information on student schedules, transportation needs, and backgrounds. A schedule is then developed based on site needs, student schedules, and transportation.

Program orientation commences the third week of the semester. All students placed at hospital sites must undergo four-hour volunteer orientations mandated by the Joint Commission on Accreditation of Healthcare Organizations (8). Since WIC sites do not require formal volunteer orientations, students who can not attend hospital orientations are placed there. The following week, a mandatory program orientation is conducted on campus where volunteers meet each other and are introduced to program materials. Program staff then meets on-site with individual volunteer teams to provide introductions to site staff, a brief demonstration of program activities, and instructions in completing report forms which document their activity at the sites. From this point on,
typically week five of a fifteen week semester, volunteer teams operate independently without direct supervision.

Training and supervision of volunteers is accomplished in large degree during program meetings held on campus approximately every three weeks. Each meeting typically has a training theme and guest speaker—past topics have included behavior management, parenting and culture, nutrition education for children—and time for reflection. Through reflective activities such as discussions and the journals required for students enrolled for credit, program staff continually assesses student needs for training and follow-up. Additional supervision is provided by visits from program staff to sites and by site staff. However, most site staff is so burdened by workplace demands that follow-up is typically done by program staff.

To simplify student tasks, program materials are stored in large plastic bins on site and staff replenishes them throughout the semester. Materials and curriculum have been developed utilizing previously published lists of educational materials for teaching about foods and nutrition to children, as well as through student projects. For those students who do not have strong backgrounds in nutrition, handouts have been created to facilitate the communication process. The curriculum allows students with limited nutrition training to effectively present nutrition and literacy messages while they “do no harm.” This prescribed quality of the curriculum protects students from dispensing (and recipients from receiving) misinformation. For additional details on curriculum and program operation, see the program’s web site (9).

FSNE funding provides for program materials and administrative staffing. Instructional funds are provided by the university. Staffing consists of .5 FTE
professional staff, one full-time graduate assistant (20 hours per week), and one part-time undergraduate employee (10 hours per week). Time demands on staff are quite intense during the four weeks of recruitment and site placement, but otherwise this staffing has proven adequate.

Addressing Challenges

• Transportation

Storrs, the home of the University of Connecticut, is 26 miles from Hartford; students must allow one hour for travel time, parking and traffic. Since public transportation is not available, vehicles supplied by the office of Community Outreach on campus and students’ personal cars convey students to sites. Because the lack of transportation limits program participation and the travel arrangements for 40+ students are complex and ever changing, transportation is program staff’s ultimate trial. Sending students from a rural campus to unfamiliar inner-city sites that have the reputation as being unsafe also presents challenges; maps and detailed directions are provided to drivers and cellular telephones are relied upon for communication en route.

• Student schedules and calendar

Many student schedules do not contain the necessary four hour time block (two hours for clinic time plus two hours for travel) during weekday daytime hours to volunteer with Husky Reads; students’ free time for extracurricular activities tends to be in the evenings or on weekends. Students in this situation are encouraged to build the necessary time block into their schedule for the following semester. The academic calendar also creates barriers when working with community-based organizations that
must provide services year-round. However, since Husky Reads provides conscientious and motivated volunteers for two semesters per year to the volunteer-dependent ROR programs at hospital sites, their staff are eager to collaborate and will speed up the normally slow pace of volunteer screening and orientation on Husky Reads’ behalf. The WIC clinics, which did not have volunteers previously, have seen a jump in participant satisfaction with the advent of waiting room volunteers; they too are enthusiastic partners. Reciprocity is critical; since the service students provide is important to the sites, they are willing to work around scheduling barriers.

- **Communication**

  The challenge of communication with large numbers of volunteers is accomplished primarily through the Internet, although early in the semester the volume of e-mail can seem overwhelming. The university has given Husky Reads an e-mail address³ and website⁴, and students are encouraged to use the computer rather than telephone to contact staff. E-mail communication alleviates the mismatch between staff availability (daytime) and student availability (evening). Program materials and updates are also disseminated via e-mail. One semester a “live chat” on the Internet was tried to facilitate communication with volunteers but was too cumbersome to manage with the large number of participants.

- **Cultural differences**

  The variability in student backgrounds, especially prior experiences (or lack of) with cultural, racial and economic diversity, presents the greatest challenge for training.

³ huskyreads@uconn.edu

⁴ http://www.canr.edu/nusci/outrch/huskyreads/index_hr.html
For many students from small-town or suburban New England communities, whose residents are mainly from Caucasian backgrounds, this is the first time they have the experience as “the other”; the sites reflect Hartford’s 70% nonwhite population and serve Latino, African-American and West Indian families almost exclusively. In order to prevent the reinforcement of stereotypes that can occur when students encounter other races and cultures (10), issues of culture, class and race are actively discussed during program orientation, trainings, and reflection.

- **Liability**

  Potential legal issues can present another hurdle to student placement in community sites. The office of Community Outreach on campus ensures that drivers in all university-sponsored community-service programs meet standards for driving records and insurance. As part of their normal screening, the hospital sites conduct background checks on volunteers and hospital-sponsored liability insurance covers volunteer practice.

**Program Outcomes**

Both qualitative and quantitative methods have been used to assess program outcomes. The most extensive evaluation has been of the impact on student participants. A qualitative analysis employing content analysis techniques (11) was conducted on the transcripts of 24 semi-structured interviews of students who completed a minimum of one semester in Husky Reads (2004 unpublished data). Coding and thematic analysis have been done using Ethnograph software (Ethnograph version 5.0, 1998, Qualis Research Associates, Salt Lake City, UT). Evaluation focus groups are also conducted at the end of each semester with students; the transcripts of these have also been transcribed, and
they and the student journals from the past six semesters are currently undergoing thematic analysis as well. A data base of information on student demographics, majors, year in school, career plans, etc. is also being compiled.

While the student interviews have provided some insight into the program impact on families receiving the services, parent surveys are currently being administered as part of FSNE evaluation to determine current nutrition knowledge and program recognition. Parents will be surveyed again in one year. Due to limitations on site staff time, evaluation of program impacts on sites has been determined by measures such as willingness to collaborate and word-of-mouth spread of knowledge about the program to new clinics.

Information from these sources thus far indicates that participation in Husky Reads has had the following effects on stakeholders:

- **Students**

  Students consistently report that participation enhances their ability to apply classroom-based knowledge, promotes gains in personal development and greater understanding and knowledge of cultural and economic differences, builds a better relationship with the university, and provides clarification of future majors and career paths. At the end of the semester, about 65% of students indicates that they plan to repeat the experience, and 15-25 % actually joins for another semester. Another measure of student satisfaction is frequent word-of-mouth recommendations from past volunteers, one of the most common ways new students are recruited.
• **Food Stamp Recipients**

  If recipient satisfaction were the only measure of program outcome on families, the program would score extremely well, since parents and children at sites frequently express enthusiasm and appreciation for the presence of Husky Reads volunteers in the waiting rooms. However, student assessment of the impact on families also indicates that children do learn about nutrition from the program. Repeatedly students use terms such as “see the wheels turn,” “connect,” “role model,” and “make a difference” to describe their impact on the children. Analysis of the parent survey described above will further increase knowledge of program impact on the families.

• **Program Sites**

  Judging from the continued desire for collaboration and requests from new sites, Husky Reads has enhanced the ability of the hospital-based sites to implement the ROR program, and for WIC sites to provide nutrition education and improve client satisfaction.

• **The University**

  The program generates goodwill toward the university in the community. In addition, students consistently state that serving as an institutional representative increases their identification with the university (students wear tee shirts with university logos at sites). They have reported a desire to “give back” to the university for the positive experience in Husky Reads. On the departmental level, nutrition majors have described an enhanced relationship with the department, program volunteers without any prior nutrition background have enrolled in nutrition classes during subsequent semesters, and the department has gained nutrition majors.
• Food Stamp Nutrition Education

On average 40+ students per semester volunteer approximately 850 total hours at sites, allowing FSNE to reach more than 1,200 children and their families with nutrition education with only minimal personnel costs. Since wait times at clinics can be lengthy, these encounters are often of long-duration and intensive, allowing for in depth nutrition education. Furthermore, for children with chronic conditions such as asthma who visit clinics frequently, the contacts with volunteers are repeated. Students with experience in Husky Reads who participate in the advanced levels of the program typically perform projects and work that FSNE could not accomplish without hiring additional staff. Finally, through positive working relationships with site staff, Husky Reads has laid the groundwork and provided an entrée for more in-depth nutrition education activities at the same sites.

Applications for Practice

• The potential for replication of Husky Reads is substantial. FSNE is a federally funded program currently providing nutrition education to families who receive food stamps in 50 states (12). ROR is a nationwide early literacy program with over 2,000 sites in pediatric clinics serving families with limited incomes (1). There is likely to be significant overlap between FSNE target audiences and those of the national ROR program. In addition, the university is one of many institutions of higher education whose undergraduates would benefit from experiential learning opportunities, and whose mission includes service. If a state’s FSNE is one of the many based in an institution of higher education, it is a natural fit to recruit students to work with these
audiences to promote nutrition messages in pediatric waiting rooms which are also ROR sites. For purposes of organization and coordination, Husky Reads has proved to be a model replicable in multiple sites with only minor modifications.

- For future nutrition professionals, service-learning experiences such as Husky Reads give them the opportunity to apply classroom-based knowledge, make decisions about their futures, and develop stronger interpersonal skills (13). Why wait until a dietetic internship, the quintessential example of experiential education (14), to provide students with these opportunities for personal and professional growth?

- In a world growing more racially, ethnically, and economically diverse, experience in community-based programs with diverse audiences promotes increased tolerance, appreciation for other cultures, and reduction of stereotypes (10,13). These experiences have the potential to provide the “diversity in educational preparation” encouraged by ADA (15) as well as addressing the critical need for cultural competence in the profession (16).

- Husky Reads allows the Department of Nutritional Sciences to meet ADA foundation knowledge and skills requirements for didactic programs in dietetics in many categories, including health behaviors and educational needs of diverse populations; sociocultural and ethnic food consumption patterns; food availability and access for the individual, family, and community; influence of socioeconomic, cultural, and psychological factors on food and nutrition behavior; diversity issues; working as a team member; health care delivery systems; and availability of food and nutrition programs in the community (17).
• For many departments of nutritional sciences and family and consumer sciences, particularly in land grant institutions, service is part of their mission, as is the integration of undergraduate education with research. Use of service-learning pedagogy allows community nutrition researchers to meet these institutional objectives.

• In the field of community nutrition where there are not enough qualified practitioners to fill job openings (18) and current practitioners do not represent the racial and cultural diversity of the U.S. population or the audiences they are serving (15,16), programs such as Husky Reads can function as one of the marketing tools the ADA deems necessary to attract people to the profession (19).

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Chapter 3

Exploring Student Outcomes
from a Service-learning Experience in Community Nutrition
Using Qualitative Research Techniques

by

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Abstract: Exploring Student Outcomes from a Service-learning Experience in Community Nutrition Using Qualitative Research Techniques

Objective: The primary objective of this qualitative study was to investigate the full range of outcomes for undergraduates participating in a community nutrition experience using service-learning pedagogy. A secondary objective was to determine whether the outcomes differed between service-learning students and other students.

Design: Semi-structured in-depth interviews were conducted.

Setting: Large state university

Participants: A purposeful sample of past students (N = 24) representing different categories of volunteers, sites, and backgrounds was interviewed. Subjects were primarily females in their first 2 years of college, with a mean age of 19.2.

Phenomena of Interest: All possible student outcomes from participation, and the effect of service-learning versus volunteering

Analysis: Interviews were audiotaped and fully transcribed. Transcripts were coded, and then analyzed using content analysis techniques to discover common themes.

Results: Participation produced a broad range of outcomes in many spheres of students’ lives, including knowledge application, diversity, personal development, career and future plans, and institutional relationship. Participation in a service-learning class rather than solely as a volunteer did not appear to enhance outcomes, or to produce different outcomes.

Conclusions and Implications: Student participants and the sponsoring department and institution benefit from a community nutrition experience that utilizes service-learning as an instructional method.
EXPLORING STUDENT OUTCOMES
FROM A SERVICE-LEARNING EXPERIENCE IN COMMUNITY NUTRITION
USING QUALITATIVE RESEARCH TECHNIQUES

INTRODUCTION

Academia has recently embraced service-learning as an instructional method. In practice it allows universities to work on societal challenges in collaboration with community partners by fulfilling their mission of service (1). Within health professions education it has been popularly adopted as a means to teach skills in collaboration, teamwork and communication in community-based settings (2,3). While there is a long tradition of community service activities in the education of future nutrition practitioners, few reports exist on the application of service-learning pedagogy in nutrition. Previous articles have been of a how-to nature, providing background, program descriptions, and ideas for how other practitioners can get started in the area (4-6).

Service-learning is typically defined as a form of experiential learning that includes community service accompanied by specific learning objectives, reflection, and reciprocity of learning between students and recipients of the service. Service-learning is distinguished from other forms of experiential education such as community service and internships in its balance of students’ learning objectives with the provision of service. In contrast, during traditional community service, the provision of service is all-important and during an internship, the students’ learning objectives are the priority (2).

Student outcomes research in the service-learning field has focused on three areas: cognition, citizenship, and personal development. Probably the most critical link
for academics to establish is that service-learning has an impact on measures of learning such as grades and critical thinking skills, but the evidence is inconclusive (1,7-13). However, strong support for the positive impact of service-learning comes from the area of personal development. Service-learning participants consistently score higher than their peers on measures such as leadership and interpersonal skills, career development, reduction of stereotypes and increasing tolerance of other cultures (8,13-16). The literature also consistently demonstrates positive civic outcomes from service-learning, such as commitment to activism and political participation (1,7,8,13-16). Two consistent criticisms of previous studies is that they have typically examined only one or two outcomes of interest in a specific discipline, thereby missing other potential outcomes and thus leading to underestimation of program impact, and that traditional experimental designs have not captured the complexity of service-learning (17). An extensive review of the literature in service-learning is available on the University of Connecticut Food Stamp Nutrition Education (FSNE) web site (18).

For the past four years undergraduates from the University of Connecticut have delivered direct nutrition services to families receiving food stamps, the target audience of Connecticut FSNE, in an experiential education program that utilizes service-learning pedagogy. This initiative has allowed Connecticut FSNE to reach an underserved population in a cost-efficient manner while also providing students real-life experience. This paper, one component of a program evaluation, focuses on the five themes that emerged from analysis of student outcomes. Participation in the experience appears to be effective in developing multicultural skills, applying classroom-based knowledge,
facilitating personal growth, clarifying future plans and improving students’ relationships with the institution.

PROJECT DESCRIPTION

Since Spring, 2000, Connecticut FSNE has recruited undergraduate volunteers from the University of Connecticut to deliver nutrition education to its target audience in Hartford, Connecticut, 26 miles away. Participants provide nutrition education integrated with literacy activities to families waiting to see medical providers in the waiting rooms of three public pediatric clinics and two WIC clinics. All program curriculum materials, such as children’s books, games and craft activities, feature food and nutrition themes.

Most students participate as volunteers, but some enroll in a one-credit stand-alone service-learning course (20-25% of total), or are employed in federal work-study positions (2-5%). Although the experience was originally envisioned as most relevant to students majoring in nutrition, in actuality it also attracts majors from other health professions, education, family studies, and psychology, as well as students still undecided about their major.

In addition to their weekly commitment in the clinic, all students are required to attend lengthy site and program orientations. Service-learning students must write weekly journals, and attend all discussion group meetings. Volunteers and work-study students are also encouraged to attend these meetings, which typically focus on topics such as culture and diversity, nutrition education techniques, managing children at sites, and community nutrition program referral. For further details, see the program’s web site.
(18). From January 2000 to May 2004, over 250 students have volunteered four hours a week (two hours of clinic time plus two hours of travel time per week) for the program.

METHODS

The first objective of this study was to determine the program’s impact on students and whether certain student characteristics, sites, or program characteristics affected the outcomes. The second objective was to determine whether students enrolled for credit and who are required to participate in reflection activities and a group service activity benefited more from the experience. The reflection component and service activity require additional planning and feedback from program staff. To answer these questions, we conducted individual interviews so students could reflect at length about what they had learned from their participation. Qualitative methodology was utilized to capture the full range of outcomes and all the complexity of service-learning, thereby addressing the criticisms of earlier research in the field.

Sample

All interview subjects had participated in the program for at least one of the five previous semesters. To determine the widest range of outcomes from program participation, staff identified key informants among the students who could provide very diverse perspectives about the program. These purposeful selection criteria included different sites, majors, years in college, race, age, gender, program dropouts, participation as a volunteer, for credit, and work-study, and for one and/or multiple semesters. Students who had enrolled for credit, the service-learning students, were oversampled in
order to test the question of whether service-learning has a greater impact than community service alone.

Once the members of the sample were identified, they were contacted via e-mail and offered $10 as compensation for an interview estimated to take one hour. When students responded, interviews were scheduled at their convenience in central locations on campus. A total of 27 potential subjects were directly contacted, of whom 19 elected to be interviewed. Of the remaining eight, six of them did not respond to any messages and two were unable to participate due to schedule conflicts. All eight had similar demographic profiles to the subjects interviewed. All categories of interest were recruited except for one; no subjects who dropped out of the program responded to any of the e-mail messages. The sample grew when subjects identified three fellow students who held unusual opinions about the program, and in two cases where students who heard about the interview from friends contacted program staff to offer themselves as subjects. Twenty-four students were ultimately interviewed.

Data Collection

Interviews were conducted in private and the discussion was confidential. According to the guidelines of the institution’s human subjects review board, written informed consent was obtained before each interview began. Ten open-ended questions were then asked about student motivation, about program characteristics that enhanced or hindered the experience, and to elicit understanding about program impact. The questions were pilot tested on two prior participants who were not part of the final sample; testing resulted in some clarifications to the interview guide. The interviews
were semi-structured in that each subject was asked all ten questions for consistency, but subjects were allowed to digress into relevant topics. Probes were used if students did not address specific issues, or when they raised other interesting topics. Demographic information about subjects was collected at the end. Interviews lasted an average of 65 minutes, with a range from 40 to 110 minutes. All interviews were audiotaped and later fully transcribed verbatim by a third party. Transcriptions were reviewed for accuracy by the interviewer.

**Data Analysis**

Interview transcripts were coded thematically by the first author (MP) using computer software (Ethnograph version 5.0, Qualis Research Associates, Salt Lake City, UT). Coding was done by sentences or paragraphs representing the subjects’ thoughts about a single topic. Data analysis consisted of systematic review of the interview transcripts employing content analysis techniques and was conducted in stages. Transcripts were read and examined at least five times; codes were refined and recategorized during each reading. Some initial themes were anticipated from the literature but unpredicted themes emerged as well. For each of the five major themes ("spheres") that emerged, additional closely related subthemes ("domains") were also identified; these were less universal, but still occurred frequently. The final stage of analysis consisted of verification of themes and/or theories. New interviews were conducted until no major new themes emerged and redundancy was achieved.

To increase the credibility of the data and discern relationships between subjects’ characteristics and the themes that evolved, a second method of data analysis derived
from the work of Miles and Huberman (19) was also utilized. A grid was constructed to allow for visual comparisons between different students representing different selection criteria, which aided in the search for patterns in the data.

RESULTS

Subject Characteristics

For a summary table of student characteristics, refer to Table 1. A diverse sample of informants representing students who typically participate in the program was recruited for the study. An exception was that as expected, fully fifty percent of the sample participated for credit, i.e., were service-learning students.

Key Themes from Subject Narratives

Analysis of the interview transcripts revealed content related to program evaluation in many areas, including student outcomes, student motivations, program qualities, and impact on the target audience. However, due to space limitations, this paper discusses only the first area. Five major themes, or spheres, related to student outcomes emerged from the data analysis. These spheres were in diversity, personal development, knowledge application, career and the future, and institutional relationship. Note that these themes are all interrelated and connected (Figure 1). In addition to the five major themes, less uniform themes that cluster under the subject heading for each sphere, called domains, also arose from the analysis. Quotes from students will be used to illustrate the spheres and domains in the discussion below to allow readers to “hear”
students speaking in their own voices, one of the goals of qualitative research. Many students expressed the same ideas; space limitations prevent the use of additional quotes.

• **Theme: “A Whole New World”, the Diversity Sphere**

One of the most pervasive impacts of this program on the students was its effect on their perceptions of the target audience. In many cases this change was expressed by their sudden awareness “of a whole new world” that did not wholly consist of economically privileged white people: “…it was a world that I was unfamiliar with and by going in there and doing the program I felt that I had gained some worldly knowledge about other cultures and ways of living.” They also learned the value of experiencing diversity rather than reading about it in a book: “I think it [the diversity] is something that I probably read about or was aware of, but it’s not like real until you are there…”

➤ **Domain: Their territory**

For many students this is their first experience being someone of a different race, culture or class than the majority of people around them. Here’s how that was described by one student: “…the first time you’re there it’s like going to a middle school dance where you walk into the room and the girls are on one side and the guys are on the other side… It was Hartford and it was a lot of like minority people and well …so um, you’re afraid.” Most students reported changes in these feelings as the semester progressed: “It [participation in the program] overcomes the uncomfortable feelings about being like this white girl coming into a primarily black and Spanish setting, so I think I learned how to be comfortable with myself—in that situation.”
Domain: Reversing of stereotypes

When students were asked to describe the changes in themselves over the semester, one of the most consistent responses was that they had changed their opinions about the families. Students acknowledged holding stereotypes based on beliefs about race and also socioeconomic status. Here is a relevant comment: “…at first I was feeling like, ‘oh, these poor kids,’ they come from a bad background and their education must be kind of bad. But then in getting to know the kids I think one of the main things that surprised me…um…the kids were so intelligent, so smart…” Here’s how this same student described her own change over the semester: “I remember sitting in some of the meetings and how some of the students just stereotyped the kids…which I did earlier on too, but then going through this program it kind of opened my eyes to it…”

Domain: We’re the same

Students also reported that after their usual initial impression that the families were different from themselves, they learned that in many ways, people are the same: “And it turns out that I had a lot more in common with these people than I originally thought.”

Domain: Own privilege

Many students discovered their own privilege for the first time, and how different life is for many other people: “When you grow up having everything that you need and maybe even everything that you want, it’s hard to really know what that’s like to be sick and not have help.” The experience
also made students value what they had: “I’m seeing a future as in I’m going to have a job, I’m going to have a college degree, I might go to grad school, I’m gonna have my own apartment, stuff like that. So I’m seeing all these things in my future and all she [young mother at site] sees in her future is taking care of her kid and maybe going back to high school. It just blew my mind that that’s all some people have to look forward to.”

- **Theme: Growth and Maturation, the Personal Development Sphere**

Students reported personal growth in many different domains:

- **Domain: Increased confidence**

  Students repeatedly stated that the program had an impact on their level of confidence in many arenas. Here’s a relevant quote: “...I became more confident in doing things I’m not comfortable doing, getting out of my comfort zone and trying something new and interacting with young children, and even interacting with their parents.”

- **Domain: Development of leadership abilities**

  Some students used their increased confidence in new endeavors. “I have other positions in the university now that I didn’t have when I was doing this program. I’m president of the pharmacy class and vice president of the Greek Council, positions that this experience didn’t directly get me into, but then again, it’s things like this that can subconsciously build you up and give you a lot of confidence.” Another student said it in this way: “I got a lot out of it because I realized I wanted to do more and it actually inspired me to apply
for an RA [resident assistant] position with the dorms, which I got...so it really helped me, I guess, in becoming more secure in who I am and more involved.”

- Domain: Development of responsibility

For some students, the experience helped teach them about the importance of being responsible. For one student who acted as the coordinator at her site: “I was the one in contact with the site, so I learned like um...like I have to make those phone calls [to make arrangements] and be responsible. I learned it was important to do.” Another student became more financially responsible: “The fact that my parents see that I’ve had this experience and now I’m trying to apply it to my own life, they’re gaining more respect for me too. The whole thing was, I started paying my cell phone bill, and they were like, ‘What’s going on, are you okay?’ but just from doing that my parents have more respect for me now.”

- Theme: Using Classroom-based Learning, the Knowledge Application Sphere

- Domain: In nutrition

Students in nutrition classes typically found many applications of their nutrition knowledge. Here is a relevant example: “I learned so much by being able to attend Nusc 165 and learn the aspects of healthy nutrition..., and then by going to the clinic and playing with the food pyramid with the kids and saying, ‘You don’t need very much candy and sweet stuff but you need a lot of cereal and bread and milk.’” For another student, it made her
brush up on nutrition: “So I think it was good for the kids and us, both, because it gave them information and it kept us needing to know what we were talking about. We couldn’t just go in there and make something up.”

➢ **Domain: The reality of nutrition education**

The challenges of communicating with a diverse audience became real to another student: “When you’re learning how to analyze a diet for research in Nusc 200, at the clinic you’re seeing firsthand that there might be difficulties in communication.” From a nutrition perspective, students were sometimes disappointed that they were not able to put all of their nutrition knowledge into practice: “How much nutrition can you teach a two or three year old? You definitely interact with the play foods and explain things, but how much are they going to take in?”

➢ **Domain: In other disciplines**

Almost all participants described how that they were able to apply classroom-based knowledge in a wide variety of disciplines as a result of program participation. For instance, one student learned more about child development: “Just seeing the way kids work, I was like, ‘Oh, I learned about this in class the other day,’ or when the parents were doing certain things, it was like, ‘Oh yeah.’ So I was matching what I was seeing with the theories. It was so cool to see how what I was learning in class was actually real.”

Another student mentioned, “A lot of stuff in my sociology class I try to relate back to Husky Reads because that’s the only opportunity I’ve had with lower income families and in a city. So we talk about stuff like how inner city stores
charge more for groceries and now at least I have some kind of context to go with the class…” Students in family studies were especially tuned into diversity issues: “Remember how we talked in one of our meetings about how some parents don’t read to their kids? From diversity class we learned that you gotta remember that they’re from a different culture and they have different customs.”

- **Theme: Clarifying Future Directions, the Career Sphere**

  Many students utilize this experience as a test for their future—would they like working with children, would they like the clinical setting, which major should they pursue?

  ➢ **Domain: Provide future direction**

    For many students, the experience pointed them in a particular direction: “Since Husky Reads I’m becoming more focused on the big picture, like how does teenage pregnancy in the inner city make preschoolers at the WIC Clinic pat my tummy and ask me, ‘where’s your baby?’ ” Another student reported that he is taking different classes as a result: “Last semester it made me take a psychology class and then from interacting with a lot of Hispanic kids now I’m taking a Latino Studies class.”

  ➢ **Domain: Reinforce previous plans**

    For some students, the experience strengthened their previous plans: “I think the experience has enhanced my passion to become a pediatrician.” A future dietitian said, “It’s definitely made my choice in nutrition concrete."
Like, this is gonna be my life. I think if I didn't have this experience, I’d be graduating still kinda iffy.”

- **Domain: New career possibilities**

  Finally, for many students, it opened doors to new career options: “I’m getting out of it, would I like to teach? Would I be able to teach? So really a lot about teaching and transferring my nutrition knowledge to a more elementary level.” The site placement of one student provided enlightenment: “Since I was at one of the WIC clinics I was curious, so I’m like, ‘what is WIC? Do I have a job at WIC?’ And so it helped me get connected with WIC and find out what’s involved in it, and who works there. They do hire R.D.s.”

- **Domain: Value of nutrition**

  Some students, especially those in nutrition, learned about the value of their future profession: “…what amazed me the most and what I learned the most was how...nutrition really does play a huge part. And it just makes you feel like important, you know?” Another nutrition major said it this way: “The most important thing I learned is my role. It made me feel comfortable being in nutrition as my major. I feel like I can have an impact…I think that’s the most important thing I learned, that I can make a difference.”

- **Theme: Changed Relationships with the Department and the University, the Institutional Sphere**

  Participation appeared to have an impact on the students’ relationships with the university on several levels.
Domain: The departmental level

The experience brought many students into greater involvement with the department of nutritional sciences: "I definitely wound up getting more involved in the department. I was never really the extracurricular type person. I never took the plunge to actually do anything, so once I did, I'll be honest, it definitely got me more involved in my schoolwork and I'm up around the building a lot more. It kind of gave me a jump start and you know, it’s a lot easier to interact now with other students and staff...” Another student decided to stay in the department: “I feel like that’s the reason I stayed in this program [didactic program in dietetics] rather than transferring [to the coordinated program]... ‘cause I felt so comfortable...”

The experience also inspires some students to subsequently enroll in nutrition classes: “I was interested in taking a nutrition class afterwards 'cause I planned on doing the program more than one semester.” For other students, the experience brings them into the major: “Ever since Husky Reads I’ve thought of majoring in nutrition.”

Domain: The university level

Many students reported that the experience made them identify more strongly with the university. This came from two sources. At sites students serve as university representatives. Here’s a relevant quote: “It helped me connect to UConn more because I felt like I am part of UConn and I’m going out and I’m representing us. I felt good about that when I usually don’t feel connected to UConn so the volunteering really helped me feel connected..."
because this is my school. This is what I’m doing for a few years.” Serving as role models for the children at sites also increased their identification with the university.

Students indicated greater satisfaction with the university following their experience in Husky Reads. This occurred when students felt the experience had benefited them in some way, as reflected by this comment from a student who felt the program had helped her make decisions about future career directions: “…the experience is definitely my best UConn experience...like beyond or surpassing any of my classes...” Another common occurrence was that new relationships with peers developed, which also increased their positive feelings about their university experience: A new transfer student said it in this way: “I was with two other girls and we had the ride back and forth so we had time to talk about classes and I could get a better idea of the campus and what was going on from their experiences here, which made me feel more friendly to UConn.”

**Additional Results**

Outcomes were almost exclusively positive; many students struggled to find something they did not like about the program. The range of outcomes and the magnitude of benefits for what was for the majority of students only a semester-long experience were unexpected. Civic outcomes were the only realm not well represented; although many students planned to participate in community service again in the future, a measure of civic participation, they did not discuss other civic outcomes during the interviews.
Using criteria such as complexity of thought, insightful narratives, and number of key quotes, certain students appeared to benefit more from the program than others. In searching for explanations for this finding, no discernable differences in outcomes were found between students representing different demographic categories, type of participation (credit, volunteer, or work-study), and length of participation. The student’s race did affect diversity outcomes; minority students were not fazed by the racial and cultural diversity at sites. Nutrition majors had the unique opportunity to feel more affiliated with their department; a strong outcome for many. Of special interest is that no differences in outcomes were found between students enrolled for credit (the service-learning students) and other students. Finally, reciprocity, a key component of service-learning, was consistently demonstrated during the interviews by quotes such as this one: “I think they [the kids at sites] probably did more for me [laughing] than I did for them.”

**DISCUSSION**

The findings from this study indicate that program participation produced a wide variety of positive outcomes for students. The students in the sample made strong connections to classroom knowledge and their future careers while growing in other ways, such as in personal development, in their understanding of diversity issues, and in their relationship with the department and institution. Although every outcome discussed above is supported by the literature, very few other evaluations of service-learning have reported such diversity and range of outcomes—quite possibly because closed surveys rather than qualitative methods were used. Also, as was previously discussed, prior studies usually investigated outcomes in only one or two areas (17).
Except for race and major, we found no patterns in the results that were linked to demographic variables. However, outcomes could be related to variables we were unable to assess, such as cognitive development (20,21), personality, and prior experiences.

Students enrolled in the experience for credit did not appear to benefit more than non-credit students, contradicting our initial belief that the program would have greater impact on service-learning students. Our results appear to contradict best practices that suggest that reflection is critical for good outcomes. However, prior research in this area has focused on applications to a particular academic course (22). The students in our study did report applying experiential events to class work, but our program is not directly associated with any one course.

Since outcome spheres are interrelated, impact in one sphere affects other spheres; for instance, growth in departmental and institutional attachment will also impact students’ academic development. Nutrition majors were not only able to apply their nutrition knowledge, but the experience positively influenced their understanding of their future roles and made them more comfortable with staff from the department. These latter two outcomes may also have a strong impact in the academic realm, such as increasing retention rates. The greater identification and satisfaction with the institution at large may decrease the likelihood of dropping out of college and may have other long-term implications. Prior researchers have found that students who participate in service have higher retention rates (23), and are more likely to attend graduate school and donate money to their alma mater (24).

Qualitative methodology was well suited to investigating this study’s broad research question. Much of the past research has relied on large-scale surveys with low
response rates (16,24,25). Interviews consisting of open-ended questions allowed the full range of outcomes from the experience to emerge in the students’ own words and from their own understanding; the outcomes were not predetermined or limited by the researchers’ understanding. The inductive method we employed permitted unexpected themes, such as departmental and school affiliation to emerge.

**Study Strengths and Limitations**

The purposeful sampling method utilized to recruit subjects resulted in a diverse sample of students representing almost all categories of typical participants. The single exception was that no subjects who dropped out of the program mid-semester were successfully recruited; the program’s low dropout rate contributed to this situation, providing only a small pool of potential subjects. However, since participants who were not included in the study may have had different experiences from those interviewed, selection bias may limit the transferability of these findings. Furthermore, as is typical of small sample sizes in qualitative research, the numbers of subjects who represented the various demographic and program categories may have been insufficient to reveal any shared differences in outcomes based on subgroups such as race, gender, or sites. This limitation may explain the lack of differences found in outcomes of the different subgroups in this study.

Interviews offer the usual drawbacks and strengths. They are memory dependent and subjects may choose to report socially acceptable attitudes and practices only. On the other hand, they allow for trust and rapport to develop and are open-ended. Investigator bias is another potential limitation of this study; the first author is the one
permanent staff person associated with the program. To minimize this effect, interviews were private and conducted in locations of the student’s choice and at the student’s convenience. Furthermore, no students were recruited who were program participants during the semester the interviews were conducted in order to prevent anyone from feeling a sense of obligation.

This program cannot be considered a pure service-learning experience since only 20-25% of the students are typically enrolled in the class and hence performing reflection exercises. In addition, even if students are enrolled, this is an elective, stand-alone course; the literature on best practices says that service-learning courses ideally are integrated into the required curriculum in the major (22). However, while Husky Reads does not meet all service-learning criteria, it does utilize the pedagogy and best practices whenever possible. This may be one reason for the magnitude and range of benefits from a program that was of one semester’s duration for the majority of subjects.

**IMPLICATIONS FOR RESEARCH AND PRACTICE**

Based on the results of this study and the evidence in the literature, service-learning experiences strengthen undergraduate education in many arenas, including diversity skills, academic outcomes, personal development, career knowledge, and institutional relationship. Students are able to apply classroom-based knowledge and gain other critical skills while building their resumes for internships, future employment or graduate school.

Service-learning pedagogy has been utilized in many academic disciplines, but not often in nutrition; given the results reported here, educators in the field should begin
to utilize these methods in nutrition classes. Service-learning experiences introduce students at an early stage in their education to the field of community nutrition and may potentially influence them to choose this area for their future career. For the department, the college, and the institution as a whole, this program generates goodwill and fulfills the institution’s mission of service while also attracting new students to nutrition courses and the major. The program described in this paper is one that could be readily replicated in other institutions, especially those with FSNE funding and/or land grant and other universities whose mission includes service. For Connecticut FSNE, this program enables us to deliver nutrition education economically to 3,000 individuals in our target audience on an annual basis.

Additional research is still required to determine whether the reported effects from service-learning are due to the effects of participation in community service alone or are due to all the other program components contributed by service-learning. The positive impact of service-learning on students’ relationships with the academic department and institution has not been widely reported in the literature in the past. Since these outcomes will aid in efforts to institutionalize service-learning, they also should also be further investigated.

To summarize, one final quote illustrates the benefit, especially in the academic realm, of developing a service-learning program:

“I was able to put everything I’ve been learning the past few years to use. Just sitting in the classroom, you learn about it, you take notes, you take the test, and you put it in the back of your mind, ’cause you need it for another class, but you don’t really think about it. Actually being able to see it really reinforces it.”
Acknowledgements

We would like to thank all the student volunteers, the families of Hartford, Connecticut, and our sites (Connecticut Children’s Medical Center, Burgdorf Clinic, St. Francis Hospital, and the City of Hartford WIC Program) for their participation in Husky Reads during the past four years. U.S.D.A. Food Stamp Nutrition Education and the University of Connecticut provided funding for the nutrition education components of the program but not this evaluation. Graduate student coordinators Valery Phillips and Rachel Glennon and undergraduate coordinators Beth Gluck, Kate Moran and Bethany Graham have made invaluable contributions to the program.

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Exploring Student Outcomes
From a Service-learning Experience in Community Nutrition Using Qualitative Research Techniques

Table 1: Characteristics of Student Subjects

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Semester Standing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>19.2</td>
</tr>
<tr>
<td>Range</td>
<td>17-21</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>20</td>
</tr>
<tr>
<td>Male</td>
<td>4</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
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</tr>
<tr>
<td>Caucasian</td>
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</tr>
<tr>
<td>Asian</td>
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</tr>
<tr>
<td>Latino</td>
<td>1</td>
</tr>
<tr>
<td>African-American</td>
<td>1</td>
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<table>
<thead>
<tr>
<th>Major</th>
<th>Semesters in Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition/dietetics</td>
<td>One 17</td>
</tr>
<tr>
<td>Other Health Professions</td>
<td>Two 5</td>
</tr>
<tr>
<td>Family Studies/Education/Psychology</td>
<td>Four to Six 2</td>
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</table>
Exploring Student Outcomes

From a Service-learning Experience in Community Nutrition Using Qualitative Research Techniques

Figure 1: Five Spheres (Themes) of Student Outcomes from Participation
Chapter 4

Study Implications and Next Steps for Husky Reads

by

Meredith Poehlitz, R.D.
University of Connecticut
Department of Nutritional Sciences
STUDY IMPLICATIONS AND NEXT STEPS FOR HUSKY READS

The investigation of student outcomes from Husky Reads and the review of literature in the field have both internal and external implications. On the program level, it is evident that the experience of Husky Reads has a wide-ranging impact on the participating students, especially in the cognitive, personal development, diversity, career and future, and institutional relationship spheres of their lives. The impacts on the other stakeholders, the service recipients, the sites, and the institution, have yet to be established. The external implications, for the education of future nutrition practitioners, are that service-learning is an effective practice for providing the experience with diversity that professional organizations such as the American Dietetic Association are currently mandating.

Program Implications

Future program objectives should focus on ways to optimize the program for students, so that the maximum numbers of them receive the maximum benefits from participation. The wide range of outcomes for students in many spheres raises the question of whether a program focus on a specific sphere might create greater impact. Potentially, program focus on a particular arena might produce greater and longer lasting effects than those created currently, which are dispersed in so many spheres. In order to target a specific sphere, such as diversity, recruitment and descriptive materials would need to be rewritten with this objective in mind. Guest speakers with expertise in diversity could also be found for program meetings. Reflection exercises could focus on
diversity issues, providing thought-provoking questions about the many ways food and culture interact. Since this institution, like many other institutions of higher education, is also focusing on diversity, it might be feasible to develop programs with other interested parties within the university. Potentially this change could also diversify the program’s funding if it is compatible with other institutional efforts. Ultimately, this kind of program objective could also impact recruitment efforts, since it might make sense to recruit specific majors, or students at a specific point in their college careers for maximal impact.

**Differential Impact of Service-Learning**

For the purposes of program planning, this study did not conclusively answer the question of whether students enrolled for credit, our service-learning students, benefit more than other students. It is a familiar question in the service-learning literature: is the impact due to students’ participation in community service or due to the service-learning program components? Upon further consideration the outcome obtained here is not so surprising; previous studies have found that the extra impact of service-learning usually has the greatest effect on academic outcomes and here students were not applying this experience to a specific course. According to the best practices literature, Husky Reads should be integrated into a nutrition course within the standard curriculum in order to expose more students to these experiences. This process would address the issue of self-selection within service-learning courses: that the students who could potentially benefit most from the practice are not currently exposed to it. For example, students could be randomly assigned to one of two sections of Nusc 165 to control for self-selection bias.
One section could be a service-learning section, the other would be taught in a traditional manner. Students would be prevented from switching between sections. The outcomes from an experimental study of this type would more accurately reflect the impact of service-learning.

**Program Evaluation**

The next steps for the student component of the Husky Reads student evaluation are to design a pre and post survey for students to complete every semester. Such a tool would allow for quantification of program benefits over time and would be a way to monitor the program. Ideally, the survey would collect demographic information and contain items to assess satisfaction, attitudinal changes, skills and abilities, and, for comprehensive program evaluation, the perspectives of the other stakeholders in Husky Reads, the service recipients, the sites, the department and the institution, FSNE, must also be taken into account and investigated further. While it is clear from this study that Husky Reads benefits its student participants, benefits to other stakeholders, especially to the service recipients at sites, must also be established.

**Institutional Benefits**

The departmental and institutional benefits found in this study have not been extensively reported in the literature and merit further investigation from other researchers since these outcomes could have a major impact on the institutionalization of service-learning. A few exploratory studies in this area have shown that college students who perform community service have higher retention rates (Shumer 1994), higher rates
of graduate school attendance, and greater likelihood of donating money to their alma mater (Astin et al. 1999). In this specific study, at the institutional level many students from a variety of majors reported greater identification and satisfaction with UConn as a result of their experiences in Husky Reads. Ultimately, one would expect that these outcomes would have similar effects to those that the exploratory studies have found.

From a departmental perspective, the benefits to nutrition majors from Husky Reads were especially pronounced. Uniformly these students were brought into greater contact with the department, which all subjects reported was beneficial. The impact was even more substantial for some nutrition majors, who reported that their participation in Husky Reads affected their schoolwork and leadership abilities as well. The benefits of participation for other majors, while different from those of the nutrition majors, were still consistently positive, another institutional impact. All of these outcomes in the institutional relationship sphere will hopefully assist in obtaining additional support for the program beyond FSNE, currently the major funding source.

**Program Replication**

Husky Reads is replicable and transportable to other locations and sites, an implication for other land-grant institutions of higher education and/or FSNE programs. It would allow institutions to meet their missions of service while concurrently addressing needs in general undergraduate education for diversity education and active learning experiences. In the education of nutrition practitioners, this study demonstrates the benefits of service-learning experiences, pedagogy currently underutilized in the nutrition field. The current diversity initiatives from the American Dietetic Association
suggest that future dietitians need more exposure during training to diversity and that educators of practitioners should market the profession to potential students (ADA 2003, 2004; Fitz). Participation in service-learning programs such as Husky Reads would accomplish both objectives. Furthermore, since dietetics is a profession that values experiential education---for evidence, consider the dietetic internship---service-learning is philosophically consistent, and would provide students with similarly valuable experiences at an earlier stage of their education.

From a research perspective, the literature review and the process of conducting this particular study have demonstrated the importance of determining whether community service alone, rather than service-learning, is capable of producing similar outcomes. As mentioned above, the impact of service-learning experiences on the institutional relationship has not been widely examined in the past, and also deserves further study since the implications of this outcome for the future of service-learning in higher education are vast. Another potential area of investigation is the longitudinal effect of service-learning participation. While one would expect experiences like Husky Reads to have long-term consequences, very few researchers have previously studied the question, particularly as it relates to specific program outcomes. Finally, more observational studies are needed to determine what students actually do at sites, and whether their actions are consistent with their reports. Observational data would provide some triangulation for the self-report data collected from this study, and is probably one of the only practical methods to corroborate the self-reports utilized here.
## APPENDIX A  
*Table 1: Summary of Large Survey Studies in Service-Learning*

<table>
<thead>
<tr>
<th>AuthorS</th>
<th>year</th>
<th>Students</th>
<th>Colleges*</th>
<th>Design</th>
<th>Data Sources</th>
<th>objectives</th>
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<tbody>
<tr>
<td>Astin &amp; Sax Sax &amp; Astin</td>
<td>1998</td>
<td>3,450</td>
<td>42</td>
<td>quasi-exp, pre/post</td>
<td>self-report surveys; institutional records</td>
<td>Impact of community service on 35 student outcomes for LSAHE first year evaluation</td>
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<tr>
<td></td>
<td>1997</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Astin et al.</td>
<td>1999</td>
<td>12,376</td>
<td>209</td>
<td>quasi-exp, pre/post</td>
<td>self-report surveys</td>
<td>Impact of volunteerism on 18 long-term developmental &amp; cognitive outcomes</td>
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<td>Astin et al.</td>
<td>2000</td>
<td>22,236</td>
<td>not given</td>
<td>quasi-exp, pre/post</td>
<td>self-report surveys; test scores; case studies; interviews</td>
<td>Compared effects of community service and service-learning using 11 outcomes</td>
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<tr>
<td>Conrad &amp; Hedin</td>
<td>1982</td>
<td>4,000</td>
<td>27</td>
<td>quasi-exp, pre/post</td>
<td>self-report surveys; attitude scales; observation</td>
<td>Impact of experiential education programs on students’ social, psychological &amp; intellectual development</td>
</tr>
<tr>
<td>Eyler et al.</td>
<td>1997</td>
<td>1,535</td>
<td>20</td>
<td>quasi-exp, pre/post</td>
<td>self-report surveys</td>
<td>Compared service-learning &amp; non-service-learning students on attitudes, skills, values</td>
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<tr>
<td>Eyler &amp; Giles</td>
<td>1999</td>
<td>1,100</td>
<td>20</td>
<td>quasi-exp</td>
<td>attitude scales</td>
<td>Impact of service-learning program quality on student outcomes</td>
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<tr>
<td>Gray et al.</td>
<td>1999</td>
<td>1,322</td>
<td>28</td>
<td>one shot</td>
<td>self-report surveys</td>
<td>LSAHE final evaluation---Impact of service-learning on students, service recipients, &amp; institutions</td>
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<tr>
<td>Serow &amp; Dreyden</td>
<td>1990</td>
<td>1,960</td>
<td>11</td>
<td>one shot</td>
<td>self-report surveys</td>
<td>Relationship between personal &amp; institutional factors and participation in community service</td>
</tr>
</tbody>
</table>

* Colleges typically refer to institutions of higher education, but in Conrad & Hedin they refer to the number of program sites.
## APPENDIX B  
Table 2: Summary of Studies in Service-Learning (excluding large scale surveys)

<table>
<thead>
<tr>
<th>Authors</th>
<th>Date</th>
<th>N</th>
<th>Colleges</th>
<th>Design</th>
<th>Data Sources</th>
<th>Objective(s)</th>
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<tr>
<td>Batchelder &amp; Root</td>
<td>1994</td>
<td>96</td>
<td>1</td>
<td>Quasi-exp. Pre/post</td>
<td>Self-report surveys; Attitude scales</td>
<td>Effects of s-l &amp; non-s-l courses on cognitive development, program quality</td>
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<tr>
<td>Eyler et al.</td>
<td>1998</td>
<td>24</td>
<td>4</td>
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<td>Problem-solving interviews</td>
<td>Differences between novice &amp; expert s-l students on problem-solving</td>
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<td>6</td>
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<td>Interviews</td>
<td>Impact of service-learning on critical thinking and issue understanding</td>
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<td>Grades</td>
<td>Compared self-selected service-learning and non-s-l students on academics</td>
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<td>1</td>
<td>Pre/post</td>
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<td>Impact of community service on social, personal, and cognitive outcomes</td>
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<td>Self-report surveys</td>
<td>Impact of required vs. optional service on civic attitudes, values, skills</td>
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<td>123</td>
<td>1</td>
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<td>Self-report surveys; Attitude scales; Grades</td>
<td>Compared s-l &amp; non-s-l sections on learning outcomes, development, values</td>
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<td>1998</td>
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<td>23</td>
<td>Quasi-exp Pre/post</td>
<td>Self-report surveys</td>
<td>Impact of contact with recipients &amp; reflection on student attitudes &amp; values</td>
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<td>1993</td>
<td>89</td>
<td>1</td>
<td>Experimental</td>
<td>Grades</td>
<td>Impact of service-learning vs. non-s-l on academic outcomes</td>
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<td>Moore</td>
<td>1999</td>
<td>25</td>
<td>25</td>
<td>Qualitative</td>
<td>Observations; Interviews</td>
<td>Impact of experiential education on h.s. students’ development &amp; learning</td>
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<td>95</td>
<td>1</td>
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<td>Self-report surveys; Writing samples</td>
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<td>1</td>
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<td>Self-report surveys; Open-ended responses</td>
<td>Impact of stand-alone s-l program on student development &amp; application</td>
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<td>Reeb et al.</td>
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<td>125</td>
<td>1</td>
<td>Quasi-exp. Pre/post</td>
<td>Self-report surveys; Grades; Course evals.</td>
<td>Compared academic outcomes &amp; social responsibility of s-l &amp; non-s-l students</td>
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<td>Steinke et al.</td>
<td>2002</td>
<td>110</td>
<td>12</td>
<td>Quasi-exp. Pre/post</td>
<td>Self-report surveys; Open-ended responses</td>
<td>Examined relationship between student outcomes &amp; program quality</td>
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</table>
HUSKY READS Student Responsibilities—Spring 2004

- Keep your time commitment throughout the semester. We expect the same kind of commitment you would make to a job or to a test scheduled in one of your classes. The clinics count on you!

- **Actively** participate by initiating conversations with children and their parents. (You’ll have more fun and get more out of the experience too!)

- If you have to miss a day due to illness or transportation problems, it is your responsibility to 1) call your driver or passengers, 2) your site, and 3) our office.

- Wear the *Husky Reads* t-shirt and ID each time you visit your clinic and follow the dress code for your specific site. Generally this means to avoid short skirts, low-cut shirts or pants, shorts, and at CCMC, no blue jeans. Studs or rings in a piercing at any visible site (other than your ears) should be removed before you visit the site, and clothing should cover tattoos.

- Hospital sites (not WIC) require proof of a current TB test (within one year before you can begin to work in the clinics. Free TB skin tests are provided at the hospital orientations. If you cannot come to one of them, you must pay $15.00 for test done at the Student Health Center.

- Sites also require proof of current immunizations for measles, MMR, and rubella. The Medical Records Dept. at the Student Health Center can give you a copy of your immunization record. You must provide documentation of immunization status before you begin working in the clinic. If you need any of these immunizations, you must assume the cost charged to you by the Student Health Services.

- Fill out a Husky Reads contact form each time you visit the clinic.

- The Literacy Training and Program Orientation on Wed, 2/11 in Room 380 of the Student Union is required for everyone unless you have a class conflict or have attended it previous semesters.

- Everyone is strongly encouraged to attend discussion group meetings. For Spring 2004, these meetings are Wednesday afternoons from 4:00-5:30 PM on 3/3, 3/31, and 4/28 in Room 162.

- You are responsible for any parking or traffic violations incurred in transit or at the clinics.

- If you drive a Community Outreach vehicle, you also must meet the following requirements: 18 years or older; driving for 2 or more years; and within the last 18 months must not have more than two at fault accident/violations or have any violation for drunk driving, driving under the influence of drugs, or reckless driving; or have a reinstated license in effect less than one year after revocation.
Your name (please PRINT everything):

E-mail address:

Telephone:              Cell phone:

Current mailing address:

Permanent address and e-mail (if different):

Major:                  Student number:

Semester of Study:

Please check the relevant box below:

☐ ☐ ☐

Former volunteer    Attended previous Info. Mtg.  First Info Mtg.

Priorities for participation
For Spring 2004, we must limit our participants to approximately 30 new students total. Our priorities will be students enrolled for credit in Nusc 281, nutrition and dietetics majors, students who are able to drive other students in UConn or their own vehicles, and upperclassmen.

Your availability:
Please write below when you have 4-hour time blocks weekdays during the daytime available to work in the clinics. Please list the time you can leave Storrs and the time you must be back in Storrs. (The more flexibility in your schedule, the more likely it is that we will find a slot for you.)

<table>
<thead>
<tr>
<th>Monday</th>
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Which of the following opportunities interest you? Please check as many as apply:

_______ Semester-long volunteer opportunities in Hartford pediatric clinics

_______ Practicum experience for credit in Nutr. Sciences 281, Experience in Community Nutrition. (Must have concurrent enrollment or prerequisite of Nusc 165 or 166.)

_______ Work-study positions in Husky Reads. (Must already have work-study funding.) Please indicate number of hours you would like to work per week. Work time does not include transportation time unless you drive other students to the site.

_______ Occasional volunteer opportunities at events such as health fairs or for community service projects.

_______ I won’t be able to join Husky Reads this semester, but would like to be on the mailing list for other semesters.

Which hospital volunteer orientation can you attend? Check one or both. *(Availability for both increases your chances of being placed.)*

________ CCMC on Wed., 2/4, 3:00-8:00 PM  _________St. Francis on Thurs, 2/5, 3:00-8:00 PM

*If you are not able to attend either orientation, you will be placed at a WIC clinic.

Do you need transportation to Hartford? Circle Yes or No

Are you willing to drive other students in a UConn vehicle to your site? Circle Yes or No *(Note requirements for UConn drivers on Student Responsibilities handout.)*

If you have your own car, are you willing to drive other students? Circle Yes or No *(Note requirements for insurance on Student Responsibilities handout.)*
Do you speak any languages other than English? Which ones?

Please tell us why you are interested in participating in Husky Reads and what you hope to gain from it:

Briefly describe any prior experiences you have had with children (siblings, babysitting, volunteer experiences, camp counseling, etc.):

Briefly describe any prior experience you have had working, traveling, or volunteering with cultures other than your own:

THANKS FOR YOUR INTEREST!
Student Expectations for Nutritional Sciences 281
“Experience in Community Nutrition”

- Prerequisite courses are Nutritional Sciences 165 or 166. If you are concurrently enrolled in Nusc 165 or 166, you may enroll for one credit only in 281.

- Credit earned depends on amount of time in setting: 2 contact hours at the site per week counts for one credit. Transportation time does not count toward credit.

- This is an experiential program so your attendance is crucial! Students in Nusc 281 are allowed to miss 1 clinic session only each semester. All other missed sessions in the clinic must be made up. If you do not have your own transportation to the sites and your schedule does not allow you to join other groups, make-up might not be possible this semester. That would mean that you would have to take an incomplete for the semester and make up the missed sessions Fall Semester 2004.

- Class meetings are required and mandatory. They will be excused with a doctor’s note only. (Exception: If you have already attended literacy training a previous semester, you may skip that training/meeting.) Without a doctor’s note, missed meetings will affect your grade for the semester. For Spring 2004, mandatory meetings are on the following Wednesdays: 2/11 (Literacy), 3/3, 3/31, and 4/28 from 4:00-5:30. All meetings except the one on 2/11 will be in Room 162 of the Dodd Center (meeting on 2/11 is in Room 380 of the Student Union).

- Keep a journal of the time you spend at the clinic, activities you do, and impressions you form each time you visit the clinic, attend a discussion group meeting or training session, and participate in the community project. We expect only a paragraph or two for each journal entry, but it must include reflection about how the experience is impacting your thoughts and life, not just a list of things you did. Journals will be turned in at mid-term (due Monday, 3/05/04) and at the end of the semester (due Monday, 5/03/04).

- Complete a Hartford-based community project as part of the experience on a Saturday in March or April. This will require approximately 8 hours of time during the semester and potentially more depending on the number of credits you wish to take.

- Your grade in the class will be determined by your attendance, journal entries, and active participation in class discussions, clinic time, and the community project.

- Sign the Husky Nutrition Program contract indicating that you have read these expectations and agree to meet them.
1. I agree to fulfill my commitment of hours at my site, two hours per week for one credit, for the whole semester. I understand that only one missed clinic session will be allowed per semester. All other missed sessions in the clinic will be made up and I will need to arrange my own transportation to the missed sessions. If all missed sessions cannot be made up before the end of the semester, I will take an incomplete and complete the work the following semester.

2. I agree to attend a volunteer orientation in Hartford for my designated clinic site.

3. I agree to attend four mandatory training and discussion group meetings during the semester. Missed meetings will affect my grade and will be excused only with a doctor's note. Discussion group meetings for Spring Semester 2004 are Wednesdays from 4:00-5:30 PM on 2/11, 3/3, 3/31 and 4/28. (All meetings are in Room 162 of the Dodd Center except for 2/11, which is in Room 380 of the Student Union.)

4. I agree to participate in a Hartford-based community project that will take approximately 6 hours on a Saturday in March or April.

5. I agree to keep a journal of the time spent at the clinic, including activities I do and impressions that I form. Journal entries will also be made for training and discussion group meetings and for the community service project. Journals will be turned in at mid-term (by 3/22/04) and at the end of the semester (by 5/3/04).

6. I understand that the grade for Nusc 281 is based on my attendance and active participation in discussions, active participation and completion of all clinic shifts, participation in the community service project, and completion of thoughtful journal entries.

7. I agree to provide proof of a current TB skin test and documentation of immunization status prior to my first day at the clinic site.

8. I agree to respect and keep the confidentiality of the clinic patients.

______________________________    ________________________    __________
Signature                                      Printed Name                                      Date
How to write "Reflection" Journals for Nusc 281

Reflection is how the “learning” part of service-learning happens. Each time you visit the clinic or attend a program meeting or training, make a journal entry. It should be one to two paragraphs long and completed soon after the experience you are writing about (or you will forget the details of the experience and your feelings about it). Make the journal entry in a Word computer file and add to it each week. Back up the file on a disc! Then when you need to turn it in, send it as your Word file in an e-mail attachment to Meredith: mpoehlit@canr.uconn.edu. Due dates for Spring 2004 are 3/05/04 and for the first installment and 5/3/04 for the second installment.

Journal writing can feel risky and/or revealing. Your journal entries are confidential and will not be shared with the rest of the class without your permission. For ideas on topics to write about, look at the list below:

♦ Write down your thoughts and feelings about the experience (not a list of things that you did).

♦ Consider how the experience is different than what you expected and write about that.

♦ Observe the environment at the clinic and write about your observations. Who uses the clinic? Why? What kind of experience do you think they are having?

♦ What are you taking away from the experience? Write about the good and bad.

♦ Consider how the experience helps you apply your classroom-based learning. What are you learning about nutrition education, psychology, education, etc. in the “real world”?

♦ How will you use this experience in the future? Think about your goals, and how the experience is (or is not) helping you reach them.

♦ Are you having fun? Or, was something you experienced especially moving or disturbing? Write about that.

♦ Were you able to incorporate nutrition education into the literacy activities, or literacy activities into the nutrition education activities? Why or why not?

♦ Write some suggestions about how we can improve the program for the families you work with, or for other student volunteers.

♦ As the semester progresses, describe how your thoughts and feelings have changed since your first few visits.
Husky Nutrition Program – Spring 2004
Program Evaluation

Your responses to the following questions are important in our evaluation of the program. Please elaborate on each question and use specific examples as appropriate.

1) Think back to your expectations about what the Husky Reads experience would give you. What were the expectations? Did the program meet them?

2) Would you recommend this experience to others? Why or why not?

3) What did the families and children you interacted with gain from their experience with Husky Reads?

4) How can we help you to learn more from this experience in the future? Please include specific speaker and topic feedback and recommendations for trainings and discussions, as well as your suggestions for improving the management of the program.

5) How could we change the program to make a greater impact on families regarding health and nutrition? Any suggestions are welcome.

6) Please tell us anything else you think we need to know to improve the program.
APPENDIX D: SERVICE-LEARNING BIBLIOGRAPHY


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