Associations of Civic Attitudes in Service Learning

Christina M. Roemer

Virginia Polytechnic Institute and State University

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Associations of Civic Attitudes in Service Learning

by

Christina M. Roemer

Thesis submitted to the faculty of

Virginia Polytechnic Institute and State University

in partial fulfillment of the requirements for the degree of

MASTER OF ARTS IN EDUCATION

DEPARTMENT OF EDUCATIONAL LEADERSHIP AND POLICY STUDIES

APPROVED:

____________________________________

Don G. Creamer, Chairperson

____________________________________  _____________________________

John Muffo  Michele James-Deramo

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Associations of Civic Attitudes in Service Learning

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Christina M. Roemer
Don G. Creamer, Chairperson
Educational Leadership and Policy Studies

ABSTRACT

Civic responsibility is comprised of actions and attitudes associated with democratic governance and social participation. Students enrolled at institutions of higher education have the opportunity to transform their social interests into advocacy through personal connections with the community. Service learning is an effective method of increasing citizenship participation and civic responsibility by incorporating community service activities with academic coursework.

This study used survey research to examine the civic attitude scores of service learning students at a large, public, mid-Atlantic state university. The research questions attained information on the associations among students who perform written and discussion reflection activities (outside of class and in-class) regarding civic attitude by gender, class year, and grade point average. The associations between interest in future service participation and civic attitude were also examined.

The data were collected with the Service-Learning Participant Profile (pre-test) and the Service-Learning Evaluation (post-test). Crosstabulation procedures and chi-square tests were used to analyze the data. It was found that students who performed discussion reflection activities outside of class had higher civic attitude levels and more interest in future service participation.
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CHAPTER ONE

INTRODUCTION

Civic responsibility is comprised of actions and attitudes associated with democratic governance and social participation. Actions of civic responsibility can be displayed in advocacy for various causes. By advocating social issues or environmental concerns, people strengthen their commitment to their community as well as to their own individual citizenship (Weeks, 1998). Some attitudes related to civic responsibility include the intention to serve others, the belief that helping others is one's social responsibility, and the tolerance and appreciation of human differences (Markus, King, & Howard, 1993).

Students enrolled at institutions of higher education have the opportunity to transform their social interests into advocacy through personal connections with the community (Weeks, 1998). Higher education has been commissioned to teach the values of a democratic society. These democratic values honor individual diversity, the common good of the larger community, and the active enterprise of social improvement (American Council on Education, 1949; Wingspread, 1993). A variety of higher education policy statements have been written that discuss civic responsibility and the potential impact of social participation on students.

(Elrich, & Hollander, 1999) are policy statements that reflect the importance of civic responsibility in higher education.

Since World War II, higher education has placed more emphasis on basic freedoms and civic responsibility (American Council on Education, 1989). In 1949, the Student Personnel Point of View called for stronger forms of community involvement. College graduates were expected to be well-informed citizens more involved in their communities and prepared to lead the future of America. Institutions of higher education were given the responsibility to provide experiences that developed a firm sense of democracy in students (American Council on Education, 1989).

Almost 50 years later, a second piece of literature examined civic responsibility in higher education. This statement, An American Imperative: Higher Expectations for Higher Education (Wingspread, 1993), created a set of civic virtues that paralleled the values of the United States Constitution. Institutions of higher education were called to provide students with opportunities to experience society and then reflect on their experiences as an integral part of their education. These social experiences were to be provided through firsthand exposure to the community, politics, or business. Colleges and universities were challenged to graduate civic-minded students with a sensitivity toward the needs of their communities and empowerment to create social change (Wingspread, 1993).

A year later, the Student Learning Imperative (American College Personnel Association, 1996) proclaimed that college-educated people should possess a sense of civic responsibility. Institutions of higher education were challenged to provide both on and off-campus experiences to promote civic activities. Furthermore, this policy statement purported that students learned by
interacting in their environment, therefore, participation in community governance and self-reflection were suggested to increase learning (American College Personnel Association, 1994).

Most recently, the Declaration on the Civic Responsibility of Higher Education (Ehrlich & Hollander, 1999) was drafted. This document promotes the teaching of democratic skills through students participation in roles of active citizenship. It challenged higher education to reinvigorate its civic mission with a recommitment to the ideals of democracy by engaging with the community in activities and teaching (Ehrlich & Hollander, 1999).

Although these policy statements express a desire for higher education to promote civic responsibility, most faculty members are trained in positivist research methods that discourage community participation in defining problems and gathering data (Checkoway, 1996). With faculty emphasis on traditional methods of knowledge acquisition, there is little attention given to developing the personal qualities needed for civic life, effective democratic self-government, and the ability to work collaboratively (Astin, 1998). Instruction is merely viewed as teachers being the providers of knowledge to passive students who are the recipients of that knowledge. These methods of research and instruction do not utilize actual experience for learning (Checkoway, 1996). Furthermore, there is seldom mention of civic responsibility in curriculum reform, and most higher education programs lack requirements that focus on issues of American civic life and democracy (Astin, 1998).

Regardless of what still has not been accomplished, higher education has the obligation to promote civic responsibility in students through curricular and co-curricular experiences (American Council on Education, 1949). One of the most effective methods of increasing citizenship participation and civic responsibility is through community service both inside and outside of the classroom. Community service can potentially provide a motivation for learning
and prepare students for citizenship. Interaction with the community can be used to foster critical thinking and encourage reflection on personal values. Reflection on service experiences can aid in learning how to deal with both cultural and personal differences. When community service is coupled with academic coursework, it can enhance student learning and compensate for deficits in traditional classroom pedagogy (Beckman, 1997).

Institutions of higher education have successfully promoted civic responsibility through co-curricular volunteer service programs and curricular service learning (SL) courses. Unlike SL, students who participate in non-academic volunteer service programs do not receive course credit or typically have a reflection process incorporated into their service experience. Volunteer programs tend to be strictly service oriented. Although there are benefits for the student who is serving and those being served, volunteer programs are not structured towards reciprocity as much as SL courses.

Instead, these programs are usually able to readily respond to student needs and are open to student initiatives. Volunteer programs also have the ability to be more responsive to community needs because they have more flexibility in solving community problems than SL courses. The service projects for SL courses are usually pre-determined at the beginning of a semester and not changed during the course (National Center for Service Learning, 1982).

In both volunteer service and SL, individuals participate in service projects that will benefit their community from which they derive no monetary compensation (Waterman, 1997). However, SL is distinguished from volunteerism by including academic coursework and the components of reflection and reciprocity. Coursework and reflection link the students experiences in relation to greater social and personal issues. Reciprocity of benefit provides a
connection with the students who are serving to the person or group being served (Kendall & Associates, 1990).

The concept of SL has been in existence for many years. In 1969, SL was defined by the Southern Regional Education Board (SREB) as the accomplishment of tasks that meet genuine human needs in combination with conscious educational growth. SL blends two complex concepts: community action and efforts to learn from that action and connect what is learned to existing knowledge (Stanton, Giles, & Cruz, 1999). Kendall (1990), the former executive director of the National Society of Experiential Education (NSEE), notes that a good service learning program helps participants see their [service] questions in the larger context of issues of social justice and social policy - rather than in the context of charity (p.20).

SL is a form of experiential education that is employed to promote active citizenship through partnerships between communities and universities. Those partnerships create a connection between coursework and real life experiences (Parker-Gwin & Mabry, 1998). Experiential education is a pedagogy that differs from traditional education by rejecting the notion that truth is independent of knowing and argues that application, understanding, and mastery lead to the acquisition of knowledge (Dewey, 1938). Students learn by actively participating in the community instead of learning about social problems strictly in a classroom setting (Bringle & Hatcher, 1996).

Reflection is a key component in experiential education. It is a unifying learning process that replaces the dualistic tendencies of traditional education where the teacher is the authority figure who imparts knowledge to students via didactic methods (Kendall, 1990). Reflection is a process of mentally looking back on an experience and making meaning of the events in an individual's perception of his or her world. The process of reflection unites individuals with their
communities (Freire, 1970). The cycle of experience and reflection grounds all forms of experiential education and is a key component to educational programs that combine service and learning (Kendall & Associates, 1990).

SL courses differ from traditional education because they include the component of reflection. Reflection integrates what is learned at the SL site with the academic concepts. These reflections are then used as a foundation to understand, interpret, and analyze service experiences. Opportunities for reflection are woven throughout the SL course providing a living text from which student acquire knowledge.

In SL courses, reflection can be performed in a variety of ways. One form of reflection is reading literature and written materials such as case studies, government documents, and professional journals. Reading has the potential to increase the understanding of an issue and provide multiple perspectives (Eyler, Giles, & Schmiede, 1996).

Written exercises are also used as a means of reflection. Journals, reflective essays, portfolios, and grant proposals are a few ways to reflect through writing. Such exercises sharpen writing skills and the process of articulating structured thoughts. A piece of written work also provides a permanent record of the service experience that can be referred back to in the future (Eyler et al., 1996).

Reflection can also be accomplished by doing projects or activities. Self-directed activities such as simulations, role-plays, slide presentations, and program development projects engage multiple skills and are conducive to groups. Doing an activity is sometimes more effective for those that learn by hands-on experiences rather than academic exercises (Eyler et al., 1996).
Oral exercises are yet another way to reflect on an experience. Formal and informal discussions, focus groups, presentations, and cooperative learning provide reflection through speaking. Talking about a service experience allows expression with verbal and non-verbal behavior and practice for oral communication skills (Eyler et al., 1996).

Research shows that reflection provides a way for the service experience to continue even after the individual has left the work site. After performing service work, most people spend a considerable amount of time thinking about, talking about, or relating their service experience to other aspects of their life (Primavera, 1999).

It has also been found that the type of reflection is a predictor of outcomes related to SL. Written reflection is a significant predictor in most outcome measures related to stereotyping, tolerance, personal development, closeness to faculty, problem solving, critical thinking, and perspective transformation. Also, some outcome measures of learning, understanding and application are predicted by written reflection (Giles & Eyler, 1999).

Reflection through discussions is a significant predictor of most outcome measures related to closeness to faculty, learning, understanding and application. Some outcome measures related to the characteristics of personal development, citizenship, problem solving, critical thinking and perspective transformation are also predicted by reflection through discussions. (Eyler & Giles, 1999).

In-class reflection and talking to others about their service experiences can have an impact on students' learning. Students who reflect in-class at least once a week have higher personal social values and perceived academic benefit from the SL than students who only reflect once or twice a month. Of the students who reflect in-class, those that perform on-going
and summative written exercises have positive changes in personal social values and civic attitudes (Mabry, 1998).

Students who reflect outside of class, at least weekly, have significant changes in personal social values. Discussing service experiences with faculty, site supervisors, and peers contributed to significant gains in civic attitudes when compared to students who only discussed their service experience with their peers (Mabry, 1998).

There is a fair number of studies related to service learning and reflection. However, no research was found that examined the pedagogy, frequency, and environment of reflection in relation to civic attitudes by student characteristics and interest in future service.

Purpose of the Study

This study was designed to examine civic attitudes of SL students in relation to demographic variables, frequency of reflection by pedagogy and environment, and the likelihood of future service. The student characteristics used were gender, class standing, and grade point average (GPA). The reflection pedagogy were written activities and discussions, and the reflection environments were in-class and out-of-class. Future service was defined by continued service at SL site and future community service in general. Data were collected by administering the Service-Learning Participant Profile (pre-test) and the Service-Learning Evaluation (post-test) (Virginia Tech Service-Learning Center, 1996) to students enrolled in SL courses during the Spring 1999 semester. Student characteristics were taken from the pre-test. The post-test provided the information regarding the frequency, pedagogy, and environment of reflection. Information related to civic attitudes and interest in future service was also provided by the post-test survey.
For the purposes of this study, the term civic attitudes has an operational definition that consists of a combination of scores. The civic attitude score was created using four post-test items that elicited information regarding the intentions and beliefs related to serving others and the appreciation of human difference. These items were added together and divided by four to create a mean civic attitude score for each respondent.

Composite scores were also created for each type of reflection. The written reflection score combines responses from post-test items that elicit information on whether the participant wrote about service activities by keeping a journal, doing a paper or report, and participating in a listserv or on-line discussion. The discussion score combines responses from post-test items that elicit information on whether the participant discussed service activities with other students, site supervisors, or course instructors. Both the written reflection composite score and the discussion reflection composite score summed the responses of post-test items. This sum was used to tally the number of times each pedagogy type was employed.

Research Questions

There were ten research questions that guided this study.

1. What is the relationship between civic attitude scores and the amount of variety in written reflection pedagogy?
2. For students who perform written reflection, what are the associations between civic attitude scores and gender, class year, and GPA?
3. What is the relationship between civic attitude scores and the amount of variety in discussion reflection pedagogy?
4. For students who perform discussion reflection, what are the associations between civic attitude scores and gender, class year, and GPA?
5. What is the relationship between civic attitude scores and the frequency of performing out-of-class reflection?

6. For students who perform out-of-class reflection, what are the associations between civic attitude scores and gender, class year, and GPA?

7. What is the relationship between civic attitude scores and the frequency of performing in-class reflection?

8. For students who perform in-class reflection, what are the associations between civic attitude scores and gender, class year, and GPA?

9. What is the relationship between continued service at the service learning site and civic attitude scores?

10. What is the relationship between the likelihood of future community service participation and civic attitude scores?

Significance of the Study

The present study had significance for both future practice and future research. In terms of practice, staff at SL centers could find the data collected in this study to be helpful. The findings could provide information about how the frequency and pedagogy of reflection relates to civic attitudes among the students in SL courses. Service-Learning Center staff might use this information to assess the extent to which the role of reflection plays in promoting the development of civic attitudes in the SL courses that they coordinate.

Faculty members considering incorporating a SL component into their coursework design could find the results of the study useful. The research findings could provide information on how reflection relates to civic attitudes in SL students. Faculty could use this information to
assess if SL is promoting civic attitudes in the manner they want it to and how they could incorporate effective reflection activities.

The present study was also significant in terms of suggesting future research. The present study did not measure results by ethnicity. Future scholars may wish to examine the issues of reflection, civic responsibility, and race. Understanding differences in reflection and civic attitudes by ethnicity might illuminate how reflection and civic attitudes in SL interacts with the issue of ethnicity.

This study included participants from one institution located in a rural area. Future studies might examine reflection and civic attitudes among students at schools in different settings (urban or suburban). Such a study might provide insight into the role that location plays in terms of reflection, civic attitudes, and demographic characteristics.

This study was created to only measure students reflective activities and civic attitudes during a one-semester course. A longitudinal study could be designed to measure the levels of civic attitudes during college versus after graduation. Such a study could be used to track the permanence of civic attitudes outside of the college environment and prove whether the learning that takes place in college SL courses has a long-term impact.

Limitations

The present study was not without some limitations. One such limitation was due to the nature of the data. Data in the study were self-reported. Respondents could have been less than candid when completing the pre-test and post-test. If this occurred, the results might have been skewed (Gall, Borg, & Gall, 1996).
Issues of definition limited the study. The post-test used an operational definition of civic attitudes; therefore, there may be other components of civic attitudes that the post-test did not measure. If so, the results of the study may have been influenced.

The study was also limited by the characteristics of the students in the sample. The gender and choice of college major in the sample were not representative of the entire campus population. Therefore, some of the information resulting from this study might not be generalized to the entire study body.

Organization of the Study

This study was organized around five chapters. Chapter One provided a description of civic attitudes, SL, the pedagogy of reflection, and the research questions that guided the study. Chapter Two reviewed the literature relevant to the study. The third chapter describes the methodology employed in the study, including sampling techniques and procedures used to collect and analyze data. The findings of the study are reported in Chapter Four, while the final chapter discusses those findings and implications for future practice and research.
CHAPTER TWO

LITERATURE REVIEW

To gain a greater understanding of civic attitudes among college students and the pedagogy of reflection, it was necessary to examine bodies of literature regarding experiential education, extracurricular volunteer programs, service learning (SL), and reflection. This chapter is organized around six sections. Literature regarding the foundations of experiential education is examined in the first section. Then, the literature comparing experiential education and traditional education is explored in the second section. The third section describes community service opportunities in higher education, student volunteer characteristics, and current developments in SL. Evidence of positive student outcomes related to community service is covered in the fourth section. The fifth section discusses the pedagogy of reflection. Finally, a summary of the literature and contributions to future research are covered in the conclusion.

The Foundations of Experiential Education

Experiential education is an educational pedagogy that was developed over a century ago. Through the decades, concepts of experiential education have been employed in many fields such as cooperative education, internships, outdoor education, organizational training and development, and SL. It is the process individuals go through to test their environment, therefore assuming that knowledge is not fixed but instead a living cycle of attaining truth through experimentation (NSEE Foundations Document Committee, 1997).

Dewey initially captured the essence of experiential education in the early 1900s (Dewey 1925; Dewey, 1938). Dewey’s argument for experiential education was that events are only in existence in an operative way, and the major concern is the meaning of the events. Experiencing things in life is unavoidable; therefore, his question was how to make sense of the experience.
Dewey theorized that experiential education begins with a concrete experience that is then processed through an intentional learning format resulting in useable knowledge (Dewey, 1925).

The interconnection of experience, learning, and development has provided an opportunity for various forms of experiential education to grow. Organizational theorist Lewin believed experience was tied to personal and organizational development in the 1940s. Lewin found such development occurred when individuals or groups set goals, reflected on prior experiences to create a theory, used that theory in their work and then revised their goals and theories based on the outcome of their new experience (Lewin, 1952). Even today, principles of experiential education are used in team building, creative problem solving, and conflict resolution with organizational training and development (NSEE Foundations Document Committee, 1997).

In the 1960s and 1970s, Freire used experiential education as a means to empower oppressed people in Latin America. Freire viewed acts of learning such as reading, writing, and speaking as political movements that could be used for the empowerment of people. He theorized that people are empowered when they realize the world is not a static place and understand it instead as a reality in transformation.

Freire developed the concept of conscientization. Conscientization is the critical awareness of the parts individuals play in the making of their surroundings. This awareness provides them the power to change the conditions they self-define, thus, breaking an authoritarian model for an egalitarian process (Freire, 1970).

During the 1980s and 1990s, Shor, a professor of English at the City of New York Graduate Center and the College of Staten Island, put Freire's concepts to practice in his classroom. Shor shared the power of teaching a college course with his students. The curriculum
was negotiated and the classroom authority was shared. The effort to include the students in the experience of making their own education resulted in outbreaks, power struggles, and student-demands. Through this experimental course structure, Shor derived the more people are allowed to actively participate in their learning the more control they will seek (Shor, 1996).

Human development theorist Kolb took experiential learning one step further. He suggested that learning is the process in which knowledge is created through a transformational cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation (Evans, Forney, & Guido-DiBrito, 1998). Both Freire and Kolb contended that the goal of experiential education was not only to transform experience into knowledge, but also to use this new knowledge for both individual and collective developmental purposes (NSEE Foundations Document Committee, 1997).

Experiential education has also been connected with theories of cognitive and developmental psychology. The works of Gilligan, Piaget, Perry, and Kohlberg are linked by the belief that cognitive and moral development impact how humans make meaning of experiences (NSEE Foundations Document Committee, 1997).

According to Gilligan, intellectual and moral developments represent attempts to create an understanding of experiences and perceptions in everyday life. Piaget's work, from 1952, was rooted in cognitive-structural theories that examine the process of intellectual development with a focus on how people think, reason, and make meaning of their experiences. In 1968, Perry's theory or scheme of Intellectual and Ethical Development used forms of development as structures that shape how people view their experiences. Then, Kohlberg's Theory of Moral Development attempted to define individuals through representations of how they transform their thoughts with regard for what is right or viewed as necessary (Evans et al., 1998).
Experiential Education versus Traditional Education

Dewey criticized traditional education. He described traditional classroom-based education as dualistic methodology created in response to the demands of urban industrial capitalism. He explained that this dualism was based on deductive logic that works from the general to the specific and assumes that the learner is ignorant and the teacher is the wise authority figure. In Dewey's opinion, traditional education was undemocratic and hierarchically structured which, thereby, divorced subjective from objective ways of knowing and separated experience from learning. Dewey's concept of experiential education was intended to be holistic and integrative, based on the process of making meaning out of knowing (Dewey, 1938).

Traditional education is concept-centered and focused on classroom instruction alone. This approach is inadequate for the preparation of well-prepared citizens. Traditional education teaches students how to collect facts but not how to process and critically evaluate information in a real-life setting (Koulish, 1998). This empowers professors and limits students, thereby robbing students of their sense of subjectivity which encourages them to remain silent (Wright, 1989).

SL reinforces the strengths of traditional education while transcending its limits. Experiential education is personal and active because it is a process of learning by doing. In higher education, the classroom becomes an arena for cognitive skill development through the accumulation of information and research methods. Then the learning extends through connections with the community where students build their problem solving abilities, critical thinking skills, leadership roles, and team work ethics (Koulish, 1998).

Service combined with learning adds value to each and transforms both. The students roles are made more complicated when the course is built around service. Their active participation in the real world serves as a mechanism to integrate the learning process with life
experiences (Beckman, 1997). Unlike traditional education where the students are passive receivers of knowledge, SL allows students a hands-on opportunity to participate in problem solving and planning programs (Checkoway, 1996).

Research has shown that students learn by constructing meaning from their experience (Brooks & Brooks, 1993; Prawat, 1992). Traditional education seldom provides direct experience and the subsequent reflection that learning requires. The component of reflection is critical to SL. Conrad and Hedin (1982) found that reflection was the key element that contributed to SL students learning. However, the importance of processing an experience rather than a textbook as the authority is foreign to those who subscribe to traditional education. Instead of only focusing on fact retention, SL projects provide students with the opportunities to develop knowledge, skills, and attitudes that can be applied to real-life situations (Wade, 1995).

Promotion of Civic Attitudes in Student Development

The development of civic attitudes is evident in community service participation. Community service performed at institutions of higher education has manifested itself in campus-based volunteer programs and SL courses. Students today have the opportunity to provide service to the community through participation in extracurricular volunteer service programs or academic courses that incorporate a component of service (Rhoads, 1998). It is also important to understand the typical student volunteer characteristics and why these students choose to serve (Astin & Sax, 1998). Discussion of current developments in professional organizations, legislation, literature, and student programs is also helpful in understanding the community service movement.
Campus-Based Volunteer Programs

Extracurricular volunteer service opportunities have been established at institutions of higher education. These programs can be found at volunteer service offices on many campuses. Usually, these programs are associated with student affairs and tend to put a greater emphasis on solving community needs, which runs the risk of over-emphasizing service and under-estimating learning. Programs linked with student affairs are less stable because they are usually a lower priority within the university's mission and normally linked to only one academic department if credit is offered (National Center for Service Learning, 1982).

Extracurricular volunteer service programs are usually strictly service oriented and not highly concerned with the reciprocity of benefits between the student who is serving and those being served. Instead, these programs tend to be more flexible in responding to student needs and are open to student initiatives. Volunteer service programs also have the ability to be more responsive to community needs and more committed to solving community problems (National Center for Service Learning, 1982). Unlike SL, students who participate in non-academic volunteer programs usually do not receive course credit or have a reflection process incorporated into their service experience (Myers-Lipton, 1998).

Since the early 1990s there has been an increase in the membership of national organizations dedicated to promoting engagement in public and community service (Astin, 1998). Recently, the YMCA of the USA established six Young Adult Civic Connector Centers at institutions of higher education across the country. These centers are part of a national effort to connect 18-29 year olds with community associations, institutions, and local elected officials. The goal of bringing young adults into contact with the community, government, and political life is to increase the level of meaningful involvement. Through outreach activities, training, and
recognition, the YMCA seeks to build a movement of citizens committed to volunteerism and governance as a strategy to strengthen American society on all levels (Leza, 1999).

The Campus Outreach Opportunity League (COOL) and the Campus Compact are two other national organizations that presently model the approach to community service for college students. Although COOL is a grassroots organization and Campus Compact works from the top down, both require carefully defined goals and research procedures to guide college students in the projects they propose and participate in. The organizations frequently offer fellowships or tuition reimbursements for students with outstanding contributions to the community (Astin 1998; Rhoads, 1998).

In the early 1980s, COOL was established to create on-campus activities that promote student-centered volunteerism (Fitch, 1991). The organization is a volunteer clearinghouse that acts as a support network for student-run community service programs. Their mission is to strengthen students capacities for social action in an environment of diversity and to foster a voice in the community that addresses the challenges in society. COOL is directed by recent college graduates, and presently has a network of approximately 600 colleges and universities nationwide (Myers-Lipton, 1998).

Campus Compact was established in 1985 by a group of college presidents that supported the belief that community service is key to holistic student development (Fitch, 1991). The creation of this administrative body was initiated with the goal to combat the growing generation of self-centered, materialistic students by encouraging participation in community service activities. Today, Campus Compact has a membership of over 400 presidents and chancellors from institutions across the country and has dedicated resources to its Integrating Academic Study with Community Service Program (Myers-Lipton, 1998). Their current goal is to increase
the average number of students participating in community service from 10% to 30% by the year 2004 (Ehrlich & Hollander, 1999).

Other service-related agencies interact with college campuses by offering college students volunteer service opportunities in various locations. The Youth Service America (YSA) provides resources to young American to serve locally, nationally, and globally. YSA has created a network of over 200 service organizations with extensive information on research, best practices, resources, and service opportunities available on their web site: www.SERVEnet.org. For example, information on organizations such as Break Away, Up With People, and Do Something are available via links through the SERVEnet page. Users can enter their zip code and immediately be given a list of volunteer opportunities in their area. The database can also match volunteers with service activities based on their ages (Youth Service America, on-line).

Break Away: The Alternative Break Connection is a nonprofit organization. It is a national resource providing information on alternative break programs, services, training, and publications. Break Away also offers alternative spring break programs for teams of college students to engage in experiential learning by taking part in short term community service projects during their break. Students work in conjunction with community agencies and learn about issues such as literacy, poverty, racism, hunger, and homelessness. The objective of the alternative break is to expose students to issues and situations they otherwise would not have had the opportunity to experience firsthand (Break Away, on-line).

Up With People is another organization geared toward giving students an opportunity for exposure to unfamiliar environments. The Worldsmart program is a yearlong experience organized by Up With People that combines international travel with musical performance and
leadership development through community service. Students gain a breadth of knowledge, skills, and wisdom and are transformed into global citizens (Up With People, on-line).

The Do Something organization inspires young people to believe that change is possible. This national organization trains, funds, and mobilizes students to become community leaders. Do Something believes in the spirit of family and friendships, a lifelong passion for learning and education, the importance of health and affordable health care, an economy built on opportunities for employment and housing, and a responsive and accountable government. It offers connections with service opportunities that relate to and uphold its beliefs (Do Something, on-line).

Academic-Based SL Programs

SL courses use experiential education by combining service (the experience) and learning (the academic coursework and reflection). These courses offer academic credit and are linked to universities via academic affairs. To sustain an effective SL program, certain criteria need to be met. The program must engage students in actions for the common good of the community and provide open structures for critical reflection of their service. Clear learning goals, realistic time commitments, and individual responsibilities need to be established from the beginning. Additionally, the appropriate match between student and service site requires special attention. These processes will increase the likelihood of a positive experience for everyone involved (Kendall & Associates, 1990).

The training process is vital to the longevity of a SL program. Initially, the students' skill levels are assessed to avoid redundancy in training. Then training goals, expectations, and learning objectives are set and clearly communicated to the students. Training sessions utilize the proper pedagogy to keep the lessons practical and engaging. At the end of the session, an
evaluation is conducted by soliciting feedback from the participants. Students are not over-trained, because other needed skills or information normally are learned on-site (Kendall & Associates, 1990).

The supervision of students is necessary to provide guidance and support without limiting individual creativity. The quantity of supervision is contingent on what service activities are being conducted and the volunteers' skill levels. Supervision is an on-going process. Initially a supervisor provides students with their job descriptions and performance expectations, and then follows up with feedback in an evaluation of their progress. It is important that supervisors have a good working relationship with clients (people receiving the service) to more accurately gauge the effectiveness of the volunteers who are placed at each site (Kendall & Associates, 1990).

The purposes of SL program evaluation are to continually prove the program's value, monitor administrative efficiency and productivity, and assess the quality of the students and the services provided. Evaluation should be done at the beginning, at the end, and anytime in between during a program cycle. Evaluation must be integrated as a key component of the program in the planning process. Assessment should be done so often that it becomes a natural part of the program itself (Kendall & Associates, 1990).

SL programs are linked to academic affairs; therefore, they tend to have a high level of commitment from the institution due to their association with the institution's academic mission. This encourages involvement by many different academic departments. These programs are usually centralized in a coordinated SL center because they have an academic component. However, SL programs tied to academic affairs run the risk of over-emphasizing learning and under-estimating service. The largest emphasis tends to be on student learning; therefore,
many community agencies and organizations may be exploited in the process of achieving academic goals (National Center for Service Learning, 1982).

In SL programs associated with academic affairs, faculty usually initiates the inclusion of an optional or mandatory SL component into a credit-bearing course (Parker-Gwin & Mabry, 1998; Rhoads, 1998). Faculty who have incorporated SL found that it enhances performance in the traditional measures of learning. It also increases students' interest in the subject and improves problem-solving skills (Bringle & Hatcher, 1996). Students who choose a SL component are involved in a community service project coupled with structured reflective exercises and course-related requirements. Relating their service to the course through reflection provides the potential to broaden their appreciation of their academic discipline and enhance their sense of civic responsibility (Bringle & Hatcher, 1996; Rhoads, 1998).

Volunteer Characteristics

Students who elect to do community service tend to be more inclined than other students to seek out service. Women also have a greater tendency to serve than do men (Astin & Sax, 1998; Chapman & Morley, 1999; Stukas, Switzer, Dew, Goycoolea, & Simmons, 1999). One key factor in service participation is whether students have volunteered during high school. The characteristics of a typical student volunteer include high self-rated leadership ability, involvement in religious activities, and commitment to participation in a community action before attending college (Astin & Sax 1998; Sax & Astin, 1997).

Those who volunteer in college also tend to be less materialistic and less involved in drinking and smoking than non-volunteers (Astin, 1996). Students who have parents or friends who serve in the community are more likely to participate in service activities themselves (Fitch, 1987; Stukas et al., 1999). Although some students have a higher tendency to serve than others,
their participation in service activities may not reflect the impact of their service participation (Myers-Lipton, 1998).

An evaluation of the Corporation for National Service’s Learn and Serve America Higher Education (LSAHE) program was conducted jointly by the University of California Los Angeles (UCLA) and the RAND Corporation. By incorporating the UCLA’s national CIRP survey data in the study, it afforded an assessment of the LSAHE program’s effect on student development (Astin & Sax, 1998).

The joint study cited that the bulk (70%) of undergraduate service work is done in student activities and student affairs programs. On the average, only 29% of community service work is done in academically linked SL courses. In addition to collegiate service, 48% of students performed community service in noncollegiate organizations as well. The most common locations for service were universities (52%), elementary or secondary schools (37%), social or welfare organizations (29%), hospitals or clinics (26%), community centers (23%), and parks (20%). The percentages add up to be more than one hundred because many students volunteered at more than one location (Astin & Sax, 1998).

The most common reason for students to volunteer is to help other people. A sense of satisfaction is the second leading reason why students get involved in community service (Astin & Sax, 1998; Fitch, 1987). Other popular reasons to serve are feelings of personal satisfaction and the chance to improve society. Of these top four reasons, three are related to civic responsibility and helping others (Astin & Sax, 1998). Research also shows that students who perceived they were making a contribution to society were more likely to continue serving in the future (McKenna & Rizzo, 1999).
Current Developments

Over the years, various areas of community service have experienced substantial developments. New national service legislation has afforded funding for community service programs, and an increased amount of Internet resources and literature related to community involvement and SL have been produced. Additionally, national organizations focusing on experiential education have been established.

Seven years ago, President Clinton signed the National and Community Service Trust Act of 1993 into law. The enactment of this law formed the Corporation for National Service designed to involve Americans of all ages and backgrounds in community projects. Its goals were to foster civic responsibility and provide educational opportunity for those who make a commitment to serve. From this legislation, the AmeriCorp national service program, National Senior Service Corps, and Learn and Serve America were created (Transcript: Bill Clinton, April 11, 1994).

In 1995, President Clinton ordered that the Action Agency (provided for by the Domestic Volunteer Service Act of 1973) be merged with the Corporation for National Service. This merger was due to an overlapping of similar goals between the two organizations and to further develop nationwide community service projects (Transcript: Bill Clinton, April 11, 1994).

In an effort to extend and amend the national service law, the National and Community Service Amendments Act of 1998 was submitted by President Clinton. The proposed amendments focused on reducing AmeriCorp costs, integrating age and income guidelines for National Senior Service Corps members, and reorganizing the Learn and Serve America administration. The legislation was submitted for the purpose of strengthening the partnership
between national service programs and traditional volunteer organizations (Transcript: Bill Clinton, March 23, 1998).

AmeriCorps is the national service program established to give students the opportunity to participate in community service in exchange for post-secondary educational funding. By 1998, over 100,000 American students had served their country through the AmeriCorps program. Students participated in service activities that assisted in meeting current social needs (Transcript: Bill Clinton, March 23, 1998). For example, the National School and Community Corps (NSCC) is one of the AmeriCorps programs. The NSCC participants take part in restructuring school and urban school reform. This program enriches the school environment to benefit students, parents, and the community as a whole (National School and Community Corps, on-line).

The National Service-Learning Clearinghouse (NSLC) was established to disseminate information for Learn and Serve America and various other educational service programs and practitioners. The NSLC manages a database of on-line service-related information. For facts on how SL projects provide students with opportunities for self- and community improvement, the NSLC has established a website (nics.jaws.umn.edu). They also offer a toll-free number to answer questions about available resources, referrals to other organizations, and bibliographical information. NSLC Information Specialists are prepared to send out free packets of materials on SL programs, definitions, initiatives, and standards. Also available are electronic discussions groups and an on-site library at the University of Minnesota (National Service-Learning Clearinghouse, brochure).

Internet resources offer information on how students can thoughtfully participate in organized social action through SL. The Big Dummy's Guide to Service Learning
(www.fiu.edu/~time4chg/library/bigdummy/html) is a simple web site that provides answers to questions about SL projects, including how SL is different from community service, the role of the educator, planning a project, and ideas for combining service and learning. There is also the Service-Learning: The Home of Service-Learning on the WorldWideWeb (csf.colorado.edu/sl/index.html) that explores the benefits of incorporating community service into learning activities. Users are able to join a discussion group, read articles related to local needs, and follow a series of links to other nonprofit organizations involved with social service projects.

Professional publications specific to SL and community involvement have evolved. In recent years, the first journal has emerged that publishes articles on curriculum issues in community SL, research, and evaluation results. The Michigan Journal of Community Service Learning, located at the University of Michigan, is a peer reviewed publication addressing issues related primarily to higher education and some pieces of interest to post-secondary teachers (Allen, 1997).

To complement research in student development and student services, a new 18-volume series of monographs is being published by the American Association of Higher Education (AAHE). Each book in the series will provide a focused examination of the relationship between SL and individual disciplines. The volumes will address academic disciplines such as composition, accounting, education, political science, psychology, and sociology. Additional disciplines will follow (Deans & Meyer-Goncalves, 1998).

National organizations related to personal involvement have also been established. Today the National Society for Experiential Education (NSEE) serves as a resource for proponents of experience-based education methods. It has been in existence for over twenty-five years and is a leading professional organization for SL practitioners. The NSEE provides its members with a
quarterly newsletter containing articles on the latest experiential education studies, and discounts on publications, conference registrations, consulting, and NSEE Resource Center materials. Members are also given the opportunity to join Special Interest Groups (SIGs). These groups are organized around similar conceptual interests for the purposes of networking and discussing leadership opportunities. Consulting services for educational institutions are also available (for a fee) through the NSEE to aid in the development of experiential education workshops (National Society for Experiential Education, on-line).

Benefits of Service

Students participating in community service at institutions of higher education have benefited from the many positive outcomes related to their service experiences. Both extracurricular volunteer service programs and SL courses impact civic attitudes through service activities (Astin & Sax, 1998).

Outcomes Related to Volunteerism

There are many outcomes related to civic attitudes through participation in volunteer service programs. Participating in volunteer activities has an impact on feelings of self-empowerment. Students' concern for the environment and financial status are also affected. Volunteer work can motivate people to care for others, increase protest participation, and improve leadership abilities (Astin, 1993). There are also long-term effects of volunteer work evidenced through behaviors and values (Astin, 1999; Fendrich, 1993; Yates & Youniss, 1998).

The effect of volunteer work is evident in student outcomes. The Higher Education Research Institute at the University of California, Los Angeles, has been collecting data through the Cooperative Institutional Research Program (CIRP) survey since 1973. It is a longitudinal study that includes over 500,000 students at 1,300 institutions of all types (Astin, 1993).
The model of input-environment-outcome (I-E-O) guides the study. The input refers to the characteristics the students possess before they enter college. The term environment refers to the exposure to educational experiences, programs, faculty, and peers. Outcomes refer to the student characteristics after the exposure to the various collegiate environments. This model assesses the impact of different environmental experiences and conditions on students' growth or change (Astin, 1993).

Volunteer work was one of the environmental factors measured in the CIRP survey. There is a pattern of outcomes related to students who participate in volunteer activities. Volunteer participation has a strong correlation with personality measures. Social activism, leadership, protesting, and tutoring other students are positively associated with volunteer participation. Attitudinal outcomes are also correlated with volunteer activities. Developing a meaningful philosophy of life and the promotion of racial understanding and environmental cleanups are attitudes related to volunteer service. Additionally, volunteer work has significant positive correlations with degree attainment, cultural awareness, public speaking and interpersonal skills. There was also positive correlations between those who perform volunteer service and those who chose to pursue careers as physicians and clinical psychologists (Astin, 1993).

Volunteer work has long-term effects. It was reported that the effects of community service in youths persist for a 15-year period. Therefore, the best factor for predicting community involvement at age 30 is whether or not there is participation at age 15. This study suggests that individuals who engage in community service activities at an early age are more likely to continue serving throughout their adult lives than those who did not serve at an early age (Yates & Youniss, 1998).
Voluntary protesting in public demonstrations while in college also has long-term effects on continued community service and civic responsibility. Black and White alumni from Florida A & M University who participated in protests related to segregation during the 1950s and 1960s, were surveyed 10 and 25 years after the protests took place. In comparison to White non-protesters, White protestors are more likely to have advanced degrees and be employed in education. They are also more likely to participate in protests after college than are their White non-protestor counterparts.

Black protestors are more likely to pursue advanced degrees and have higher incomes than are their Black non-protestor counterparts. In comparison to Black non-protestors, Black protestors are more likely to belong to civic organizations and to be concerned with peaceful race relations. Both the White and Black protestors voted at higher rates. Overall, both groups of protestors were more involved in serving their communities and political issues than were those who did not protest (Fendrich, 1993).

Other long-term effects related to volunteer work were found in a group of students who were surveyed once in 1985 during their first year in college, a second time in 1989 and a third time in 1994-1995. The Student Information Form (SIF) was administered in 1985 to 279,985 students from 546 institutions to serve as a pretest for the longitudinal study. In 1989, 27,064 students from 388 institutions completed the first follow-up survey. It included items regarding college experiences and perceptions and posttest questions relating to the pretest survey from 1985. The second follow-up survey was completed in 1994-1995 by 12,376 students from 209 institutions. This second survey provided information on graduate school attendance and early career experiences (Astin, 1999).
Long-term behavioral outcomes correlated with volunteer work were revealed in the results. Students who indicated participation in volunteer activities are more likely to attend graduate school and earn advanced degrees. They also had a higher propensity to donate money to their alma mater and socialize more with people from different ethnic backgrounds. Students who volunteered during college were more committed to participate in community action programs. They also were more likely to provide aid for others needing help and to take part in environmental cleanups. Additionally, collegiate volunteers were more concerned with promoting racial understanding and developing a meaningful philosophy of life than were those who did not volunteer in college (Astin, 1999).

A direct correlation can be made between participation in volunteer work during college and participation in volunteer work after college. Results revealed that volunteering six or more hours in the last year of college doubles the likelihood of volunteering after graduation. For example, 44% of the students who indicated that they spent six or more hours doing volunteer work in their last year of college are volunteering at least one hour a week after graduation. However, only 19% of the students who did not volunteer in their last year of college are volunteering after graduation (Astin, 1999).

Outcomes Related to SL

There are numerous positive outcomes related to SL. It is a vehicle for students to reflect on personal issues and governmental responsibility (Yates & Youniss, 1998). SL also provides a means for students to explore personal values, increase their understanding of others and of diversity, and broaden their perception of social good in the larger community context (Rhoads, 1998). Gains in skill development, self-efficacy, and renewed interest in academic coursework can be attributed to SL (Wade, 1995). There is also a relationship between SL and a recognized
need for professional advocacy, a greater understanding of the importance of political activism (Cotunga & Vickery, 1992), and an increased level of civic responsibility (Myers-Lipton, 1998).

Community service through SL programs encourages reflection on personal issues and governmental responsibility. Data were collected from students enrolled in a one-year SL course at a Catholic high school. Students were enrolled in a mandatory junior-year religion class that required them to work 20 hours a week at a downtown soup kitchen for the homeless. Included in the study were 160 currently enrolled students and 121 alumni who took the class previously. Data were gathered through questionnaires, in-class writing assignments, and discussion sessions (Yates & Youniss, 1998).

During the study, students voiced their opinions on how they could take a personal role in enacting social change and the limits on individual initiative. They also discussed how public funds should be spent and the government's responsibility to the homeless. Other issues relating to race and diversity also surfaced. Topics such as understanding the meaning of being a Black American and the negative social images of Blacks were mentioned. Students related experiences of family members in the civil rights movement and Vietnam to their present experiences. The results revealed that current students wanted to continue volunteer activities even after the mandatory class was over. Therefore, alumni data were examined to explore whether students actually did volunteer more after the class (Yates & Youniss, 1998).

Alumni surveys indicated that 44% did other voluntary service while still in high school, 45% volunteered sometime after high school graduation, and 32% were currently volunteering. Six themes emerged in the political development of the alumni. Because of the SL course, alumni were awakened to societal problems and brought into contact with people who were different from them. These experiences taught them about their responsibility to help others. The
ability to make a difference in society inspired them to continue serving. Furthermore, the students were educated about social ills and taught to think critically (Yates & Youniss, 1998).

Exposure to SL can also cause pre-service teachers to change their views and improve their abilities as teachers, resulting in a rededication to their profession. A study was conducted on 41 teacher-education students who were involved in a social practicum project for one semester. The SL activities varied greatly, ranging from cleaning up parks to working with senior citizens. Data were collected through class papers, journal entries, and a written survey. Seminar discussions and open-ended interviews with 10 students were also used in the data collection. Interview questions focused on previous and present service activities and what participants were learning about themselves and others through their service experiences (Wade, 1995).

Outcomes from the data revealed that overall students increased their self-efficacy. Twenty-nine students attested to learning something new about themselves or developing a new skill. Students also learned new information about community service. Their SL experience developed a stronger concern for societal issues and increased their commitment to serving in the community. However, there were others that felt frustrated by their inability to contribute more and the length of time it took for noticeable change to occur (Wade, 1995).

SL can have an impact on college students' knowledge, attitudes, and future professional behavior. In a nutrition course, a component of SL was included to encourage action toward solving social problems. The SL experience provided firsthand exposure to hunger related issues to heighten the students' sensitivity to the problem and to encourage social responsibility. Students were enrolled in a semester-long community nutrition class that offered the option to volunteer in a food bank and soup kitchen for 20 hours per week. Data were collected through
students written work and oral observations. Ten of the 12 students opted to participate in the SL component (Cotugna & Vickery, 1992).

The participating students reported that they had a reality shock due to the number of children and people their own age that they encountered at the soup kitchen. Furthermore, the SL students were forced to examine their own value systems and to dispel the myth that people who are hungry are from minority groups. They realized that many hungry people are elderly, handicapped, or people just like themselves who fell on hard times. All of this enlightenment created a professional challenge for the nutrition students. They recognize the need for professional advocacy and the importance of becoming politically active (Cotugna & Vickery, 1992).

Students who participate in community service through SL courses show an increased level of caring. Three universities were included in a qualitative study that assessed students who participated in a variety of short-term, long-term, local, and distant community service experiences. Data were collected over six years (1991-1996) from 108 formal and informal interviews. Sixty-six open-ended surveys, 200 participant observations, and analysis of various students' journals were also examined. Ninety percent of the students were undergraduates and 10% were graduate students (Rhoads, 1998).

The results revealed that students involved in community service experience a self-exploration that help them think more about themselves and how others might view them. Quotes from students reflect concerns regarding whether they were judgmental of others or if they were being sensitive (caring) to the needs of others (Rhoads, 1998).

There were also results that suggested an increased understanding of others. Students who have firsthand experiences with homeless or low-income families realize there are names
and faces behind the statistics of people in the streets. Students' quotes discuss the reality of social problems and that helping others does make a difference (Rhoads, 1998).

A greater understanding of the social good in the larger community context was also revealed. There was an increased level of consciousness in making choices to help change society. Some students mentioned that there are consequences to not helping others. For example, people who are not doing a thing to help must live with a guilty conscience knowing that there are others who are hungry and homeless (Rhoads, 1998).

Differences also exist in levels of civic responsibility in SL students, volunteer program students, and non-volunteers. Twenty-five students in a two-year comprehensive SL program were compared to 25 volunteer program students, and 150 random non-volunteers. All the students in each group were in their junior year. The SL students connected their service experiences with reflection through discussions and academic applications. The volunteer program students were placed in community service projects through a campus volunteer clearinghouse without a reflection or academic component. The non-volunteers did not perform any service at all (Myers-Lipton, 1998).

A survey that included scales on civic responsibility, locus of control, and civic behavior was administered in a pretest/posttest fashion. The Civic Responsibility Scale has items related to caring for people in need. Other items in the Civic Responsibility Scale related to the responsibility to solve social problems and the obligation to vote in elections. The Locus of Control Scale contained items related to empowerment, making change in politics and world events, and consumer-controlled pricing. The Civic Behavior Scale inquired about contacting government officials and protest participation.
When the data from the pretests were compared to the posttests for each group, the results revealed that there are greater increases in all the scales for the SL students. This indicated that service linked to academics and accompanied by reflection increases civic responsibility (Myers-Lipton, 1998).

Reflection

Reflection is critical to the internalization of knowledge. It should be included in the process of experiential education from the beginning. Experiences are defined through reflection as learners make connections between their activities and their learning goals. Before the experience, students should reflect on their preconceived notions on a topic related to the educational goals and then reflect again during and after their experience to note the changes in their attitudes and behaviors (NSEE Foundations Document Committee, 1997).

Many experiences create controversy. However, if these experiences are not reflected upon they can be harmful or misleading to the individual. A lack of sensitivity can develop and a decrease in the learner's responsiveness is likely to occur (Dewey, 1933). Although an experience alone might cause personal growth, it is not until the experience is thoughtfully considered and analyzed that future actions are influenced (Checkoway, 1996; Glenn & Nelson, 1988).

Within a SL course students participate in community service and reflect on their service relating the course content to greater social issues and civic responsibility. Reflection links concrete experiences to abstract concepts. College courses that include SL achieve the maximum educational benefit by building the component of reflection into the curriculum of the course. These reflective activities connect course objectives with the service experience and occur on a regular basis throughout the semester. The instructor guides the students through reflection.
exercises encouraging feedback by providing an opportunity to examine personal values. (Hatcher & Bringle, 1997).

It is important for reflection activities to foster academic learning to establish integrity for SL in higher education. Throughout the semester the learning from service can be enriched through regular and varied analytical reflective activities. The three most frequently used methods of reflection are journals, directed writing exercises and structured class discussions (Hatcher & Bringle, 1997).

Journals can be used as a written exercise based on the learning objective and design of the SL course. Professors sometimes require students to include a list of terms in their journal entries or to reread their previous entries and highlight comments that relate to the course content. Keeping a journal is a common assignment, yet some professors choose not to use journals because students are not adequately challenged. The entries often result in a log of service activities without thoughtful analysis of the experience. Journals can also be hard to evaluate (Hatcher & Bringle, 1997).

Directed writings require students to relate their service experience to a reading assignment. Short written assignments are used to develop critical thinking. Students are required to synthesize their text in light of their service experience. These writing exercises can then be used as a foundation to a more complex paper or to frame class discussions (Hatcher & Bringle, 1997).

Course content can also be integrated with service through class discussions. Students can be asked to compare and contrast what they have read in the text with their actual experience. Open discussion allows students to learn from one another and give voice to fears (Koulish, 1998). By listening to the various comments from the group, students construct or
reclaim their personal values. It is an effective classroom-based reflection activity because is broadens the students perspectives and fosters critical thinking through dialogue (Beckman, 1997; Hatcher & Bringle, 1997).

When serving in the community, students often encounter unfamiliar situations that challenge or contradict their perspectives. Therefore, it is pertinent that real world issues are incorporated into reflection regardless if the method is written or discussion. As students values are transformed in light of their previous perceptions and real world experiences, it is expected that their behavior would also be modified. Students personal development and civic responsibility is supported through exercises that include a clarification of personal values (McEwen, 1996).

Conclusion

SL has been studied in a variety of ways. Research has been conducted through qualitative methods such as observations, open-ended questionnaires, journal entries, and discussions (Cotugna & Vickery; 1992, Rhoads, 1998; Yates & Youniss, 1998). There are also studies that incorporate both qualitative and quantitative research methods (McKenna & Rizzo, 1999; Primavera, 1999; Wade, 1995). Predominantly, both large scale and small research studies related to SL and community service are conducted by employing survey instruments for data collection (Astin, 1993; Astin, 1996; Astin, 1999; Astin & Sax, 1998; Chapman & Morley, 1999; Fendrich, 1993; Fitch, 1987; Myers-Lipton, 1998; Sax & Astin, 1997; Stukas et al., 1999).

Research indicates that SL students report an increased desire to participate in community service, a deepened sense of personal responsibility to the community, and a heightened level of commitment to community service (Astin & Sax, 1998; Markus et al., 1993). It is in the best
interest of the community to impress upon students the importance of service, however, it cannot be assumed that students' service participation is automatically linked to concepts of civic responsibility (Mohan, 1994; Stukas et al., 1999). Service alone will not teach students citizenship or tolerance of others (Cohan, 1994). To gain the full benefits of SL, reflection must be incorporated into the curriculum. By incorporating reflection, students' learning will be enriched by connecting their service to their coursework (Hatcher & Bringle, 1997).

The literature that was reviewed in this chapter examined the history of experiential education and how it differs from traditional education. Also, the various ways students can serve in college, how serving benefits them, and the importance of reflection was presented. Students who participate in SL courses are exposed to an environment that provides a variety of positive outcomes. Additionally, the research stated that learning, personal development, and civic responsibility are increased when coupled with reflection. However, very little research exists that examines the associations between pedagogy, frequency and environment of reflection and civic attitudes, civic attitudes and students' characteristics, and civic attitudes and future service.
CHAPTER THREE

METHODOLOGY

The method of research chosen for this study was survey research. Questionnaires are an effective method used to collect information regarding a sample's characteristics, experiences, and opinions. The findings from survey questionnaires can then be generalized to the larger population the sample is supposed to represent (Gall, Borg, & Gall, 1996). In this study, survey questionnaires were used to elicit data regarding service learning (SL) student characteristics, reflection activities, civic attitude scores, and interest in future community service.

Research Questions

This study examines the pedagogy, frequency, and environment of reflection in relation to civic attitude scores by student characteristics and interest in future service. Specifically, this study was designed to explore the following research questions:

1. What is the relationship between civic attitude scores and the amount of variety in written reflection pedagogy?
2. For students who perform written reflection, what are the associations between civic attitude scores and gender, class year, and grade point average (GPA)?
3. What is the relationship between civic attitude scores and the amount of variety in discussion reflection pedagogy?
4. For students who perform discussion reflection, what are the associations between civic attitude scores and gender, class year, and GPA?
5. What is the relationship between civic attitude scores and the frequency of performing out-of-class reflection?
6. For students who perform out-of-class reflection, what are the associations between civic attitude scores and gender, class year, and GPA?

7. What is the relationship between civic attitude scores and the frequency of performing in-class reflection?

8. For students who perform in-class reflection, what are the associations between civic attitude scores and gender, class year, and GPA?

9. What is the relationship between continued service at the service learning site and civic attitude scores?

10. What is the relationship between the likelihood of future community service participation and civic attitude scores?

Participants

Data for this study were previously collected in the Spring of 1999. The instruments used to gather the data were the Service-Learning Participant Profile (pre-test) and the Service-Learning Evaluation (post-test) survey questionnaires. The surveys were administered to students at a large, mid-Atlantic, state university. Participants in this study were undergraduates enrolled in courses containing a service learning (SL) component. The data collected using this survey allow for the study of pedagogy, frequency, and environment of reflection in relation to civic attitudes and interest in future service by student characteristics.

A total of 297 students completed the pre-test survey and 161 completed the post-test survey. The post-test sample size is smaller because instructors are not required to administer the instruments. Evidently, fewer instructors administered the post-test than the pre-test.

Based on the data from participants who took both the pre-test and post-test, the sample of 161 service learners was composed of 78.4% female and 21.6% male students. Their ethnicity
was 83.9% Caucasian, 5.4% Asian American, 5.4% Multiracial, 2.7% Hispanic American, 1.8% African American, and 0.9% other. Seventy-nine percent of the sample were enrolled in the third year or above in college and 43% had a grade point average (GPA) of 3.0 (on 4.0 scale) or better.

The survey responses were predominantly (72.3%) from students majoring in arts and sciences. Seventy-four percent of the sample served 20 hours or more at their SL site during the semester. While 95% of the participants had performed previous community service, 85% had never before participated in SL.

Comparisons can be made between the sample in this study and the entire campus population based on Fall 1998 enrollment statistics. In Fall 1998, the entire university enrollment was 41% female and 59% male students. Only 48% of the undergraduate students at the university were in their third year or above, and 29.4% percent of the undergraduates were majoring in arts and sciences. Therefore, gender, class year, and choice of college major in the sample were not representative of the entire campus population (Institutional Research and Planning Analysis, 1999).

The university’s ethnic composition was fairly representative of the sample. It consisted of 82.4% Caucasian, 5.8% Asian American, 5.7% Foreign National, 4.1% African American, 1.8% Hispanic American, and 0.3% American Indian (Institutional Research and Planning Analysis, 1999).

Data Collection

Questionnaires were used to collect the data. The pre-test and post-test survey questionnaires are printed on both sides of scantron forms (see Appendices A and B). There were 40 items on the pre-test survey and 48 items on the post-test survey. The front sides of both
surveys were identical, containing 24 Likert-scale items. The 24 questions were comprised of five items related to personal social responsibility, five items on the importance of community service, seven items related to civic awareness, four items on self-oriented motives, and three items related to service-oriented motives.

The back side of the pre-test survey elicited information regarding gender, age, ethnicity, college year, GPA, prior community service, church attendance, and preconceived perceptions related to SL. Response option formats varied from question to question. Some responses were offered in a Likert-scale design and others were categorical.

The post-test survey asked students questions regarding whether they will serve in the future and the amount of time they spent serving on their project during the semester. Additionally, the post-test survey elicited information about the pedagogy, frequency, and environment of reflection. Questions related to contact with service beneficiaries, course impact on civic attitudes, social awareness, and the usefulness of the SL course were also on the post-test survey. A variety of response option formats were used. A few questions offered simple yes or no responses, others were posed in a Likert-scale design, and some required categorical responses.

Both surveys contain information taken from pre-existing instruments. The first 17 Likert-scale questions on each survey were taken from three sources. These items were adapted from the Cooperative Institutional Research Program (CIRP) Student Information Form (Astin, Sax, Korn, & Mahoney, 1991), pre- and post- course survey questionnaires (Markus et al., 1993), and the Civic Responsibility Scale (Myers-Lipton, 1998). The last seven items on the post-test survey related to civic attitudes and social awareness were also taken from the pre- and post-course survey questionnaires (Markus et al., 1993).
The Service Learning Center (SLC) staff created all the remaining items on each survey. Data gathered from the pre-test survey and post-test survey were used by the SLC to assess the students' preconceived perceptions of SL, the impact of SL courses on student development, and the extent to which reflective methodologies were employed.

The pre-test survey was distributed during the first week of the semester. The post-test survey was given at the semester's conclusion. Students completed the instruments in class. Course instructors were responsible for administering, collecting, and delivering the surveys to the SLC. Survey completion was voluntary for students, yet highly encouraged as a part of SL participation. The survey administration was voluntary for the instructors.

The collected data were screened for missing and invalid responses. Individual surveys were then examined in an effort to remedy the inconsistencies. Each survey was assigned a case number to account for the 24 participants who did not fill in their social security numbers.

Reliability

Reliability is a term that refers to whether an instrument measures consistently over time and populations (Gall et al., 1996). Reliability analysis allows the study of measurement scale properties and the individual items in the scale. The procedure calculates the number of commonly used measures of scale and how individual scale items relate to each other within the scale (SPSS, Version 8.0).

One form of reliability is internal consistency reliability, which refers to the examination of individual test items (Gall et al., 1996). Cronbach's alpha test is a model of internal consistency reliability and is based on inter-item correlation (SPSS, Version 8.0). It measures a test's internal consistency based on the extent to which a participant who answers a question in one way will respond to other questions in the same manner (Gall et al., 1996).
The pre-test and the post-test surveys have been used since the Fall semester of 1995. Previous studies have been conducted utilizing the data collected with the instruments (Mabry, 1998; Parker-Gwin & Mabry, 1998). In both Mabry's (1998) and Parker-Gwin and Mabry's (1998) studies, the instruments were tested for reliability by using Cronbach's alpha test on items combined into scales. The scale items were grouped together based on a factor analysis (Mabry, 1998; Parker-Gwin & Mabry, 1998). A factor analysis is a statistical procedure used to reduce the number of variables by combining highly correlated variables with each other (Gall et al., 1996).

In the study conducted by Mabry (1998), the first two scales were created and analyzed comparing pre-test and post-test scores. Coefficient alpha levels (α) for the scales were as follows: Personal Social Responsibility (4 items) pre-test $\alpha = .63$ and post-test $\alpha = .78$ and Civic Attitudes (5 items) pre-test $\alpha = .80$ and post-test $\alpha = .81$.

Two other scales were formed consisting of post-test questions only. The coefficient alpha levels for these scales were Perceived Course Impact on Civic Attitudes (6 items) $\alpha = .92$ and Perceived Academic Benefit of Service Learning (3 items) $\alpha = .78$ (Mabry, 1998). These data suggest an acceptable degree of internal consistency reliability for the instruments for group research purposes.

Parker-Gwin and Mabry also conducted another study in 1998. In this study, five scales were created and compared based on pre-test and post-test scores. The scales had coefficient alpha levels as follows: Personal Social Responsibility (5 items) pre-test $\alpha = .77$ and post-test $\alpha = .74$, Importance of Community Service (3 items) pre-test $\alpha = .77$ and post-test $\alpha = .83$, Civic Awareness (5 items) pre-test $\alpha = .72$ and post-test $\alpha = .71$, Self-Oriented Motives (4 items) pre-
test $\alpha = .68$ and post-test $\alpha = .79$, and Service-Oriented Motives (3 items) pre-test $\alpha = .77$ and post-test $\alpha = .80$.

An additional two scales were formed using only post-test questions. The final two scales had the following coefficient alpha levels: Course Effects on Awareness of Social Problems (2 items) $\alpha = .75$ and Course Effects on Civic Duty $\alpha = .89$ (Parker-Gwin & Mabry, 1998). The resulting scores from Parker-Gwin and Mabry's reliability tests also suggest a high degree of internal consistency for the instruments.

Cronbach's alpha tests were also performed on the data used in this study. Five scales were created from post-test survey questions based on a factor analysis. Table 1 displays the derived factors (scales) and post-test reliability results.

Civic Attitudes

Actions and attitudes related to social participation are components of civic responsibility (Weeks, 1995). Some attitudes associated with civic responsibility include intentions and beliefs related to service and the appreciation of human differences (Markus, King, & Howard, 1993). Specifically, SL students have the potential to increase their level of civic attitudes by interacting with the community. Research indicates that SL students report a heightened level of commitment to community service and a deepened sense of personal responsibility to the community (Astin & Sax, 1998; Markus et al., 1993).

To understand the associations between reflection, civic attitudes, and student characteristics, seven independent variables were chosen. Three variables were demographic characteristics and four were characteristics related to reflection. The demographic variables were gender, class year, and GPA. The remaining four independent variables were written
Table 1

Derived Factors and Reliability Scores for Service-Learning Evaluation (post-test)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Number of Items</th>
<th>n</th>
<th>Reliability (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civic Awareness</td>
<td>6</td>
<td>161</td>
<td>.78</td>
</tr>
<tr>
<td>Course Effect on Civic Responsibility</td>
<td>7</td>
<td>159</td>
<td>.84</td>
</tr>
<tr>
<td>Importance of Community Service</td>
<td>6</td>
<td>161</td>
<td>.83</td>
</tr>
<tr>
<td>Personal Social Values</td>
<td>8</td>
<td>152</td>
<td>.81</td>
</tr>
<tr>
<td>Self-Oriented Motives</td>
<td>4</td>
<td>159</td>
<td>.72</td>
</tr>
</tbody>
</table>
reflection, discussion reflection, out-of-class reflection, and in-class reflection. The dependent variable was civic attitude scores.

**Gender**

The pre-test included a question related to participant gender. The item simply asked, what is your sex/gender? Female and male were given as the two response options. Females were coded zero and males were coded one.

**Class Year**

The pre-test also included a question that asks what is your class year? Participants were given seven response options ranging from 1st year, coded zero, to other, coded six. The five middle options each account for one-year intervals, graduate, and other students, coded one to five accordingly.

**Grade Point Average**

A question regarding GPA on the pre-test asked, what is your current GPA? and provided five response categories. The categories were below 2.0, 2.0-2.49, 2.50-2.99, 3.0-3.49, and 3.5+. The coding of these items ranged from zero to four beginning with the lowest GPA.

**Written Reflection**

The post-test presented a series of three items in a yes/no fashion to elicit information regarding participants written reflection activities. The questions inquired as to whether participants kept a SL journal, wrote about their service activities in a paper or report, or participated in a listserv or on-line discussion. Yes responses were coded zero. No responses were coded one.
Another variable was formed regarding written reflection. The Written Reflection Composite Score was created using the three questions related to types of written reflection pedagogy. A sum of the items formed a composite score to indicate the amount of variety in written reflection pedagogy for each participant. This composite score is discussed further in the Data Modifications section.

**Discussion Reflection**

The post-test also presented a series of three items on discussion reflection activities. Responses were requested in a yes/no format. Participants were asked whether they spoke about their service activities with their fellow students, site supervisor, or course instructor. Items answered with a yes response were coded zero and no responses were coded one. The drawback of this item is that each type of contact was weighed the same.

Another variable was created for discussion reflection. The Discussion Reflection Composite Score was formed using the three questions related to types of discussion reflection pedagogy. The composite score is a sum of the items used to indicate the amount of variety in discussion reflection pedagogy for each participant. This composite score is also discussed further in the Data Modifications section.

**Out-of-Class Reflection**

The post-test included a question related to the frequency and environment of reflection. Participants were asked about the frequency of their out-of-class reflection activities. The six possible responses were: did not reflect on service activities outside the class, once or twice during the semester, once a month or about 3 times during the semester, about twice a month/every other week, at least once a week, and two or more times every week. The responses were coded zero to five beginning with no reflection activities.
In-Class Reflection

Also on the post-test was an item inquiring about the frequency of participants' in-class reflection. Students responded by using response options identical to the six provided in the out-of-class reflection question. The responses were coded in the same manner.

Civic Attitude Scores

The post-test included four questions relating to the impact of the SL course on civic attitudes. The questions asked participants to indicate how much their intentions and beliefs related to service and appreciation of human differences were strengthened after completing the SL course. Response options are given in a four-point Likert-scale format ranging from not at all (coded one) to a great deal (coded four).

These four items were extracted from the Course Effects on Civic Responsibility Scale (see Table 1) to comprise the Civic Attitude Scale. First, a factor analysis was performed on the four items in the Civic Attitude Scale. The results indicated the four items measure one common factor, thereby making it a viable scale. Second, a Cronbach's alpha test was run to measure the scale's reliability. The items for each participant were summed and divided by four to create a mean civic attitude score. Then the data was screened and one participant was found to have only answered three of the four items in the scale. The fourth item that was left blank was assigned a nine and not figured into the participant's mean score. For this one instance, the participant's score was summed and divided by three.

Table 2 displays the question statement, the individual items that comprise the Civic Attitude Scale, and the scale's reliability score. All response options and coding are given at the bottom of the table.
Table 2

Civic Attitude Scale Items and Reliability

<table>
<thead>
<tr>
<th>Scale</th>
<th>Individual Items</th>
<th>n</th>
<th>Reliability (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civic Attitude</td>
<td>Indicate the degree to which participation in this course has increased or strengthen your:</td>
<td>57</td>
<td>.88</td>
</tr>
<tr>
<td></td>
<td>• intention to serve others</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• belief that helping others is one's social responsibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• belief that one can make a difference in society</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• tolerance and appreciation of others</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Four response options were offered not at all (coded one), a little (coded two), somewhat (coded three), and a great deal (coded four).
Future Service

Students who volunteered in high school have a greater likelihood of participating in community service in college and afterwards in their adult life (Yates & Youniss, 1998). Research also indicates, upon course completion, that SL students report an increased desire to participate in future community service. Those who perceived they were making a contribution to society were more likely to continue serving in the future (Astin & Sax, 1998; Markus et al., 1993; McKenna & Rizzo, 1999).

The Civic Attitude Score was used as the independent variable to examine the associations between inclination to perform future community service and the level of civic attitudes. The variable of civic attitude score contains the same four items that were discussed in the previous section and displayed in the Civic Attitude Scale (see Table 2).

Two items addressing future service were used as dependent variables in this study. The first dependent variable related to continued service at the assigned SL site. The second dependent variable reflected the likelihood of future community service participation.

Continued Service at SL Site

Students were asked whether they planned to continue serving at their SL site after the semester was over. The response choices were given in a yes/no format. The no responses are coded zero and the yes responses are coded one.

Future Service Participation

The post-test also contained an item that asked what are the chances that you will participate in community service in the future? A four-point Likert scale was used with response options ranging from no chance (coded zero) to very good chance (coded three).
Data Modifications

Before statistical procedures could be performed on the variables used in this study, modifications were performed. Some of the items were collapsed and recoded to provide an adequate sample size or summed to create composite scores.

Adequate Sample Size

To obtain an adequate sample size for the demographic independent variable of class year, the responses were collapsed and recoded (see Appendix C). The responses for class year were changed as follows: 1st year (coded zero), 2nd year (coded one), 3rd year (coded two), and 4th year and above (coded three). The 5th year, graduate, and other options were included in 4th year and above.

Independent variables from the post-test also were changed to obtain an adequate number of responses. The two items related to the frequency and environment (out-of-class/in-class) of reflection were collapsed and recoded in the same fashion (see Appendixes D and E). Both items responses were regrouped in the following manner: did not reflect on service activities outside/inside of class, once or twice during the semester, 1 to 2 times per month, and once a week or more.

The did not reflect on service outside/inside of class option was coded zero and the once or twice during the semester response was coded one. The 1 to 2 times per month option was coded two and comprised of the once a month, about 3 times during the semester and about twice a month, or every other week responses. The final response option, once a week or more, was coded three. This item was made up of the two options at least once a week and two or more times every week.
Composite Scores

Items were also combined and recoded to form composite scores. Two scores were created entitled the Written Reflection Composite Score and the Discussion Reflection Composite Score. These scores were designed to calculate a summed score for the number of reflection activities by pedagogy performed for each participant. Both scores were formed in the same way.

First the items were recoded so that the yes responses were one and the no responses were zero. Items left blank were assigned nines and not figured in to the composite score. Then the three items containing the questions related to written reflection were summed to create the Written Reflection Composite Score, and the three items regarding discussion reflection were summed together to form the Discussion Reflection Composite Score.

Data Analysis Procedures

Prior to analyzing the data, the civic attitude scores were grouped into three categories. The categories are as follows: 1.00 to 2.99, 3.00 to 3.99, and 4.00. Then crosstabulation procedures and chi-square test statistics were performed to answer the research questions. In the following sections, the crosstabulation procedure and the chi-square test of independence are described. Then the procedures used for each null hypothesis are explained.

Crosstabulation Procedure

The crosstabulation procedure forms two-way and multiway tables. It also provides tests and measures of association such as the chi-square test statistic. Each cell in a table contains any combination of counts, percentages, or residuals. Counts are the number of cases actually observed and the number of cases expected in rows and columns that are independent of each other. Percentages add up across or down a row or column. Raw unstandardized residuals give
the difference between the observed and expected counts. The crosstabulation procedure uncovers patterns in the data that contribute to chi-square test significance by displaying the observed frequencies, expected frequencies, and residuals (SPSS, Version 8.0, on-line index).

Chi-square Test Statistic

A chi-square ($\chi^2$) test statistic determines the statistical significance of the difference between observed frequency counts and expected frequency counts. Data in the form of frequency counts can be organized in two or more categories (Gall et al., 1996). This procedure tests the hypothesis that the row and column variables are independent, without indicating strength or direction of the relationship (SPSS, Version 8.0, on-line index).

To test whether two variables are independent of each other, first the expected cell counts are computed by multiplying the row total by the column total and then dividing by the total number of sample measurements ($n$) (Ott, Larson, & Mendenhall, 1983). For example:

$$\text{Expected cell count} = \frac{(\text{row total}) \times (\text{column total})}{n}$$

Then a chi-square test statistic is calculated to measure whether the observed and expected cell counts agree. First the expected cell count ($E$) is subtracted from the observed cell count ($O$). The square of this difference is then divided by $E$. The chi-square calculation is done for all the cells and the results are added. The expected cell counts in rows and columns add to the corresponding marginal totals. Below is an example of the formula for a chi-square test statistic (Ott et al., 1983):

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

The chi-square results will be large if observed cell counts differ from the expected cell counts. Large chi-square results indicate the variables are related to each other. The term large is defined by examining the probability distribution of $\chi^2$. Many chi-square probability distributions
exist. A probability distribution is obtained by deciding the degrees of freedom particularly for that chi-square distribution (Ott et al., 1983).

The degrees of freedom for a chi-square distribution are related to the number of expected cell counts to be calculated before obtaining the rest of the cell counts by subtraction. Degrees of freedom (df) are calculated by the number of tables rows (r) minus one multiplied by the number of columns (c) minus one. The formula is (Ott et al., 1983):

$$df = (r - 1)(c - 1)$$

Chi-square distributions are not symmetrical and will always be a one-tail, upper-tail test, meaning only one end of the distribution will be the rejection region. The null hypotheses are rejected if $x^2$ exceeds the value of $x^2$ based on a preset value (alpha level = $\alpha$) and $df = (r - 1)(c - 1)$. It is also assumed that no expected cell counts will be less than one and only 20% can be less than five in the contingency table (Ott et al., 1983).

Having a predetermined $\alpha$ decreases the probability of a Type I error (rejecting the null hypothesis when it is true). Educational researchers generally reject a null hypothesis if the $\alpha$ value reaches a significance level of $p < 0.05$. The term probability value ($p$) is the actual level of significance obtained after the data have been collected and analyzed (Gall et al., 1996).

**Null Hypotheses**

All hypotheses were examined using crosstabulation procedures and chi-square tests because the data results were frequencies. The research questions were changed into null hypotheses. For each null hypothesis, the calculation used for degrees of freedom was $df = (r - 1)(c - 1)$. The researcher rejected the null hypotheses if the $\alpha$ value reached a significance level of $p < 0.05$. The next section describes the specific tests performed to determine the associations between civic attitude scores, reflection, student characteristics, and future service.
Civic Attitude Scores and Written Reflection. To examine the relationship between the civic attitude scores and number of written reflections, respondents were divided into four categories of students who performed: no written reflection, one type of written reflection, two types of written reflection, and three types of written reflection. A crosstabulation procedure was conducted to determine the relationship between the frequencies of civic attitude scores and number of written reflections. This procedure included a significance investigation using the chi-square test statistic.

Civic Attitude Scores, Written Reflection, and Gender. To examine the relationship between civic attitude scores and gender for students who performed written reflection, respondents who had performed one or more types of written reflection were filtered from the data. Then the filtered respondents were divided into two categories: male and female. A crosstabulation procedure was conducted to determine the relationship between the frequencies of civic attitude scores and gender. This procedure included a significance investigation using the chi-square test statistic.

Civic Attitude Scores, Written Reflection, and Class Year. To examine the relationship between civic attitude scores and class year for students who performed written reflection, respondents who had performed one or more types of written reflection were filtered from the data. Then the filtered respondents were divided into four categories: 1st year, 2nd year, 3rd year, and 4th year and above. A crosstabulation procedure was conducted to determine the relationship between the frequencies of civic attitude scores and class year. This procedure included a significance investigation using the chi-square test statistic.

Civic Attitude Scores, Written Reflection, and GPA. To examine the relationship between civic attitude scores and GPA for students who performed written reflection,
respondents who had performed one or more types of written reflection were filtered from the data. Then the filtered respondents were divided into five categories: below 2.0, 2.0-2.49, 2.50-2.99, 3.0-3.49, and 3.5+. A crosstabulation procedure was conducted to determine the relationship between the frequencies of civic attitude scores and GPA. This procedure included a significance investigation using the chi-square test statistic.

**Civic Attitude Scores and Discussion Reflection.** To examine the relationship between civic attitude scores and number of discussion reflections, respondents were divided into four categories of students who performed: no discussion reflection, one type of discussion reflection, two types of discussion reflection, and three types of discussion reflection. A crosstabulation procedure was conducted to determine the relationship between the frequencies of civic attitude scores and number of discussion reflections. This procedure included a significance investigation using the chi-square test statistic.

**Civic Attitude Scores, Discussion Reflection, and Gender.** To examine the relationship between civic attitude scores and gender for students who performed discussion reflection, respondents who had performed one or more types of discussion reflection were filtered from the data. Then the filtered respondents were divided into two categories: male and female. A crosstabulation procedure was conducted to determine the relationship between the frequencies of civic attitude scores and gender. This procedure included a significance investigation using the chi-square test statistic.

**Civic Attitude Scores, Discussion Reflection, and Class Year.** To examine the relationship between civic attitude scores and class year for students who performed discussion reflection, respondents who had performed one or more types of discussion reflection were filtered from the data. Then the filtered respondents were divided into four categories: 1st year,
A crosstabulation procedure was conducted to determine the relationship between the frequencies of civic attitude scores and class year. This procedure included a significance investigation using the chi-square test statistic.

Civic Attitude Scores, Discussion Reflection, and GPA. To examine the relationship between civic attitude scores and GPA for students, who performed discussion reflection, respondents who had performed one or more types of discussion reflection were filtered from the data. Then the filtered respondents were divided into five categories: below 2.0, 2.0-2.49, 2.50-2.99, 3.0-3.49, and 3.5+. A crosstabulation procedure was conducted to determine the relationship between the frequencies of civic attitude scores and GPA. This procedure included a significance investigation using the chi-square test statistic.

Civic Attitude Scores and Out-of-Class Reflection. To examine the relationship between the civic attitude scores and amount of out-of-class reflection, respondents were divided into four groups of students who reflected out-of-class: no out-of-class reflection, two times during the semester, one to two times per month, and once a week or more. A crosstabulation procedure was conducted to determine the relationship between the frequencies of civic attitude scores and amount of out-of-class reflection. This procedure included a significance investigation using the chi-square test statistic.

Civic Attitude Scores, Out-of-Class Reflection, and Gender. To examine the relationship between civic attitude scores and gender for students who performed out-of-class reflection, respondents who had performed out-of-class reflection at least one time during the semester were filtered from the data. Then the filtered respondents were divided into two categories: male and female. A crosstabulation procedure was conducted to determine the relationship between the
frequencies of civic attitude scores and gender. This procedure included a significance investigation using the chi-square test statistic.

Civic Attitude Scores, Out-of-Class Reflection, and Class Year. To examine the relationship between civic attitude scores and class year for students who performed out-of-class reflection, respondents who had performed out-of-class reflection at least one time during the semester were filtered from the data. Then the filtered respondents were divided into four categories: 1st year, 2nd year, 3rd year, and 4th year and above. A crosstabulation procedure was conducted to determine the relationship between the frequencies of civic attitude scores and class year. This procedure included a significance investigation using the chi-square test statistic.

Civic Attitude Scores, Out-of-Class Reflection, and GPA. To examine the relationship between civic attitude scores and GPA for students, who performed out-of-class reflection, respondents who had performed out-of-class reflection at least one time during the semester were filtered from the data. Then the filtered respondents were divided into five categories: below 2.0, 2.0-2.49, 2.50-2.99, 3.0-3.49, and 3.5+. A crosstabulation procedure was conducted to determine the relationship between the frequencies of civic attitude scores and GPA. This procedure included a significance investigation using the chi-square test statistic.

Civic Attitude Scores and In-Class Reflection. To examine the relationship between the civic attitude scores and amount of in-class reflection, respondents were divided into four groups of students who reflected in-class: no in-class reflection, two times during the semester, one to two times per month, and once a week or more. A crosstabulation procedure was conducted to determine the relationship between the frequencies of civic attitude scores and amount of in-class reflection. This procedure included a significance investigation using the chi-square test statistic.
Civic Attitude Scores, In-Class Reflection and Gender. To examine the relationship between civic attitude scores and gender for students who performed in-class reflection, respondents who had performed in-class reflection at least once during the semester were filtered from the data. Then the filtered respondents were divided into two categories: male and female. A crosstabulation procedure was conducted to determine the relationship between the frequencies of civic attitude scores and gender. This procedure included a significance investigation using the chi-square test statistic.

Civic Attitude Scores, In-Class Reflection, and Class Year. To examine the relationship between civic attitude scores and class year for students who performed in-class reflection, respondents who had performed in-class reflection at least once during the semester were filtered from the data. Then the filtered respondents were divided into four categories: 1st year, 2nd year, 3rd year, and 4th year and above. A crosstabulation procedure was conducted to determine the relationship existed between the frequencies of civic attitude scores and class year. This procedure included a significance investigation using the chi-square test statistic.

Civic Attitude Scores, In-Class Reflection, and GPA. To examine the relationship between civic attitude scores and GPA for students who performed in-class reflection, respondents who had performed in-class reflection at least once during the semester were filtered from the data. Then the filtered respondents were divided into five categories: below 2.0, 2.0-2.49, 2.50-2.99, 3.0-3.49, and 3.5+. A crosstabulation procedure was conducted to determine the relationship existed between the frequencies of civic attitude scores and GPA. This procedure included a significance investigation using the chi-square test statistic.

Continued Service at SL site and Civic Attitude Scores. To examine the relationship between continued service at the SL site and civic attitude scores, respondents were divided into
two categories: students who did plan to continue at their SL sites and those who did not plan to continue at their SL sites. A crosstabulation procedure was conducted to determine the relationship existed between the frequencies of continued service at SL site and civic attitude scores. This procedure included a significance investigation using the chi-square test statistic.

**Future Community Service Participation and Civic Attitude Scores.** To examine the relationship between the likelihood of future community service participation and civic attitude scores, respondents were divided into four categories based on whether they would participate in future community service: no chance, very little chance, some chance, and very good chance. A crosstabulation procedure was conducted to determine the relationship existed between the frequencies of the likelihood of future community service participation and civic attitude scores. This procedure included a significance investigation using the chi-square test statistic.
CHAPTER FOUR

RESULTS

Survey data were used to explore the civic attitudes of service learning (SL) students in relation to demographic variables, frequency of reflection by pedagogy and environment, and the likelihood of future service. The data were analyzed using crosstabulation procedures and chi-square tests. First a description of the sample is given regarding demographic characteristics and civic attitude scores. Then the results from the data analyses are described in the sections on civic attitudes and future service. Finally, the summary of the findings is discussed in the last section.

Sample

The participants used in the analyses consisted of 161 students who took both the Service-Learning Participant Profile (pre-test) and the Service-Learning Evaluation (post-test). Not all of the participants answered each of the questions regarding gender, class year, and grade point average (GPA). The Civic Attitude Scale questions were answered by 158 of the 161 participants.

Of the 161 respondents, 111 answered the question regarding gender. There were 87 (78.4%) females and 24 (21.6%) males. The item pertaining to class year had 110 respondents. Eleven (10.0%) participants were in their first year while 12 (10.9%) were in their second year, 41 (37.3%) were in their third year, and 46 (41.8%) were in their fourth year or above. One hundred and ten students indicated their GPA. There were 2 (1.8%) with a GPA below 2.0, 23 (20.9%) with a GPA between 2.0 and 2.49, 37 (33.6%) with a GPA between 2.5 and 2.99, 32 (29.1%) with a GPA between 3.0 and 3.49, and 15 (14.5%) with a GPA of 3.5 and above (see Table 3).
### Table 3

**Sample Demographic**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>% of n</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>87</td>
<td>78.4%</td>
</tr>
<tr>
<td>Male</td>
<td>24</td>
<td>21.6%</td>
</tr>
<tr>
<td><strong>Class Year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Year</td>
<td>11</td>
<td>10.0%</td>
</tr>
<tr>
<td>Second Year</td>
<td>12</td>
<td>10.9%</td>
</tr>
<tr>
<td>Third Year</td>
<td>41</td>
<td>37.3%</td>
</tr>
<tr>
<td>Fourth Year and Above</td>
<td>46</td>
<td>41.8%</td>
</tr>
<tr>
<td><strong>GPA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 2.00</td>
<td>2</td>
<td>1.8%</td>
</tr>
<tr>
<td>2.00 to 2.49</td>
<td>23</td>
<td>20.9%</td>
</tr>
<tr>
<td>2.50 to 2.99</td>
<td>37</td>
<td>33.6%</td>
</tr>
<tr>
<td>3.00 to 3.50</td>
<td>32</td>
<td>29.1%</td>
</tr>
<tr>
<td>3.50 and above</td>
<td>16</td>
<td>14.5%</td>
</tr>
</tbody>
</table>
There were 158 participants who answered the questions in the Civic Attitude Scale and had civic attitude scores. Thirty (19.1%) scored between 1.00 and 2.99 while 82 (52.2%) scored between 3.00 and 3.99 and 46 (28.7%) scored a 4.00 on civic attitudes (see Table 4).

Civic Attitudes

This section explains the associations of civic attitude scores in relation to written reflection, discussion reflection, out-of-class reflection, and in-class reflection. Each of these sections is further broken down into the demographic variables of gender, class year, and GPA. Some of the categories in the data analyses were collapsed for valid chi-square tests to result. Changes are noted at the bottom of each table.

Civic Attitude Scores and Written Reflection

Civic attitude scores were examined by number of written reflections. Of the 158 student participants in this analysis, 82 (51.9%) scored between 3.00 and 3.99 on civic attitude, and 54.9% (45) of them engaged in two written reflections. Twenty-two (26.8%) respondents with this level of civic attitude participated in zero or one written reflection while 15 (18.3%) participated in three written reflections (see Table 5).

Of the 46 participants who scored 4.00 on civic attitude, 25 (54.3%) engaged in two written reflections. Twelve (26.1%) respondents at this level of civic attitude engaged in zero or one, and nine (19.6%) engaged in three written reflections.

Thirty participants (19.0%) scored between 1.00 and 2.99 on civic attitude but had similar patterns of written reflection as respondents with higher civic attitude scores. Most of them (60.0%) engaged in two written reflections while 11 (36.7%) engaged in zero or one and one (3.3%) participated in three written reflections.
Table 4

Sample Civic Attitude Scores

<table>
<thead>
<tr>
<th>Scores</th>
<th>n</th>
<th>% of n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civic Attitude Score</td>
<td>158</td>
<td>100.0%</td>
</tr>
<tr>
<td>1.00 to 2.99</td>
<td>30</td>
<td>19.1%</td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td>82</td>
<td>52.2%</td>
</tr>
<tr>
<td>4.00</td>
<td>46</td>
<td>28.7%</td>
</tr>
</tbody>
</table>
Table 5

Frequency and Percentage of Civic Attitude Score Ranges by Number of Written Reflections

<table>
<thead>
<tr>
<th>Civic Attitude Score (n=158)</th>
<th>Number of Written Reflections</th>
<th>Range Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 or 1</td>
<td>2</td>
</tr>
<tr>
<td>1.00 to 2.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>36.7%</td>
<td>60.0%</td>
</tr>
<tr>
<td>% of Total (n=158)</td>
<td>7.0%</td>
<td>11.4%</td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>22</td>
<td>45</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>26.8%</td>
<td>54.9%</td>
</tr>
<tr>
<td>% of Total (n=158)</td>
<td>13.9%</td>
<td>28.5%</td>
</tr>
<tr>
<td>4.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>26.1%</td>
<td>54.3%</td>
</tr>
<tr>
<td>% of Total (n=158)</td>
<td>7.6%</td>
<td>15.8%</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>88</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>28.5%</td>
<td>55.7%</td>
</tr>
</tbody>
</table>

χ² = 4.682, df = 4, n.s.

Note: The categories of 0 and 1 have been collapsed.
A chi-square analysis yielded no significance in the relationship of civic attitude scores and number of written reflections ($\chi^2=4.682$, df=4, n.s.). The significance level was greater than .05, so the null hypothesis failed to be rejected.

**Civic Attitude Scores, Written Reflection, and Gender.** To examine civic attitude scores, written reflection, and gender, the data for this analysis were filtered to extract the participants with one or more written reflections. Of the 104 student participants in this analysis, 54 (51.9%) scored between 3.00 and 3.99 on civic attitude, and 74.1% (40) of them were female. Only 14 (25.9%) of the participants at this level were male (see Table 6).

Of the 29 participants who scored 4.00 on civic attitude, 26 (89.7%) were female while three (10.3%) were male. There were 21 participants who had civic attitude scores between 1.00 and 2.99 with 16 (76.2%) being female and the remaining five (23.8%) male.

A chi-square analysis yielded no significance in the relationship of civic attitude scores and gender in the students who performed one or more written reflections ($\chi^2=2.858$, df=2, n.s.). The significance level was greater than .05, so the null hypothesis failed to be rejected.

**Civic Attitude Scores, Written Reflection, and Class Year.** To examine civic attitude scores, written reflection, and class year, the data for this analysis were filtered to extract the participants with one or more written reflections. Of the 103 student participants in this analysis, 54 (52.9%) scored between 3.00 and 3.99 on civic attitude, and 51.9% (28) of them were in their fourth year or above in college. Twelve (22.2%) respondents with this level of civic attitude were in their first or second year while 14 (25.9%) were in their third year (see Table 7).

Of the 28 participants who scored 4.00 on civic attitude, 11 (39.3%) were in their third year of college while 10 (35.7%) were in their fourth year and above. Seven (25.0%) of the respondents at this level were in their first year or second year.
Table 6

Frequency and Percentage of Civic Attitude Score Ranges by Gender*

<table>
<thead>
<tr>
<th>Civic Attitude Score (n=104)</th>
<th>Gender</th>
<th>Range Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>M</td>
</tr>
<tr>
<td>1.00 to 2.99</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>76.2%</td>
<td>23.8%</td>
</tr>
<tr>
<td>% of Total (n=104)</td>
<td>15.4%</td>
<td>4.8%</td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td>40</td>
<td>14</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>74.1%</td>
<td>25.9%</td>
</tr>
<tr>
<td>% of Total (n=104)</td>
<td>38.5%</td>
<td>13.5%</td>
</tr>
<tr>
<td>4.00</td>
<td>26</td>
<td>3</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>89.7%</td>
<td>10.3%</td>
</tr>
<tr>
<td>% of Total (n=104)</td>
<td>25.0%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Total</td>
<td>82</td>
<td>22</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>78.8%</td>
<td>21.2%</td>
</tr>
</tbody>
</table>

\[ x^2 = 2.858, \text{df} = 2, \text{n.s.} \]

*Extracted Cases: Participants with one or more written reflections.
Table 7

Frequency and Percentage of Civic Attitude Score Ranges by Class Year*

<table>
<thead>
<tr>
<th>Civic Attitude Score (n=103)</th>
<th>1st&amp;2nd</th>
<th>3rd</th>
<th>4th+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00 to 2.99</td>
<td>Count</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>19.0%</td>
<td>47.6%</td>
<td>33.3%</td>
<td>100%</td>
</tr>
<tr>
<td>% of Total (n=103)</td>
<td>3.9%</td>
<td>9.7%</td>
<td>6.8%</td>
<td>20.4%</td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td>Count</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>22.2%</td>
<td>25.9%</td>
<td>51.9%</td>
<td>100%</td>
</tr>
<tr>
<td>% of Total (n=103)</td>
<td>11.7%</td>
<td>13.6%</td>
<td>27.2%</td>
<td>52.4%</td>
</tr>
<tr>
<td>4.00</td>
<td>Count</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>25.0%</td>
<td>39.3%</td>
<td>35.7%</td>
<td>100%</td>
</tr>
<tr>
<td>% of Total (n=103)</td>
<td>6.8%</td>
<td>10.7%</td>
<td>9.7%</td>
<td>27.2%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>22.3%</td>
<td>34.0%</td>
<td>43.7%</td>
<td>100%</td>
</tr>
</tbody>
</table>

χ² = 4.350, df = 4, n.s.

*Extracted Cases: Participants with one or more written reflections.

Note. The categories of 1st Year and 2nd Year were collapsed.
Twenty-one participants (20.4%) scored between 1.00 and 2.99 on civic attitude. Most of them (47.6%) were in their third year while seven (33.3%) were in their fourth year and above. Four (19.0%) respondents at this level were in their first or second year.

A chi-square analysis yielded no significance in the relationship of civic attitude scores and class year in the students who performed one or more written reflections ($\chi^2 = 4.350$, df = 4, n.s.). The significance level was greater than .05, so the null hypothesis failed to be rejected.

Civic Attitude Scores, Written Reflection, and GPA. To examine civic attitude scores, written reflection, and GPA, the data for this analysis were filtered to extract the participants with one or more written reflections. Of the 103 student participants in this analysis, 54 (52.4%) scored between 3.00 and 3.99 on civic attitude, and 33.3% (18) of them had a GPA between 3.00 and 3.49. Seventeen (31.5%) had a GPA between 2.50 and 2.99 while 12 (22.2%) had a GPA between below 2.00 and 2.49. Seven (13.0%) had a GPA of 3.50 or better (see Table 8).

Of the 28 participants who scored 4.00 on civic attitude, 10 (35.7%) had a GPA between 2.50 and 2.99 while seven (25.0%) had a GPA between below 2.00 and 2.49 and seven (25.0%) had a GPA between 3.00 and 3.49. Four (14.3%) participants at this level of civic attitude had a GPA of 3.50 or better.

Twenty-one participants (20.4%) scored between 1.00 and 2.99 on civic attitude. Almost a third of them (28.6%) had a GPA between 2.50 and 2.99 while five (23.8%) had a GPA between 3.00 and 3.49 and five (23.8%) had a GPA of 3.50 or better. Five respondents (23.8%) at this level had a GPA between below 2.00 and 2.49.

A chi-square analysis yielded no significance in the relationship of civic attitude scores and GPA in the students who performed one or more written reflections ($\chi^2 = 2.145$, df = 6, n.s.). The significance level was greater than .05, so the null hypothesis failed to be rejected.
Table 8

Frequency and Percentage of Civic Attitude Score Ranges by GPA*

<table>
<thead>
<tr>
<th>Civic Attitude Score ($n=103$)</th>
<th>GPA</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;2.0-2.49</td>
<td>2.5-2.99</td>
<td>3.0-3.49</td>
<td>3.5+</td>
<td>Total</td>
</tr>
<tr>
<td>1.00 to 2.99</td>
<td>Count</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>% within Civic Attitude Score</td>
<td>23.8%</td>
<td>28.6%</td>
<td>23.8%</td>
<td>23.8%</td>
</tr>
<tr>
<td></td>
<td>% of Total ($n=103$)</td>
<td>4.9%</td>
<td>5.8%</td>
<td>4.9%</td>
<td>4.9%</td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td>Count</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>17</td>
<td>18</td>
<td>7</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>% within Civic Attitude Score</td>
<td>22.2%</td>
<td>31.5%</td>
<td>33.3%</td>
<td>13.0%</td>
</tr>
<tr>
<td></td>
<td>% of Total ($n=103$)</td>
<td>11.7%</td>
<td>16.5%</td>
<td>17.5%</td>
<td>6.8%</td>
</tr>
<tr>
<td>4.00</td>
<td>Count</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>10</td>
<td>7</td>
<td>4</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>% within Civic Attitude Score</td>
<td>25.0%</td>
<td>35.7%</td>
<td>25.0%</td>
<td>14.3%</td>
</tr>
<tr>
<td></td>
<td>% of Total ($n=103$)</td>
<td>6.8%</td>
<td>9.7%</td>
<td>6.8%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>33</td>
<td>30</td>
<td>16</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>% within Civic Attitude Score</td>
<td>23.3%</td>
<td>32.0%</td>
<td>29.1%</td>
<td>15.5%</td>
</tr>
</tbody>
</table>

$x^2 = 2.145$, df = 6, n.s.

*Extracted Cases: Participants with one or more written reflections.

Note. The categories of below 2.00 and 2.00-2.49 were collapsed.
Civic Attitude Scores and Discussion Reflection

Civic attitude scores were examined by number of discussion reflections. Of the 158 student participants in this analysis, 82 (51.9%) scored between 3.00 and 3.99 on civic attitude, and 51.2% (45) of them engaged in three discussion reflections. Ten (12.2%) respondents with this level of civic attitude participated in zero or one discussion reflection while 30 (36.6%) participated in two discussion reflections (see Table 9).

Of the 46 participants who scored 4.00 on civic attitude, 23 (50.0%) engaged in three discussion reflections while 15 (32.6%) engaged in two. Eight (17.4%) respondents at this level of civic attitude engaged in zero or one discussion reflection.

Thirty participants (19.0%) scored between 1.00 and 2.99 on civic attitude. Most of them (40.0%) engaged in two discussion reflections while seven (23.3%) participated in three discussion reflections. Eleven (36.7%) respondents at this level participated in zero or one discussion reflection.

A chi-square analysis yielded a statistically significant relationship of civic attitude scores and number of discussion reflections ($\chi^2 = 11.514$, df=4, $p<.05$). The total percentages were compared with the civic attitude score range percentages to identify the strengths of the relationship between the variables.

A total of 29 (18.4%) participants performed zero or one discussion reflection while they comprised 36.7% of those who scored between 1.00 and 2.99 on civic attitude. A total of 57 (36.1%) participants did two discussion reflections while they comprised 40.0% of those who scored between 1.00 and 2.99 on civic attitude. There were 72 (45.6%) respondents in total who did three discussion reflections while they represented 51.2% of those with civic attitude scores between 3.00 and 3.99 and comprised 50.0% of those with a 4.00 civic attitude score.
Table 9

Frequency and Percentage of Civic Attitude Score Ranges by Number of Discussion Reflections

<table>
<thead>
<tr>
<th>Civic Attitude Score (n=158)</th>
<th>Number of Discussion Reflections</th>
<th>Range Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 or 1</td>
<td>2</td>
</tr>
<tr>
<td>1.00 to 2.99</td>
<td>Count</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>% within Civic Attitude Score</td>
<td>36.7%</td>
</tr>
<tr>
<td></td>
<td>% of Total (n=158)</td>
<td>7.0%</td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td>Count</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>% within Civic Attitude Score</td>
<td>12.2%</td>
</tr>
<tr>
<td></td>
<td>% of Total (n=158)</td>
<td>6.3%</td>
</tr>
<tr>
<td>4.00</td>
<td>Count</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>% within Civic Attitude Score</td>
<td>17.4%</td>
</tr>
<tr>
<td></td>
<td>% of Total (n=158)</td>
<td>5.1%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>% within Civic Attitude Score</td>
<td>18.4%</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 11.514, \text{ df} = 4, p < .05 \]

Note: The categories of 0 and 1 were collapsed.
Civic Attitude Scores, Discussion Reflection, and Gender. To examine civic attitude scores, discussion reflection, and gender, the data for this analysis were filtered to extract the participants with one or more discussion reflections. Of the 109 student participants in this analysis, 56 (51.4%) scored between 3.00 and 3.99 on civic attitude, and 75.0% (42) of them were female. Only 14 (25.0%) of the participants at this level were male (see Table 10).

Of the 32 participants who scored 4.00 on civic attitude, 29 (90.6%) were female while three (9.4%) were male. There were 21 participants who had civic attitude scores between 1.00 and 2.99 with 16 (76.2%) being female and the remaining five (23.8%) male.

A chi-square analysis yielded no significance in the relationship of civic attitude scores and gender in the students who performed on or more discussion reflections ($\chi^2=3.298$, df=2, n.s.). The significance level was greater than .05, so the null hypothesis failed to be rejected.

Civic Attitude Scores, Discussion Reflection, and Class Year. To examine civic attitude scores, discussion reflection, and class year, the data for this analysis were filtered to extract the participants with one or more discussion reflections. Of the 108 student participants in this analysis, 56 (51.9%) scored between 3.00 and 3.99 on civic attitude, and 50.0% (28) of them were in their fourth year or above in college. Twelve (21.4%) respondents with this level of civic attitude were in their first or second year while 16 (28.6%) were in their third year (see Table 11).

Of the 31 participants who scored 4.00 on civic attitude, 12 (38.7%) were in their third year of college. Eleven (35.5%) respondents at this level of civic attitude were in their fourth year and above and eight (25.8%) were in their first or second year.
Table 10

Frequency and Percentage of Civic Attitude Score Ranges by Gender*

<table>
<thead>
<tr>
<th>Civic Attitude Score ($n=109$)</th>
<th>Gender</th>
<th>Range Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>F  M</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>1.00 to 2.99</td>
<td>Count</td>
<td>16 5</td>
</tr>
<tr>
<td></td>
<td>% within Civic Attitude Score</td>
<td>76.2% 23.8%</td>
</tr>
<tr>
<td></td>
<td>% of Total ($n=109$)</td>
<td>14.7% 4.6%</td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td>Count</td>
<td>42 14</td>
</tr>
<tr>
<td></td>
<td>% within Civic Attitude Score</td>
<td>75.0% 25.0%</td>
</tr>
<tr>
<td></td>
<td>% of Total ($n=109$)</td>
<td>38.5% 12.8%</td>
</tr>
<tr>
<td>4.00</td>
<td>Count</td>
<td>29 3</td>
</tr>
<tr>
<td></td>
<td>% within Civic Attitude Score</td>
<td>90.6% 9.4%</td>
</tr>
<tr>
<td></td>
<td>% of Total ($n=109$)</td>
<td>26.6% 2.8%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>87 22</td>
</tr>
<tr>
<td></td>
<td>% within Civic Attitude Score</td>
<td>78.8% 21.2%</td>
</tr>
</tbody>
</table>

$x^2 = 3.298$, df = 2, n.s.

*Extracted Cases: Participants with one or more discussion reflections.
Table 11

<table>
<thead>
<tr>
<th>Civic Attitude Score (n=108)</th>
<th>Class Year</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st&amp;2nd</td>
<td>3rd</td>
</tr>
<tr>
<td>1.00 to 2.99</td>
<td>Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>19.0%</td>
<td>52.4%</td>
</tr>
<tr>
<td>% of Total (n=108)</td>
<td>3.7%</td>
<td>10.2%</td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td>Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>21.4%</td>
<td>28.6%</td>
</tr>
<tr>
<td>% of Total (n=108)</td>
<td>11.1%</td>
<td>14.8%</td>
</tr>
<tr>
<td>4.00</td>
<td>Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>25.8%</td>
<td>38.7%</td>
</tr>
<tr>
<td>% of Total (n=108)</td>
<td>7.4%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>24</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>22.2%</td>
<td>36.1%</td>
</tr>
</tbody>
</table>

\[ x^2 = 4.851, \text{df} = 4, \text{n.s.} \]

*Extracted Cases: Participants with one or more discussion reflections.

Note. The categories of 1st Year and 2nd Year were collapsed.
Twenty-one participants (19.4%) scored between 1.00 and 2.99 on civic attitude. Most of them (52.4%) were in their third year while six (28.6%) were in their fourth year and above and four (19.0%) were in their first or second year.

A chi-square analysis yielded no significance in the relationship of civic attitude scores and class year in the students who performed one or more discussion reflections ($\chi^2=4.851$, df=4, n.s.). The significance level was greater than .05, so the null hypothesis failed to be rejected.

Civic Attitude Scores, Discussion Reflection, and GPA. To examine civic attitude scores, discussion reflection, and GPA, the data for this analysis were filtered to extract the participants with one or more discussion reflections. Of the 108 student participants in this analysis, 56 (51.9%) scored between 3.00 and 3.99 on civic attitude, and 33.9% (19) of them had a GPA between 2.50 and 2.99. Eighteen (32.1%) had a GPA 3.00 and 3.49 while 12 (21.4%) had a GPA between below 2.00 and 2.49 and seven (12.5%) had a GPA of 3.50 or better (see Table 12).

Of the 31 participants who scored 4.00 on civic attitude, 11 (35.5%) had a GPA between 2.50 and 2.99. Eight (25.8%) had a GPA between below 2.00 and 2.49, and eight (25.8%) had a GPA between 3.00 and 3.49. Four (12.9%) participants at this level of civic attitude had a GPA of 3.50 or better.

Twenty-one participants (19.4%) scored between 1.00 and 2.99 on civic attitude. Six (28.6%) had a GPA between 2.50 and 2.99 while five (23.8%) had a GPA between 3.00 and 3.49. Five (23.8%) had a GPA of 3.50 or better, and five (19.0%) respondents at this level had a GPA between below 2.00 and 2.49.

Table 12

<table>
<thead>
<tr>
<th>Civic Attitude Score (n=108)</th>
<th>GPA</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;2.0-2.49</td>
<td>2.5-2.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>% within Civic Attitude Score</td>
<td>% of Total (n=108)</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.00 to 2.99</td>
<td>5  6  5  5  5  21</td>
<td>23.8% 28.6% 23.8% 23.8% 100%</td>
</tr>
<tr>
<td></td>
<td>% within Civic Attitude Score</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.6%  5.6%  4.6%  4.6%  19.4%</td>
<td></td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td>12  19  18  7  56</td>
<td>21.4% 33.9% 32.1% 12.5% 100%</td>
</tr>
<tr>
<td></td>
<td>% within Civic Attitude Score</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11.1% 17.6% 16.7% 6.5% 51.9%</td>
<td></td>
</tr>
<tr>
<td>4.00</td>
<td>8  11  8  4  31</td>
<td>25.8% 35.5% 25.8% 12.9% 100%</td>
</tr>
<tr>
<td></td>
<td>% within Civic Attitude Score</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.4% 10.2% 7.4% 3.7% 28.7%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>25  36  31  16  108</td>
<td>23.1% 33.3% 28.7% 14.8% 100%</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 2.284, \text{ df }= 6, \text{ n.s.} \]

*Extracted Cases: Participants with one or more discussion reflections.

Note. The categories of below 2.00 and 2.00-2.49 were collapsed.
A chi-square analysis yielded no significance in the relationship of civic attitude scores and GPA in the students who performed one or more discussion reflections ($\chi^2=2.284$, df=6, n.s.). The significance level was greater than .05, so the null hypothesis failed to be rejected.

**Civic Attitude Scores and Out-of-Class Reflection**

Civic attitude scores were examined by amount of out-of-class reflection. Of the 158 student participants in this analysis, 82 (51.9%) scored between 3.00 and 3.99 on civic attitude, and 50.0% (41) of them engaged in out-of-class reflections once a week or more. Fourteen (17.1%) respondents with this level of civic attitude reflected outside of class once or twice during the semester or less while 27 (32.9%) reflected outside of class one to two times per month (see Table 13).

Of the 46 participants who scored 4.00 on civic attitude, 29 (63.0%) engaged in out-of-class reflections once a week or more while 13 (32.6%) reflected outside of class one to two times per month. Four (8.7%) participants at this level of civic attitude performed out-of-class reflections one or two times during the semester or less.

Thirty participants (19.0%) scored between 1.00 and 2.99 on civic attitude. A little over a third (36.7%) reflected outside of class one to two times per month while nine (30.0%) reflected outside of class once or twice a week. Ten (33.3%) performed out-of-class reflections one or two times during the semester or less.

A chi-square analysis yielded a statistically significant relationship of civic attitude scores and amount of out-of-class reflection ($\chi^2=10.645$, df=4, $\rho<.05$). The total percentages were compared with the civic attitude score range percentages to identify the strengths of the relationship between the variables.
Table 13

Frequency and Percentage of Civic Attitude Score Ranges by Amount of Out-of-Class Reflection

<table>
<thead>
<tr>
<th>Civic Attitude Score (n=158)</th>
<th>Amount of Out-of-Class Reflection</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-2/sem</td>
<td>1-2/mon</td>
</tr>
<tr>
<td>1.00 to 2.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>33.3%</td>
<td>39.7%</td>
</tr>
<tr>
<td>% of Total (n=158)</td>
<td>6.3%</td>
<td>7.0%</td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>14</td>
<td>27</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>17.1%</td>
<td>32.9%</td>
</tr>
<tr>
<td>% of Total (n=158)</td>
<td>8.9%</td>
<td>17.1%</td>
</tr>
<tr>
<td>4.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>8.7%</td>
<td>28.3%</td>
</tr>
<tr>
<td>% of Total (n=158)</td>
<td>2.5%</td>
<td>8.2%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>28</td>
<td>51</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>17.7%</td>
<td>32.3%</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 10.645, \text{ df } = 4, \ p < .05 \]

Note: The categories of did not reflect on service activities outside of class and once or twice during the semester were collapsed.
There were 28 (17.7%) respondents in total who performed out-of-class reflections once or twice a semester or less while they represented 33.3% of those who had civic attitude scores between 1.00 and 2.99. A total of 51 (32.3%) respondents performed one to two out-of-class reflections per month while they comprised 36.7% of those who scored between 1.00 and 2.99 on civic attitude. There were 79 (50.0%) respondents in total who reflected outside of class one to two times a week while they represented 63.0% of those with a 4.00 civic attitude score.

**Civic Attitude Scores, Out-of-Class Reflection, and Gender.** To examine civic attitude scores, out-of-class reflections, and gender, the data for this analysis were filtered to extract the participants who reflected outside of class at least once during the semester. Of the 102 student participants in this analysis, 53 (52.0%) scored between 3.00 and 3.99 on civic attitude, and 75.5% (40) of them were female. Only 13 (24.5%) of the participants at this level were male (see Table 14).

Of the 30 participants who scored 4.00 on civic attitude, 27 (90.0%) were female while three (10.0%) were male. There were 19 participants who had civic attitude scores between 1.00 and 2.99 with 14 (73.7%) being female and the remaining five (26.3%) male.

A chi-square analysis yielded no significance in the relationship of civic attitude scores and gender in the students who reflected outside of class at least once during the semester ($\chi^2=2.942$, df=2, n.s.). The significance level was greater than .05, so the null hypothesis failed to be rejected.

**Civic Attitude Scores, Out-of-Class Reflection, and Class Year.** To examine civic attitude scores, out-of-class reflection, and class year, the data for this analysis were filtered to extract the participants who reflected outside of class at least once during the semester. Of the 101 student participants in this analysis, 53 (52.5%) scored between 3.00 and 3.99 on civic attitude, and
Table 14

Frequency and Percentage of Civic Attitude Score Ranges by Gender*

<table>
<thead>
<tr>
<th>Civic Attitude Score (n=102)</th>
<th>Gender</th>
<th>Range Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>M</td>
</tr>
<tr>
<td>1.00 to 2.99</td>
<td>Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>73.7%</td>
<td>23.8%</td>
</tr>
<tr>
<td>% of Total (n=102)</td>
<td>13.7%</td>
<td>4.9%</td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td>Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>13</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>75.5%</td>
<td>24.5%</td>
</tr>
<tr>
<td>% of Total (n=102)</td>
<td>39.2%</td>
<td>12.7%</td>
</tr>
<tr>
<td>4.00</td>
<td>Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td>27</td>
<td>3</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>90.6%</td>
<td>10.0%</td>
</tr>
<tr>
<td>% of Total (n=102)</td>
<td>26.5%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td>81</td>
<td>21</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>79.4%</td>
<td>20.6%</td>
</tr>
</tbody>
</table>

\[ x^2 = 2.942, \text{ df} = 2, \text{n.s.} \]

*Extracted Cases: Participants who reflected outside of class at least once during the semester.
49.1% (26) of them were in their fourth year or above in college. Eleven (20.8%) respondents with this level of civic attitude were in their first or second year while 16 (30.2%) were in their third year (see Table 15).

Of the 29 participants who scored 4.00 on civic attitude, 11 (37.9%) were in their third year of college while 10 (34.5%) were in their fourth year and above. Eight (17.2%) participants at this level of civic attitude were in their first or second year.

Nineteen participants (18.8%) scored between 1.00 and 2.99 on civic attitude. Most of them (52.6%) were in their third year while five (26.3%) were in their fourth year and above. Four (21.1%) respondents at this level of civic attitude were in their first or second year.

A chi-square analysis yielded no significance in the relationship of civic attitude scores and class year in the students who reflected outside of class at least once during the semester ($\chi^2=4.512$, df=4, n.s.). The significance level was greater than .05, so the null hypothesis failed to be rejected.

**Civic Attitude Scores, Out-of-Class Reflection, and GPA.** To examine civic attitude scores, out-of-class reflection, and GPA, the data for this analysis were filtered to extract the participants who reflected outside of class at least once during the semester. Of the 101 student participants in this analysis, 53 (52.5%) scored between 3.00 and 3.99 on civic attitude, and 34.0% (18) of them had a GPA between 2.50 and 2.99. Sixteen (30.2%) had a GPA between 3.00 and 3.49 while 12 (22.6%) had a GPA between below 2.0 and 2.49. Seven (13.2%) respondents with this level of civic attitude had a GPA of 3.50 or better (see Table 16).

Of the 29 participants who scored 4.00 on civic attitude, 11 (37.9%) had a GPA between 2.50 and 2.99 while eight (27.6%) had a GPA between below 2.00 and 2.49. Seven (24.1%) had
Table 15

Frequency and Percentage of Civic Attitude Score Ranges by Class Year*

<table>
<thead>
<tr>
<th>Civic Attitude Score ($n=101$)</th>
<th>Class Year</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st&amp;2nd</td>
<td>3rd</td>
</tr>
<tr>
<td>1.00 to 2.99</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>21.1%</td>
<td>52.6%</td>
</tr>
<tr>
<td>% of Total ($n=101$)</td>
<td>4.0%</td>
<td>9.9%</td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>Count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>20.8%</td>
<td>30.2%</td>
</tr>
<tr>
<td>% of Total ($n=101$)</td>
<td>10.9%</td>
<td>15.8%</td>
</tr>
<tr>
<td>4.00</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>27.6%</td>
<td>37.9%</td>
</tr>
<tr>
<td>% of Total ($n=101$)</td>
<td>7.9%</td>
<td>10.9%</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>37</td>
</tr>
<tr>
<td>Count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>22.8%</td>
<td>36.6%</td>
</tr>
</tbody>
</table>

$\chi^2 = 4.512$, df = 4, n.s.

*Extracted Cases: Participants who reflected outside of class at least once during the semester.

Note. The categories of 1st Year and 2nd Year were collapsed.
Table 16

Frequency and Percentage of Civic Attitude Score Ranges by GPA*

<table>
<thead>
<tr>
<th>Civic Attitude Score (n=101)</th>
<th>GPA</th>
<th>&lt;2.0-2.49</th>
<th>2.5-2.99</th>
<th>3.0-3.49</th>
<th>3.5+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00 to 2.99</td>
<td>Count</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>26.3%</td>
<td>26.3%</td>
<td>26.3%</td>
<td>21.1%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>% of Total (n=101)</td>
<td>5.0%</td>
<td>5.0%</td>
<td>5.0%</td>
<td>4.0%</td>
<td>18.8%</td>
<td></td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td>Count</td>
<td>12</td>
<td>18</td>
<td>16</td>
<td>7</td>
<td>53</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>22.6%</td>
<td>34.0%</td>
<td>30.2%</td>
<td>13.2%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>% of Total (n=101)</td>
<td>11.9%</td>
<td>17.8%</td>
<td>15.8%</td>
<td>6.9%</td>
<td>52.5%</td>
<td></td>
</tr>
<tr>
<td>4.00</td>
<td>Count</td>
<td>8</td>
<td>11</td>
<td>7</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>27.6%</td>
<td>37.9%</td>
<td>24.1%</td>
<td>10.3%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>% of Total (n=101)</td>
<td>7.9%</td>
<td>10.9%</td>
<td>6.9%</td>
<td>3.0%</td>
<td>28.7%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>25</td>
<td>34</td>
<td>28</td>
<td>14</td>
<td>101</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>24.8%</td>
<td>33.7%</td>
<td>27.7%</td>
<td>13.9%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

\[ \chi^2 = 1.919, \text{df} = 6, \text{n.s.} \]

*Extracted Cases: Participants who reflected outside of class at least once during the semester.

Note: The categories of below 2.00 and 2.00-2.49 were collapsed.
a GPA between 3.00 and 3.49, and three (10.3%) participants at this level of civic attitude had a GPA of 3.50 or better.

Nineteen participants (18.8%) scored between 1.00 and 2.99 on civic attitude. Five (23.6%) had a GPA between 2.50 and 2.99, and five (26.3%) had a GPA between 3.00 and 3.49. At this level, there were four respondents (21.1%) with a GPA of 3.50 or better and another five (26.3%) with a GPA between below 2.00 and 2.49.

A chi-square analysis yielded no significance in the relationship of civic attitude scores and GPA in the students who reflected outside of class at least once during the semester ($\chi^2=1.919$, df=6, n.s.). The significance level was greater than .05, so the null hypothesis failed to be rejected.

**Civic Attitude Scores and In-Class Reflection**

Civic attitude scores were examined by amount of in-class reflection. Of the 158 student participants in this analysis, 82 (51.9%) scored between 3.00 and 3.99 on civic attitude, and 42.7% (35) of them reflected in class once or twice during the semester. Seven (8.5%) respondents with this level of civic attitude did not reflect in class while 25 (30.5%) reflected during class one to two times per month and 15 (18.3%) performed in-class reflections once or twice a week (see Table 17).

Of the 46 participants who scored 4.00 on civic attitude, 17 (37.0%) engaged in in-class reflections once or twice during the semester while 13 (28.3%) reflected in class one to two times per month. Ten (21.7%) performed in-class reflections once or twice a week, and six (13.0%) participants at this level of civic attitude engaged in no reflections during class.

Thirty participants (19.0%) scored between 1.00 and 2.99 on civic attitude. Most of them (40.0%) reflected in class one to two times per month while seven (23.3%) did not reflect during
Table 17

Frequency and Percentage of Civic Attitude Score Ranges by Amount of In-Class Reflection

<table>
<thead>
<tr>
<th>Civic Attitude Score</th>
<th>Amount of In-Class Reflection</th>
<th>Range</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n=158)</td>
<td>0/sem</td>
<td>1-2/sem</td>
<td>1-2/mon</td>
</tr>
<tr>
<td>1.00 to 2.99</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>7</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>23.3%</td>
<td>20.0%</td>
<td>40.0%</td>
</tr>
<tr>
<td>% of Total (n=158)</td>
<td>4.4%</td>
<td>3.8%</td>
<td>7.6%</td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>7</td>
<td>35</td>
<td>25</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>8.5%</td>
<td>42.7%</td>
<td>30.5%</td>
</tr>
<tr>
<td>% of Total (n=158)</td>
<td>4.4%</td>
<td>22.2%</td>
<td>15.8%</td>
</tr>
<tr>
<td>4.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>6</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>13.0%</td>
<td>37.0%</td>
<td>28.3%</td>
</tr>
<tr>
<td>% of Total (n=158)</td>
<td>3.8%</td>
<td>10.8%</td>
<td>8.2%</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>58</td>
<td>50</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>12.7%</td>
<td>36.7%</td>
<td>31.6%</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 8.039, \text{ df} = 6, \text{ n.s.} \]
class at all. Six (16.7%) performed in-class reflections one or two times during the semester, and five (16.7%) participants at this level of civic attitude reflected in class once a week or more.

A chi-square analysis yielded no significance in the relationship of civic attitude scores and amount of in-class reflection ($\chi^2=8.039$, df=6, n.s.). The significance level was greater than .05, so the null hypothesis failed to be rejected.

Civic Attitude Scores, In-Class Reflection, and Gender. To examine civic attitude scores, in-class reflections, and gender, the data for this analysis were filtered to extract the participants who reflected in-class at least once during the semester. Of the 95 student participants in this analysis, 50 (52.6%) scored between 3.00 and 3.99 on civic attitude, and 72.0% (36) of them were female. Only 14 (28.0%) of the participants at this level were male (see Table 18).

Of the 28 participants who scored 4.00 on civic attitude, 25 (89.3%) were female while three (10.7%) were male. There were 17 participants who had civic attitude scores between 1.00 and 2.99 with 13 (76.5%) being female and the remaining four (23.5%) male.

A chi-square analysis yielded no significance in the relationship of civic attitude scores and gender in the students who reflected in-class at least once during the semester ($\chi^2=3.139$, df=2, n.s.). The significance level was greater than .05, so the null hypothesis failed to be rejected.

Civic Attitude Scores, In-Class Reflection, and Class Year. To examine civic attitude scores, in-class reflection, and class year, the data for this analysis were filtered to extract the participants who reflected outside of class at least once during the semester. Of the 95 student participants in this analysis, 50 (52.6%) scored between 3.00 and 3.99 on civic attitude, and 50.0% (25) of them were in their fourth year or above in college. Twelve (24.0%) respondents
Table 18

Frequency and Percentage of Civic Attitude Score Ranges by Gender*

<table>
<thead>
<tr>
<th>Civic Attitude Score (n=95)</th>
<th>Gender</th>
<th></th>
<th>Range Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>1.00 to 2.99</td>
<td>13</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>76.5%</td>
<td>23.5%</td>
<td>100%</td>
</tr>
<tr>
<td>% of Total (n=95)</td>
<td>13.7%</td>
<td>4.2%</td>
<td>17.9%</td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td>36</td>
<td>14</td>
<td>50</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>72.0%</td>
<td>28.0%</td>
<td>100%</td>
</tr>
<tr>
<td>% of Total (n=95)</td>
<td>37.9%</td>
<td>14.7%</td>
<td>52.6%</td>
</tr>
<tr>
<td>4.00</td>
<td>25</td>
<td>3</td>
<td>28</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>89.3%</td>
<td>10.7%</td>
<td>100%</td>
</tr>
<tr>
<td>% of Total (n=95)</td>
<td>26.3%</td>
<td>3.2%</td>
<td>29.5%</td>
</tr>
<tr>
<td>Total</td>
<td>74</td>
<td>21</td>
<td>95</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>77.9%</td>
<td>22.1%</td>
<td>100%</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 3.139, \text{df} = 2, \text{n.s.} \]

*Extracted Cases: Participants who reflected in class at least once during the semester.
with this level of civic attitude were in their first or second year while 13 (26.0%) were in their third year (see Table 19).

Of the 28 participants who scored 4.00 on civic attitude, 12 (42.9%) were in their third year of college while nine (32.1%) were in their fourth year and above. Seven (25.0%) participants at this level of civic attitude were in their first or second year.

Seventeen participants (17.9%) scored between 1.00 and 2.99 on civic attitude. Most of them (41.2%) were in their third year while six (35.3%) were in their fourth year and above. Four (15.8%) respondents at this level of civic attitude were in their first or second year.

A chi-square analysis yielded no significance in the relationship of civic attitude scores and class year in the students who reflected in class at least once during the semester ($\chi^2=3.458$, df=4, n.s.). The significance level was greater than .05, so the null hypothesis failed to be rejected.

Civic Attitude Scores, In-Class Reflection, and GPA. To examine civic attitude scores, in-class reflection, and GPA, the data for this analysis were filtered to extract the participants who reflected in class at least once during the semester. Of the 95 student participants in this analysis, 50 (52.6%) scored between 3.00 and 3.99 on civic attitude, and 36.0% (18) of them had a GPA between 3.00 and 3.49. Fifteen (30.0%) had a GPA 2.50 and 2.99 while ten (20.0%) had a GPA between below 2.00 and 2.49. Seven (14.0%) respondents with this level of civic attitude had a GPA of 3.50 or better (see Table 20).

Of the 28 participants who scored 4.00 on civic attitude, nine (32.1%) had a GPA between 2.50 and 2.99 while eight (28.6%) had a GPA between 3.00 and 3.49. Seven (25.0%) had a GPA between below 2.00 and 2.49, and four (14.3%) participants at this level of civic attitude had a GPA of 3.50 or better.
### Table 19

**Frequency and Percentage of Civic Attitude Score Ranges by Class Year**

<table>
<thead>
<tr>
<th>Civic Attitude Score (n=95)</th>
<th>1st&amp;2nd</th>
<th>3rd</th>
<th>4th+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00 to 2.99</td>
<td>Count</td>
<td>% within Civic Attitude Score</td>
<td>% of Total (n=95)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>6</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>23.5%</td>
<td>41.2%</td>
<td>35.3%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>4.2%</td>
<td>7.4%</td>
<td>6.3%</td>
<td>17.9%</td>
<td></td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td>Count</td>
<td>% within Civic Attitude Score</td>
<td>% of Total (n=95)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>13</td>
<td>25</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>24.0%</td>
<td>26.0%</td>
<td>50.0%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>12.6%</td>
<td>13.7%</td>
<td>26.3%</td>
<td>52.6%</td>
<td></td>
</tr>
<tr>
<td>4.00</td>
<td>Count</td>
<td>% within Civic Attitude Score</td>
<td>% of Total (n=95)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>12</td>
<td>9</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>25.0%</td>
<td>42.9%</td>
<td>32.1%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>7.4%</td>
<td>12.6%</td>
<td>9.5%</td>
<td>29.5%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>% within Civic Attitude Score</td>
<td>% of Total (n=95)</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>32</td>
<td>40</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>24.2%</td>
<td>33.7%</td>
<td>42.1%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

\[ \chi^2 = 3.458, \text{ df} = 4, \text{ n.s.} \]

*Extracted Cases: Participants who reflected in class at least once during the semester.

**Note:** The categories of 1st Year and 2nd Year were collapsed.
Table 20

Frequency and Percentage of Civic Attitude Score Ranges by GPA*

<table>
<thead>
<tr>
<th>Civic Attitude Score (n=95)</th>
<th>GPA</th>
<th>Range Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;2.0-2.49</td>
<td>2.5-2.99</td>
</tr>
<tr>
<td>1.00 to 2.99</td>
<td>Count</td>
<td>4 5 4 4</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>23.5% 29.4% 23.5% 23.5%</td>
<td>100%</td>
</tr>
<tr>
<td>% of Total (n=95)</td>
<td>4.2% 5.3% 4.2% 4.2%</td>
<td>17.9%</td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td>Count</td>
<td>10 15 18 7</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>20.0% 30.0% 36.0% 14.0%</td>
<td>100%</td>
</tr>
<tr>
<td>% of Total (n=95)</td>
<td>10.5% 15.8% 18.9% 7.4%</td>
<td>52.6%</td>
</tr>
<tr>
<td>4.00</td>
<td>Count</td>
<td>7 9 8 4</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>25.0% 32.1% 28.6% 14.3%</td>
<td>100%</td>
</tr>
<tr>
<td>% of Total (n=95)</td>
<td>7.4% 9.5% 8.4% 4.2%</td>
<td>29.5%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>21 29 30 15</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>22.1% 30.5% 31.6% 15.8%</td>
<td>100%</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 1.782, \text{df} = 8, \text{n.s.} \]

* Extracted Cases: Participants who reflected in class at least once during the semester.

Note: The categories of below 2.00 and 2.00-2.49 were collapsed.
Seventeen participants (17.9%) scored between 1.00 and 2.99 on civic attitude. Five (29.4%) had a GPA between 2.50 and 2.99, and four (23.5%) had a GPA between 3.00 and 3.49. At this level, there were four respondents (23.5%) with a GPA of 3.50 or better and another four (23.5%) with a GPA between below 2.00 and 2.49.

A chi-square analysis yielded no significance in the relationship of civic attitude scores and GPA in the students who reflected in class at least once during the semester ($\chi^2=1.782$, df=8, n.s.). The significance level was greater than .05, so the null hypothesis failed to be rejected.

Future Service

In this section, the relationship between continued service at the SL site and civic attitude scores is explained. Then the likelihood of future community service participation is described in relation to civic attitude scores.

Continued Service at the SL Site and Civic Attitude Scores

Continued service at the SL site was examined by civic attitude scores. Of the 158 student participants in this analysis, 82 (51.9%) scored between 3.00 and 3.99 on civic attitude, and 58.5% (48) of them indicated they would not continue their service at the SL sites after the semester was over. Thirty-four (41.5%) respondents with this level of civic attitude indicated they would continue serving at their SL sites (see Table 21).

Of the 46 participants who scored 4.00 on civic attitude, there was an even split in the group. Twenty-three (50.0%) indicated they would not continue serving and the other 23 (50.0%) indicated they would continue serving.
Table 21

**Frequency and Percentage of Civic Attitude Score Ranges by Continued Service at the Service Learning Site**

<table>
<thead>
<tr>
<th>Civic Attitude Score ($n=158$)</th>
<th>Continued Service</th>
<th>Range</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>1.00 to 2.99</td>
<td>23</td>
<td>7</td>
<td>30</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>76.7%</td>
<td>23.3%</td>
<td>100%</td>
</tr>
<tr>
<td>% of Total ($n=158$)</td>
<td>14.6%</td>
<td>4.4%</td>
<td>19.0%</td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td>48</td>
<td>34</td>
<td>82</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>58.5%</td>
<td>41.5%</td>
<td>100%</td>
</tr>
<tr>
<td>% of Total ($n=158$)</td>
<td>30.4%</td>
<td>21.5%</td>
<td>51.9%</td>
</tr>
<tr>
<td>4.00</td>
<td>23</td>
<td>23</td>
<td>46</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>50.0%</td>
<td>50.0%</td>
<td>100%</td>
</tr>
<tr>
<td>% of Total ($n=158$)</td>
<td>14.6%</td>
<td>14.6%</td>
<td>29.1%</td>
</tr>
</tbody>
</table>

Total Count 94 64 158
% within Civic Attitude Score 59.5% 40.5% 100%

$\chi^2 = 5.423$, df = 2, n.s.
Thirty participants (19.0%) scored between 1.00 and 2.99 on civic attitude. Most of them (76.7%) indicated they would not continue serving while seven (23.3%) indicated they would continue serving.

A chi-square analysis yielded no significance in the relationship of continued service at the SL site and civic attitude scores ($\chi^2=5.423$, df=2, n.s.). The significance level was greater than .05, so the null hypothesis failed to be rejected.

**Future Community Service Participation and Civic Attitude Scores**

Two of the categories in this data analysis were collapsed for a valid chi-square test to result. Changes are noted at the bottom of the table.

Future community service participation was examined by civic attitude scores. Of the 158 student participants in this analysis, 82 (51.9%) scored between 3.00 and 3.99 on civic attitude, and 80.5% (66) of them indicated there was a very good chance they would participate in community service in the future. Sixteen (19.5%) respondents with this level of civic attitude indicated there was little or some chance of future community service participation (see Table 22).

Of the 46 participants who scored 4.00 on civic attitude, 42 (93.1%) indicated a very good chance they would participate in community service in the future. Four (8.7%) respondents indicated little or some chance of future community service participation.

Thirty participants (19.0%) scored between 1.00 and 2.99 on civic attitude. Over half of them (53.3%) indicated there was a very good chance they would participate in community service in the future. Fourteen (46.7%) indicated little or some chance of future community service participation.
Table 22

Frequency and Percentage of Civic Attitude Score Ranges by Future Community Service Participation

<table>
<thead>
<tr>
<th>Civic Attitude Score (n=158)</th>
<th>Future Participation</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>little or some chance</td>
<td>very good chance</td>
<td>Range</td>
<td>Total</td>
</tr>
<tr>
<td>1.00 to 2.99</td>
<td>14</td>
<td>16</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>46.7%</td>
<td>53.3%</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>% of Total (n=158)</td>
<td>8.9%</td>
<td>10.1%</td>
<td></td>
<td>19.0%</td>
</tr>
<tr>
<td>3.00 to 3.99</td>
<td>16</td>
<td>66</td>
<td></td>
<td>82</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>19.5%</td>
<td>80.5%</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>% of Total (n=158)</td>
<td>10.1%</td>
<td>41.8%</td>
<td></td>
<td>51.9%</td>
</tr>
<tr>
<td>4.00</td>
<td>4</td>
<td>42</td>
<td></td>
<td>46</td>
</tr>
<tr>
<td>% within Civic Attitude Score</td>
<td>8.7%</td>
<td>91.3%</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>% of Total (n=158)</td>
<td>2.5%</td>
<td>26.6%</td>
<td></td>
<td>29.1%</td>
</tr>
</tbody>
</table>

Total Count 34 124 158

% within Civic Attitude Score 21.5% 78.5% 100%

$x^2 = 15.908, \text{ df} = 2, p < .05$

Note. Zero participants used the no chance response option, so it was not included. The categories of little chance and some chance were collapsed.
A chi-square analysis yielded a statistically significant relationship of future community service participation and civic attitude scores ($\chi^2=15.908$, df=2, $p<.05$). The total percentages were compared with the civic attitude score range percentages to identify the strengths of the relationship between the variables.

A total of three (1.9%) participants indicated there was very little chance they would participate in future community service while they comprised 6.7% of those who scored between 1.00 and 2.99 on civic attitude and 2.2% of those with a 4.00 civic attitude score. There were 31 (19.6%) respondents who indicated there was some chance for future community service participation while they represented 40.0% of those with civic attitude scores between 1.00 and 2.99. A total of 124 (78.5%) indicated a very good chance for future community service participation while they represented 80.5% of those who scored between a 3.00 and 3.99 and 91.3% of those who had civic attitude scores of 4.00.

Research Summary

To provide a summary of the research in this study, the results for the data analyses are described by first presenting each research question. Following each question is a discussion of the findings.

What is the relationship between civic attitude scores and the amount of variety in written reflection pedagogy?

No significant relationship was found between civic attitude scores and amount of variety in written reflection. This result suggests that amount of variety in written reflection does not have an impact on civic attitude score.
For students who perform written reflection, what are the associations between civic attitude scores and gender, class year, and GPA?

No significant relationship existed between the variables of civic attitude score and gender in participants who participated in at least one written reflection. From this finding, it appears that gender does not have an impact on the civic attitude scores of those who participated in at least one written reflection.

There was no significant relationship between civic attitude scores and class year in participants who participated in at least one written reflection. This result suggests that class year does not have an impact on the civic attitude scores of those who participate in at least one written reflection.

In participants who participated in at least one written reflection, no significant relationship existed between civic attitude scores and GPA. This result suggests that GPA does not impact the civic attitude scores of those who participate in at least one written reflection.

What is the relationship between civic attitude scores and the amount of variety in discussion reflection pedagogy?

There was a significant relationship between civic attitude scores and amount of variety in discussion reflection. When combined, the 3.00 to 3.99 and 4.00 civic attitude ranges represented 81.0% of the total participants. A majority (81.7%) of the total participants participated in two or three types of discussion reflection during the semester and represented 87.8% of the 3.00 to 3.99 and 82.6% of the 4.00 civic attitude ranges. These results suggest that students who participate in two or more types of discussion reflection are more likely to have higher civic attitude scores than those who participate in fewer than two types.
For students who perform discussion reflection, what are the associations between civic attitude scores and gender, class year, and GPA?

No significant relationship existed between the variables of civic attitude score and gender in participants who participated in at least one discussion reflection. From this finding, it appears that gender does not have an impact on the civic attitude scores of those who participated in at least one discussion reflection.

There was no significant relationship between civic attitude scores and class year in participants who participated in at least one discussion reflection. This result suggests that class year does not have an impact on the civic attitude scores of those who participate in at least one discussion reflection.

In participants who participated in at least one discussion reflection, no significant relationship existed between civic attitude scores and GPA. This result suggests that GPA does not impact the civic attitude scores of those who participate in at least one discussion reflection.

What is the relationship between civic attitude scores and the frequency of performing out-of-class reflection?

There was a significant relationship between civic attitude scores and amount of out-of-class reflection. When combined, the 3.00 to 3.99 and 4.00 civic attitude ranges represented 81.0% of the total participants. A majority (82.3%) of the total participants reflected outside of class once a month or more during the semester and represented 82.9% of the 3.00 to 3.99 and 91.3% of the 4.00 civic attitude ranges. These results suggest that students who reflect outside of class once a month or more are more likely to have higher civic attitude scores than those who reflect outside of class less than once a month.
For students who perform out-of-class reflection, what are the associations between civic attitude scores and gender, class year, and GPA?

No significant relationship existed between the variables of civic attitude score and gender in participants who reflected outside of class at least once during the semester. From this finding, it appears that gender does not impact the civic attitude scores of those who reflect outside of class at least once during the semester.

There was not a significant relationship between civic attitude scores and class year in participants who reflected outside of class at least once during the semester. This result suggests that class year does impact the civic attitude scores of those who reflect outside of class at least once during the semester.

In participants who reflected outside of class at least once during the semester, no significant relationship existed between civic attitude scores and GPA. This result suggests that GPA does not impact the civic attitude scores of those who reflect outside of class at least once during the semester.

What is the relationship between civic attitude scores and the frequency of performing in-class reflection?

There was no significant relationship between civic attitude scores and frequency of in-class reflection. This result suggests that the frequency of in-class reflection does not impact civic attitude scores.

For students who perform in-class reflection, what are the associations between civic attitude scores and gender, class year, and GPA?

No significant relationship existed between the variables of civic attitude score and gender in participants who reflected in class at least once during the semester. From this finding,
it appears that gender does not impact the civic attitude scores of those who reflect in class at least once during the semester.

There was no significant relationship between civic attitude scores and class year in participants who reflected in class at least once during the semester. This result suggests that class year does not impact the civic attitude scores of those who reflect in class at least once during the semester.

In participants who reflected in class at least once during the semester, no significant relationship existed between civic attitude scores and GPA. This result suggests that GPA does not impact the civic attitude scores of those who reflect in class at least once during the semester.

What is the relationship between continued service at the service learning site and civic attitude scores?

There was no significant relationship between continued service at the service learning (SL) site and civic attitude scores. This result suggests that whether or not students indicate they will continue at the SL site after the semester ends does not impact civic attitude scores.

What is the relationship between the likelihood of future community service participation and civic attitude scores?

There was a significant relationship between future community service and civic attitude scores. When combined, the 3.00 to 3.99 and 4.00 civic attitude ranges represented 81.0% of the total participants. A majority (78.5%) of the total participants indicated there was a very good chance they would participate in future community service and represented 80.5% of the 3.00 to 3.99 and 91.3% of the 4.00 civic attitude ranges. These results suggest that students who indicate there is a very good chance they would participate in future community service are more likely to
have higher civic attitude scores than those who indicate there is some or little chance of participating in future community service.
CHAPTER FIVE

DISCUSSION

In the first section of this chapter, a brief synopsis of the study is provided. The second section discusses the conclusions drawn from the data analyses results. In the third section, the findings from this study are examined in relation to previous research. Implications for future practice and research are addressed in the fourth section, and the study's limitations are presented in the final section.

Synopsis

This study was conducted to examine the associations of civic attitudes in service learning. Civic attitude is a component of civic responsibility development. Civic responsibility is a combination of actions and attitudes associated with democratic governance and social participation. Attitudes related to civic responsibility include a belief in community service and appreciation of human differences.

In college, students have the opportunity to participate in community service through courses with a service component. Service learning (SL) is a form of experiential education that promotes active citizenship through partnerships between communities and universities. Instead of learning about social problems only in the classroom, students learn by actively participating in the community. These courses have the potential to increase students' motivation for learning and prepare them for citizenship by combining academics, service, and reflection. Coursework and reflection link the students' experiences in relation to greater social and personal issues.

Reflection is key to experiential education. It is a mental process of looking back on an experience and making meaning of the events in relation to one's world. Reflections can be accomplished through written or discussion activities either during class or outside of class.
To examine the associations of civic attitudes and service learning, survey research was used. Students at a large, mid-Atlantic, state university who were enrolled in a SL course during the Spring semester of 1999 were administered two surveys. Both surveys were voluntary for the instructors to administer and for the students to complete.

The first survey, the Service-Learning Participant Profile (pre-test), was administered to the SL students at the beginning of the semester. This survey elicited demographic information and also contained other items related to personal social responsibility, community service, civic awareness, motives for service participation and preconceived notions related to SL. Two hundred and ninety-seven students completed the pre-test.

The second survey, the Service-Learning Evaluation (post-test), was administered at the end of the semester. Only 161 students completed this survey. The post-test contained the items that comprised the Civic Attitude Scale and the items related to reflection pedagogy and reflection environment. It also contained questions related to future service. Other questions asked about personal social responsibility, community service, civic awareness, and motives for service participation.

This study examined the civic attitude scores of SL students in relation to demographic variables, frequency of reflection by pedagogy and environment, and the likelihood of future service. The data analyses were performed using demographic information from the pre-tests and the civic attitude scores, reflection, and future service information from the post-tests.

Mean civic attitude scores were derived from the four items that comprised the Civic Attitude Scale. The student characteristics used were gender, class year, and grade point average (GPA). The reflection pedagogy were written and discussion reflections, and the reflection environments were in-class and out-of-class. Future service was defined by continued service at
the SL site and future community service in general. Crosstabulation procedures and chi-square tests were used to examine the associations of the variables.

Conclusions

After the data were analyzed, the research findings were summarized. A series of conclusions were drawn from these summaries. A significant relationship was found between civic attitude scores and amount of variety in discussion reflection pedagogy. The out-of-class reflection environment also had a significant relationship with civic attitude scores. No significant associations between student characteristics and civic attitude scores were found in relation to type of reflection pedagogy and reflection environment. However, there were significant relationships between future service and civic attitude scores.

Reflection Pedagogy

There was a significant relationship between discussion reflection and civic attitude score. Talking with other students, the site supervisor, and the SL course instructor regarding service activities were the three types of discussion reflection provided on the post-test. The outcome of the performed analysis suggested that students who discussed their service activities with two or more of the people listed scored higher on civic attitude than those who talked to fewer than two of those people. This result indicates the importance of speaking with others related to the service activity in civic attitude development. Expressing thoughts and concerns through verbal and non-verbal communication aids the students in mentally processing their service experiences. The more interactions that take place between the students and those involved with the service project help the students develop their concepts of social responsibility.
Reflection Environment

A significant relationship existed between out-of-class reflection and civic attitude scores. During the semester, students reflected outside of the classroom. It was found that those participants who performed out-of-class reflections once a month or more scored higher on civic attitude than those who reflected only once or twice during the entire semester. This result suggests that those students who mentally process their service activities on their own time away from class more frequently tend to increase their civic attitude development. Perhaps students with higher levels of autonomy are more likely to reflect on their own time and thereby improve their civic attitude maturation process.

Student Characteristics

The student characteristics used in this study were gender, class year, and GPA. Regardless of reflection pedagogy or reflection environment, none of these student characteristics had a significant impact on civic attitude scores. These results suggest that students who participate in various forms of reflection pedagogy and reflection environments will benefit from SL courses regardless of their gender, year in college, or academic abilities.

Future Service

There was a significant relationship between civic attitude scores and future service participation. When asked whether they would participate in future community service activities, it was revealed that students who indicated a very good chance scored much higher on civic attitude than those who indicated little or some chance. This result suggests that students who had a greater desire to serve their community later in life also have well-developed attitudes related to civic responsibility. A lifelong commitment to serving the community is directly tied
to an understanding of one’s ability for making a difference in society, serving others, and appreciating human differences.

Relationship to Previous Research

The findings from this study are consistent with previous research conducted regarding student volunteerism and SL. This study produced results that support previous research on reflection pedagogy and reflection environment. Also, similar findings from this study related future service were found in previous research.

Reflection Pedagogy

Prior research on discussion reflection was supported by the results of this study. Discussion reflection was found to be a strong predictor of outcome measures related to learning, understanding, and application in previous research (Giles & Eyler, 1999). Discussion and application of service activities in the classroom were found to increase civic responsibility development (Myers-Lipton, 1998). In addition, a previous study using the same set of survey instruments found that discussion reflection affected changes in personal social values (Mabry, 1998). In support of these previous research studies, this study found that students who participated in discussion reflections with at least two different people (peers, instructors, or site supervisors) scored higher on civic attitude.

Reflection Environment

The finding of this study supported the results from a study performed regarding out-of-class reflection. Out-of-class reflection usually takes place when the student is not in an academic setting. Previous research found that reflecting after class is a means for the service experience to continue long after the experience is over and to provide a time for the development of ideas and values away from the classroom (Primavera, 1999). These previous
findings are reinforced by the findings in this study. It was found that students who reflected outside of the classroom more frequently than once a month scored higher on civic attitude.

Future Service

Similarities also existed in the results from this study and prior research related to future service participation. Previous researchers found that students who thought they were contributing to society were more likely to continue serving in the future. The research suggested that students increased their tendency to serve in the future if they served in their younger years and made personal connections with their service activities (Astin, 1999; McKenna & Rizzo, 1999; Yates & Youniss, 1998). This study found a direct correlation with the desire to serve in the future and civic attitude score. In support of the previous research, those who indicated there was a very good chance they would serve in the future had higher civic attitude scores than those who had less interest in future service.

Implications

The results from this study have implications for future practice and future research. The information gained can be used to support the Service-Learning Center, potential SL instructors, and civic responsibility program development. Suggestions for future research are comparing SL students with non-SL students, examining the characteristic of ethnicity in relation to service participation and civic attitudes, and conducting a long-term study that tracks civic responsibility development.

Future Practice

First, the findings support the efforts of the Service-Learning Center (SLC). The SLC staff created the instruments and collected the data used in this study, so the information gained is directly applicable to the center. The SLC provides resources to instructors who have
incorporated SL into their curricula. The information from this study strongly suggests that discussion reflection is key to successful student development. These findings have the potential to further the SLC’s efforts in providing direction and program ideas for future SL endeavors. Information such as what was found in this study should be shared with SL course instructors to prove the importance of having their students fill out the SLC survey instruments at the beginning and end of each semester.

Secondly, the results from this study can be used to assist new instructors who are considering incorporating SL into their course curriculum. From this study’s outcomes, it was concluded that reflection be used in a variety of pedagogy and environments to increase civic attitude development. At least two forms of discussion (i.e., informal talks, formal interviews) reflection should be incorporated into a SL course curriculum in addition to academic assignments. It is also important to assign reflective activities that occur outside the classroom setting at least once a month. Instructors considering using service as part of their course will be increasing the likelihood of lifelong service participation by getting college students involved in the community at a young age.

Finally, the information gained from this study can be used to encourage those who develop civic responsibility programming. Regardless of whether the program is related to SL, the same principles can be used for any program aimed at civic responsibility development. Reflection is key and should be incorporated into the program as much as possible. Depending on whether the program is short-term or long-term, the reflective activities may vary. The students should be assigned reflective discussion activities to do on their own time after or before the program in addition to reflection during the program. Discussions should be structured in a manner that aids the students in mentally processing their service experiences. The earlier in
their college careers the students are involved in service, the better their chances for future service will be. So it is suggested that civic responsibility programs be created and available for students beginning in their first year of college.

Future Research

This study only used participants who were enrolled in SL courses. To examine whether service and reflection impact civic attitude, another study could be conducted to compare SL students with non-SL students. Two samples of students could be used. Each group would be taking a class in the same discipline. For example, one group would be taking a sociology class that incorporates the components of service and reflection, and the other group would be a sociology class without service or reflection. A pre-test would be administered to both groups at the beginning of the semester measuring civic attitude and then a post-test measuring civic attitude would be administered again at the end of the semester. Comparisons could then be made between the amount of change experienced in each group to determine whether service and reflection impact a change in civic attitude.

The student characteristics of gender, class year, and GPA were used in this study. However, this study was conducted at a rural predominantly white institution and did not examine the characteristic of ethnicity in relation to service participation and civic attitude. A similar study could be conducted to analyze the impact of gender, class year, GPA, ethnicity, and type and location of institution using the same survey instruments. Two samples of students could be used from two different types of urban institutions. One sample of SL students could be taken from a predominantly white urban institution and another sample of SL students from a historically black urban university. The SL course curriculums would need to be as similar as possible. Each group would be administered the pre- and post-tests at the same time in the same
fashion. Then the data could be analyzed to examine how the characteristics of gender, class year, GPA, ethnicity, and type and location of institution impacts service participation and civic attitude development.

The data from this study were collected from one group of students who were enrolled in a one-semester SL course. To understand the long-term impact of service participation during and after college, a longitudinal study could be conducted to track civic responsibility development. First-year students who enroll in a SL course could be tracked throughout their college career. Perhaps a group of students could be formed who would commit to enroll in one SL course each year while they were in college. They would be administered a series of surveys to track their development during their four or five years of undergraduate coursework. Then, upon graduation, they would still be tracked. Surveys would then be administered in two-year intervals for 10 years. Such a study would provide information on the long-term impact and development of civic responsibility in students who participated in SL courses during and after their undergraduate years.

Limitations

This study had a variety of limitations. It was limited by the sample size, the participants in the sample, the questions on the instrument, and the ranges chosen for the civic attitude scores.

The size of the sample limited the transferability of the findings in this study to larger populations. Since only 161 of the 297 students completed both the pre- and post-tests, the usable sample was rather small. For unknown reasons, some students who completed the surveys did not fill in all the items. Therefore, of the 161 participants, there were an even smaller number of respondents who actually answered all the items being analyzed.
The participants in the sample limited this study. They were not equally distributed in each of the characteristics being analyzed. Additionally, they were not representative of the entire student population at the university. However, the university itself is not representative of higher education in the United States. Since most of them (95%) had previous service experience, it is hard to know whether they had high civic attitude levels before they took the SL course or if their attitudes were changed due to the course activities.

This study was limited by the items on the survey. Since the researcher could only conduct analyses related to the information elicited from the survey questions, there was no control over the definitions created for each topic in a section. The content and format were predetermined. Therefore, the researcher was unable to create definitions or further questions by being limited to only the items listed on the survey.

The ranges chosen for the civic attitude scores limited this study. Since the scores were grouped in the ranges of 1.00 to 2.99, 3.00 to 3.99, and 4.00, the data resulted in a curvilinear pattern. The direction of relationship in the data analyses curved due to the manner in which the scores were grouped. The distribution of scores could have been more linear if the scores were classified differently. A classification pattern of 1.00 to 2.49, 2.50 to 3.24, and 3.25 to 4.00 might have shown a more linear pattern of civic attitude scores.
## SERVICE-LEARNING PARTICIPANT PROFILE

The information you provide gives the Service-Learning Center an overview of participants and assists in evaluating the program. The questionnaire is confidential. Your ID number is used only to compare responses, aggregated with others' responses, over time. It will NOT be used to identify you personally. There is no penalty for not participating. However, your responses are very important and help us to improve the Service-Learning program.

### Indicate the importance to you personally of each of the following:

<table>
<thead>
<tr>
<th>Importance Level</th>
<th>1. Influencing social values</th>
<th>2. Helping others who are in difficulty</th>
<th>3. Developing a personal value system</th>
<th>4. Volunteering my time helping people</th>
<th>5. Finding a career that provides me the opportunity to be helpful to others or useful to society</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Important</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Somewhat Important</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Very Important</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Essential</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

### To what extent do you agree or disagree with the following statements:

<table>
<thead>
<tr>
<th>Level of Agreement</th>
<th>6. Adults should give some time for the good of their community or country.</th>
<th>7. People, regardless of whether they’ve been successful or not, ought to help others.</th>
<th>8. I feel that I can make a difference in the world.</th>
<th>9. Individuals have a responsibility to help solve our social problems.</th>
<th>10. It is important to help others even if you don’t get paid for it.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Disagree Somewhat</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Neither Agree</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Agree Somewhat</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

### Rate yourself on each of the following traits as compared to the average person your age. We want the most accurate estimate of how you see yourself.

<table>
<thead>
<tr>
<th>Trait</th>
<th>Lowest 10%</th>
<th>Below Average Average</th>
<th>Above Average</th>
<th>Highest 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Analytical and problem-solving skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. Ability to think critically</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. Interpersonal skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14. Understanding social problems facing our nation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15. Commitment to serving your community</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16. Ability to work cooperatively</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17. Ability to communicate your ideas (communication skills)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

### How important to you are the following reasons for participating in community service and/or volunteer activities?

<table>
<thead>
<tr>
<th>Importance Level</th>
<th>18. To help other people</th>
<th>19. To improve society as a whole</th>
<th>20. To improve my community</th>
<th>21. To enhance my academic learning</th>
<th>22. To develop new skills</th>
<th>23. To enhance my resume</th>
<th>24. To feel personal satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Important</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Somewhat Important</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Very Important</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

---

**Appendix A**

**ACCU-SCAN**

76-142LM088 (Reliable APPRENUS PRINT MANAGEMENT SERVICES)

**VIRGINIA TECH**

**INCORRECT MARKS**

<table>
<thead>
<tr>
<th>NAME</th>
<th>COURSE</th>
<th>DATE</th>
</tr>
</thead>
</table>

**CORRECT MARK**

<table>
<thead>
<tr>
<th>ID NUMBER</th>
<th>FORM</th>
<th>SEAT NO.</th>
<th>GROUP</th>
</tr>
</thead>
</table>

114
25. Before taking this course, how frequently in the past have you volunteered or done community service work?
- Never done service or volunteered
- Less than once a year
- About once a month
- A few times per month
- Weekly

26. Before this course, how many previous semesters have you participated in service-learning (S-L)?
- Never participated in S-L
- 1 semester of S-L
- 2 semesters of S-L
- 3 semesters of S-L
- 4 semesters of S-L
- 5 semesters of S-L
- 6 semesters of S-L
- 7 semesters of S-L
- 8+ semesters of S-L

27. How much of an impact do you expect you will have on others through your service?
- Not at All
- A Little
- Somewhat
- A Great Deal

28. How many total Hours do you think you will do on your Project during the semester?
- Less than 10
- 10-14
- 15-19
- 20-24
- 25-29
- 30-34
- 35-39
- 40+

29. How much contact/interaction with the people directly served by your service site/organization/school (such as clients or students) do you expect to have?
- None at All
- Very Little
- About Half the Time
- Frequently
- All my service time

30. Compared with traditional academic assignments (such as research papers and studying for exams), how useful do you think that participating in service-learning will be in helping you understand the material in this course?
- Much Less Useful
- A Little Less Useful
- About the Same
- A Little More Useful
- Far More Useful

31. In general, how frequently do you think you will reflect on your service activities during this course (including journals, online discussion, discussions with the supervisor or other students, Service-Learning Center reflection sessions, giving service experiences as examples in class, etc.)?
- Will not reflect on service activities
- Once or twice during the semester
- Once a month or about 3 times during the semester
- About twice a month/every other week
- At least once a week

32. Compared with traditional academic assignments (such as research papers and studying for exams), how much time and effort do you think that participating in service-learning will require in this course?
- Much Less
- A Little Less
- About the Same
- A Little More
- Far More

33. How often do you attend religious services?
- Never
- Only on special occasions (twice a year or less)
- Several times a year
- Several times a month
- 1 or more times a week

34. What is your age?
- 17-18
- 19-20
- 21-23
- 24-29
- 30+

35. What is your sex/gender?
- Female
- Male

36. What is your race/ethnicity?
- African American/Black
- Asian American
- Hispanic American
- Multiracial
- Native American Indian
- White/Caucasian
- Other

37. What is the College of your Major?
- Agriculture & Life Sciences
- Architecture & Urban Studies
- Arts & Sciences
- Business
- Engineering
- Forestry & Wildlife
- Human Res. & Education
- University & Academic Advising
- Vet. Medicine

38. What is your Class Year?
- 1st Year
- 2nd Year
- 3rd Year
- 4th Year
- 5th Year
- Graduate
- Other

39. What is your current G.P.A.?
- Below 2.0
- 2.0-2.49
- 2.50-2.99
- 3.0-3.49
- 3.5+

40. What is the most important reason you have for participating in service-learning in this class?
- It is required in this course
- It seems easier than other course requirements
- It sounds different/interesting
- I just like to volunteer
- I never done service-learning before and liked it
- A friend suggested/encouraged it
- I think it will enhance my understanding of the course material
- Getting credit to volunteer
- Other

---

Thank you for completing the Service-Learning Participant Profile. To protect your confidentiality, return this form to the student designated to collect them for your class, or directly to the Service-Learning Center.

The Service-Learning Center at Virginia Tech
202 Major Williams Hall 231-6964
SERVICE-LEARNING EVALUATION

Please enter your student ID number in the space to the right.

The information you provide gives the Service-Learning Center an overview of participants and assists us in evaluating the program. The questionnaire is confidential. Your ID number is used only to compare responses aggregated with others' responses, over time. It will NOT be used to identify you personally. There is no penalty for not participating. However, your responses are very important to us and will help us to improve the Service-Learning program.

(Fill in corresponding circles on the right throughout)

Indicate the importance to you personally of each of the following:

1. Influencing social values
2. Helping others who are in difficulty
3. Developing a personal value system
4. Volunteering my time helping people
5. Finding a career that provides me the opportunity to be helpful to others or useful to society

To what extent do you agree or disagree with the following statements:

6. Adults should give some time for the good of their community or country.
7. People, regardless of whether they've been successful or not, ought to help others.
8. I feel that I can make a difference in the world.
9. Individuals have a responsibility to help solve our social problems.
10. It is important to help others even if you don't get paid for it.

Rate yourself on each of the following traits as compared to the average person your age. We want the most accurate estimate of how you see yourself.

11. Analytical and problem-solving skills
12. Ability to think critically
13. Interpersonal skills
14. Understanding social problems facing our society
15. Commitment to serving your community
16. Ability to work cooperatively
17. Ability to communicate your ideas (communication skills)

How important to you are the following reasons for participating in community service and/or volunteer activities?

18. To help other people
19. To improve society as a whole
20. To improve my community
21. To enhance my academic learning
22. To develop new skills
23. To enhance my resume
24. To feel personal satisfaction

Other

Appendix B
25. Do you plan to continue serving with your S-L project/site? (1) No (2) Yes

26. What are the chances that you will participate in community service in the future?
   - No
   - Very Little
   - Some
   - Very Good
   - Chance
   - Chance
   - Chance
   - Chance

27. Total Hours of Service on your Project during the semester:
   1. less than 10
   2. 10-14
   3. 15-19
   4. 20-24
   5. 25-29
   6. 30-34
   7. 35-39
   8. 40+

28. In general, how frequently did you reflect on your service activities out of class (journals, letters, discussions, discussions with your supervisor or other students, S-L reflection sessions)?
   - Did not reflect on service activities outside of class
   - Once or twice during the semester
   - About once a month or about 3 times during the semester
   - About twice a month or every other week
   - At least once a week
   - Two or more times every week

29. In general, how frequently did you reflect on your service activities in class?
   - Did not reflect on service activities in class
   - Once or twice during the semester
   - About once a month, about 3 times during the semester
   - About twice a month or every other week
   - At least once a week
   - Two or more times every week

30. During the semester, did you:
   - Keep a journal of your service activities? (1) Yes (2) No
   - Write a paper or report for your class about your service activities? (1) Yes (2) No
   - Participate in a listserv or online discussion of your service activities? (1) Yes (2) No
   - Talk with other students about your service activities? (1) Yes (2) No
   - Talk with your site supervisor/project director about your service experiences? (1) Yes (2) No
   - Talk with your course instructor about your service experiences? (1) Yes (2) No
   - Consider causes and solutions related to the situation that your service addressed? (1) Yes (2) No
   - Feel that your service was meaningful and made a difference to others? (1) Yes (2) No
   - Learn more as a result of your service-learning than you would have otherwise? (1) Yes (2) No

31. How much contact/interaction did you have with people directly served by the organization or school (such as clients or students who benefit from your service)?
   - Not at All
   - Very Little
   - About Half the Time
   - Frequently
   - All my service time

32. Compared with traditional academic assignments (such as research papers and studying for exams), how useful was participating in service-learning to helping you understand the material in this course?
   - Much Less Useful
   - A Little Less Useful
   - About the Same
   - A Little More Useful
   - Far More Useful

33. Indicate the degree to which participation in this course has increased or strengthened your:
   - Not at All
   - A Little
   - Somewhat
   - A Great Deal

34. To what extent do you agree or disagree with the following statements?

Please write your response to the following questions:

a. What is the name of your Service-Learning Site or Project?

b. How would you describe your service experience to a friend? For example, what were the particular challenges, disappointments and successes of your service-learning experience?
### Original Class Year Frequencies

<table>
<thead>
<tr>
<th>Item</th>
<th>Categories</th>
<th>Frequency</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Year</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; year</td>
<td>56</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; year</td>
<td>36</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>3&lt;sup&gt;rd&lt;/sup&gt; year</td>
<td>108</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>4&lt;sup&gt;th&lt;/sup&gt; year</td>
<td>84</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>5&lt;sup&gt;th&lt;/sup&gt; year</td>
<td>9</td>
<td>4</td>
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<td>Graduate</td>
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<td>5</td>
</tr>
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### Modified Class Year Frequencies

<table>
<thead>
<tr>
<th>Item</th>
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<th>Coding</th>
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<tbody>
<tr>
<td>Class Year</td>
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<td>56</td>
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</tr>
<tr>
<td></td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; year</td>
<td>36</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>3&lt;sup&gt;rd&lt;/sup&gt; year</td>
<td>108</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>4&lt;sup&gt;th&lt;/sup&gt; year and above</td>
<td>96</td>
<td>3</td>
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### Original Out-of-Class Reflection Frequencies

<table>
<thead>
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<th>Item</th>
<th>Categories</th>
<th>Frequency</th>
<th>Coding</th>
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<tbody>
<tr>
<td>Out-of-Class Reflection</td>
<td>did not reflect on service activities outside of class</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>once or twice during the semester</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>once a month or about 3 times during the semester</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>about twice a month/every other week</td>
<td>34</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>at least once a week</td>
<td>61</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>two or more times every week</td>
<td>18</td>
<td>5</td>
</tr>
</tbody>
</table>

### Modified Out-of-Class Reflection Frequencies

<table>
<thead>
<tr>
<th>Item</th>
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<th>Frequency</th>
<th>Coding</th>
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<tbody>
<tr>
<td>Out-of-Class Reflection</td>
<td>did not reflect on service activities outside of class</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>once or twice during the semester</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1 to 2 times per month</td>
<td>52</td>
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</tr>
<tr>
<td></td>
<td>once a week or more</td>
<td>79</td>
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Appendix E

Original In-Class Reflection Frequencies

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>In-Class Reflection</td>
<td></td>
<td></td>
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<tr>
<td>did not reflect on service activities in class</td>
<td>20</td>
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</tr>
<tr>
<td>once or twice during the semester</td>
<td>59</td>
<td>1</td>
</tr>
<tr>
<td>once a month or about 3 times during the semester</td>
<td>26</td>
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</tr>
<tr>
<td>about twice a month/every other week</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td>at least once a week</td>
<td>27</td>
<td>4</td>
</tr>
<tr>
<td>two or more times every week</td>
<td>3</td>
<td>5</td>
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</tbody>
</table>

Modified In-Class Reflection Frequencies

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-Class Reflection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>did not reflect on service activities in class</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>once or twice during the semester</td>
<td>59</td>
<td>1</td>
</tr>
<tr>
<td>1 to 2 times per month</td>
<td>50</td>
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<tr>
<td>once a week or more</td>
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References


