Service learning: a vehicle to reflective thinking

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SERVICE LEARNING: 
A VEHICLE TO REFLECTIVE THINKING

An Abstract of a Dissertation
Submitted
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

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ABSTRACT

Education reform is a topic that has been around for a long time. With the passage of No Child Left Behind in 2002, states set out to set high standards for students. While setting high standards is a worthwhile goal, the method to reach those high standards has not been mandated. This research study sought to determine if exposing students to a service-learning project would increase reflective thinking, communication, and social interaction skills.

The questions that guided this study were

1. Does engagement in a service-learning project impact the individual’s development of reflective thinking? If so, what is that impact?
2. Does engagement in a service-learning project impact the individual’s development of communication skills? If so, what is that impact?
3. Does engagement in a service-learning project impact the individual’s social interaction skills? If so, how?

Data was collected using a variety of sources, including written reflective journal entries, interviews, and observations. The service-learning project was divided into three phases, Planning, Implementation, and Concluding, and data was collected from each of the phases to determine the impact the project had on reflective thinking, communication, and social skills.

Data was analyzed using qualitative research methods in which categories and themes were identified. The three data sources served to triangulate the information from the data and to maintain the reliability of the findings.
The analysis and interpretation of the data suggests that students involved in a 
service-learning project do show gains in the consistency of their reflective thinking skills 
and communication skills. The data did not show significant changes to social interaction 
skills, although many students commented that they enjoyed service-learning and would 
like to continue working with their organizations. Data also suggested that the 
improvements in reflective thinking may have been a result of allowing students to 
choose their project rather than assigning a project to them. Students wrote more 
reflective journal entries when they were passionate about their actions than when they 
felt as though they just had to write something.

More research is needed to identify the overall benefits of utilizing service-
learning in individual classrooms at the high school level.
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DEDICATION

I wish to dedicate this dissertation to my departed mother, who always believed in my dreams. Her love and support pushed me to set high goals for myself, and I would not be where I am today without her.
ACKNOWLEDGEMENTS

I owe a tremendous debt of gratitude to the many individuals who have been part of my dissertation committee. A special thanks goes to Dr. Lynn Nielsen, who took over the chair position when Dr. Henning left the university. Also, I would like to thank Dr. Traw and Dr. Knesting for being willing to join the committee in the middle or end of the process. I truly appreciate all the support, encouragement, and constructive comments offered by all committee members.
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CHAPTER 1

INTRODUCTION

Becoming a teacher was an easy decision for me. I realized early in my public education, that I loved learning, and more importantly, I loved helping others to learn. It brought me great pleasure, and still does, to see the light bulb go off in the eyes of a learner. I wanted to make a difference, and to let society know that young people have a lot to offer the world. Therefore, it was with great excitement that I accepted a teaching position in Texas.

Throughout my seven years in Texas, I became disappointed in the teaching profession. On a regular basis, administrators handed down new “quick fix” plans to help students improve their test scores on the state-mandated test. The middle school where I taught was considered a low-performing school. Many of the students were English Language Learners; some did not even speak English yet. Tests were given in English, and all students, no matter how long they had lived in the U.S., were expected to achieve levels of proficiency. This was more than an expectation; it was a requirement. To be an exemplary school, 90% of all students in a school needed to pass every section of the TAAS (Texas Assessment of Academic Skills) test. Schools that failed to have 35% of all students in all subgroups pass the TAAS test were given the label unacceptable (Texas Education Agency, 1997). If a school remained unacceptable for three years in a row, the school would be shut down, all teachers and administrators fired, and a new set of teachers and administrators brought in to take over. Each year, the bar for being rated as
unacceptable increased, so that in 2002 the cut-off point was 55% (Texas Education Agency, 2002). It was a looming threat.

With this threat hanging over teachers’ heads, the focus was to help students pass the test. The administration tried several methods to raise test scores. One year, the administration scheduled one class period that was specifically designated to teach the test. Every student in the building had to take this class, and every teacher in the building, no matter what subject he or she taught, had to teach a provided lesson that was similar to something that would be included on the state-mandated test. One day the lesson would be on reading skills, the next on math. Teachers who were not experts in math just read the math lessons, but could not explain the skills or problems. By the time the test rolled around, students were bored with the format and the idea of taking a test, and some did not even try. Some tried, but no matter how many practice tests they experienced throughout the year, they just did not get it. The school continued to be on the list of low-performing schools.

Another year, the school paid to have a packaged program that was supposed to raise test scores. Teachers went through weeks of in-service training to prepare for this new program. Basically, the class that had been designed to teach test preparation was gone, and in its place, every teacher was to take the first five or ten minutes of class to teach a mini-lesson geared toward the test. Instead of focusing on the test for one class period each day, students had to spend the first part of every period every day preparing for the test. Since reading and math were the main concerns, each teacher had to teach a
lesson in one of those two areas. When the time came to take the real test, students showed very little improvement; the threat remained.

Eventually the school purchased a computer-based program to help students with the test. Teachers and their classes were on a rotating schedule to be in the computer lab to use the software. One positive aspect of this plan was that when I took my class, they focused on English skills. When the math teachers took their classes, students focused on math skills. Students had much more fun working on their test-taking skills because it was an interactive and engaging program. Teachers enjoyed it more and were more enthusiastic about it because they could finally concentrate on their own subject. At the end of the year, there was a greater improvement in scores, and the school was no longer under the threat of being closed down. The principal was given a large monetary reward for bringing scores up, and the teachers were given a “thank you” by the principal. The next year, teachers were not nearly as enthusiastic, and the scores dipped a little. The cycle continued.

After a few years of teaching to the test, I decided to move back to Iowa where the focus was not on teaching to a test. While Iowa does not have a state-mandated test, the passage of NCLB in 2002 has forced the state to find alternative ways to prove that Iowa schools are making the grade. At my school, this involves having an array of tests instead of one single test. The tests are spread out, but that only means that several teaching days are spent on taking tests to satisfy the government and not teaching a deeper curriculum.
As more and more tests were added to the regime, I began to feel less enthusiastic about teaching again. I realized that if I was not enthusiastic about what I was teaching, I could not expect my students to be interested in learning. I decided to find a way to motivate myself and my students, and that was by helping my students to be more involved in their own education. I introduced a service-learning project, which has evolved over the years, and I have found that students do become more motivated to learn communication skills when they are given the opportunity to practice those skills outside the classroom for course credit.

There are many ways to help students learn the material they need to learn to be successful. Service-learning is a tool that allows students to demonstrate their understanding and ability to use the knowledge that is taught in the classroom. A high-stakes test, or even a unit test, provides information about what that student knows at the time of the test. Service-learning asks that students use their knowledge, and the use of the knowledge may aid in retention of the knowledge or skill. High-stakes testing may be here to stay, but that does not mean that education can not be interesting and enjoyable. Service-learning can help to motivate students, motivate the teacher, show what students do and do not know, and be a fun way to practice important skills.

Research indicates that young people are already actively involved in their communities. According to the National Center for Education Statistics (1999), 83% of public high schools in the United States had students doing some type of community service. Data covering 2003 through 2005 indicate that in Iowa, young people aged 16 to 24 volunteered an average of 24 hours per year, while the national average was 36 hours
per year (Corporation for National and Community Service, 2006). Still, Iowa ranked 11th in the nation for young adult volunteers (Corporation for National and Community Service, 2006). However, not all of these community service programs are tied to educational goals. The question is, does this type of community service have an educational benefit for the student? While many students are involved in some type of community service, are these projects helping to develop the skills they need to be productive members of society?

Many young people want to make an impact on the world. A 1998 survey conducted by Princeton Survey Research indicates “70 percent of young people ages 15-21 have participated in activities to help strengthen their community at some point in their lives” (Youth Service America, 2007). Some teenagers will find a way to make a difference, whether it is in a positive manner or a negative manner. Young people do not receive recognition when they do something positive, but their names are reported across the community when they do something negative. This may be why 61% of U.S. adults perceive teenagers as disrespectful and self-centered (Public Agenda Survey for the Ad Council and Ronald McDonald House Charities, 1997, as cited in Youth Service America, 2007).

All people want to belong (Glasser, 1998), and young people are no exception. They develop friendships with people that accept them, whether those people are a positive or a negative influence on them. Increasingly, schools are working on ways to encourage community development within the schools and classrooms to help students feel more connected to their schools. Athletics offers a type of community building
activity, but in a competitive sense: it is us against them. Through athletics, students develop a win-lose mentality in which their worthiness is based on having a winning record. In our global world, educators should be teaching students that life is not a competition, but cooperation. What affects one can have an effect on another, either directly or indirectly. By working together, teachers and students can build positive community relationships.

John Dewey (1902; 1916; 1938) visualized education as a social activity. Learning is situational, meaning that students learn from their experiences. When students interact with their environments, they use previous knowledge to explore and understand new experiences. Teachers have the responsibility to put students into various situations in which the students will have to solve problems. This problem-solving activity forces the student to think; therefore, it works on cognitive development. Students become actively involved in their own education.

Just solving the problem is not enough, though. To truly grow and internalize what they have learned, students need to practice reflective thinking as well. Service-learning allows students to work cooperatively with others in real-world problem-solving situations. While developing and implementing the service-learning project, students will inevitably face problems. To solve these problems, no matter how minor, students will need to think and make decisions. Once those decisions have been carried out, it is important that students then reflect upon the outcomes of those decisions. Service-learning provides students with real opportunities to think and reflect, thus helping them to improve their communication and literacy skills.
Glasser (1998) explains that students remain interested in their education if the assignments and concepts fit into their quality worlds. This can only be done if the teacher takes the time and effort to know and understand her students. Creating an accurate picture of each student involves conversing with the student in a caring and meaningful manner. Instructional strategies based on Gardner's (1985) multiple intelligences and Glasser's (1998) quality world theories can help students to become more interested in their school work because students will be given choices and allowed to solve problems based upon their own intellectual strengths.

Since education is a social function (Dewey, 1902, 1916, 1938), how students interact with each other is just as important as coming up with the right answers. This social interaction will build positive relationships among the parties involved and establish a cognitive understanding of human behavior. As students interact with their peers and members of the community, they gain a sense of belonging to the community. Students realize that issues that concern the community also concern them. The community comes to realize that young people can, and do, care about community issues.

Noddings (1984) emphasizes the need for a caring and nurturing student/teacher relationship. Service-learning opens up the possibility of developing a caring and nurturing student/teacher/community relationship. Through the process of creating a worthwhile service-learning project, the students interact with the teacher to discuss community issues and concerns as perceived by the student. The teacher must come to understand the unique qualities of the students to help them find a project that will best fit into their quality worlds. As Nodding points out, "The one-caring as teacher, then, has
two major tasks: to stretch the student's world by presenting an effective selection of that world with which she is in contact, and to work cooperatively with the student in his struggle toward competence in the world" (Noddings, 1984, p. 178). The teacher shares her experiences and concerns with the students in an effort to better understand the students. In turn, the students must practice reflective thinking as they search to discover their own role in this world. As the project progresses, the students become the teacher as they work with members of their community.

Problem Statement

One of the major problems with education in the United States today is that schools are not engaging students in a meaningful manner that promotes the development of life-long skills, such as communication skills. Many schools feel the pressure to improve state-mandated test scores, which creates test-driven curricula. Too much focus on teaching students how to pass a test stymies real academic engagement.

The Road to Disengagement

The push for higher standards has come from the negative reports on the state of the United States' education system. While some reports show that the U. S. is very competitive with other nations (Baer, Baldi, Ayotte, & Green, 2007; US Dept. of Education, 2008), other reports claim that schools in the United States are falling behind. The reports that have U. S. schools falling behind say that test scores for U. S. students in math and reading have steadily declined over the years (Snyder, Dillow, & Hoffman, 2007; Snyder & Hoffman, 2003). Pressure from these negative reports encouraged President Bush to sign the No Child Left Behind (NCLB) Act of 2001, pushing states to
create clear standards for their students. Although some states have seen improved test scores, the real question is whether or not NCLB is responsible for those improvements (Fuller, Wright, Gesicki, & Kang, 2007). Across the nation, states have made efforts to articulate high standards for each subject at each grade level. Unfortunately, to measure these standards, and to determine the effects of NCLB, most states turned to rigorous, high-stakes testing. By creating one test per grade level, states believed that they were encouraging students to put more effort into their studies, thereby rising to the high expectations desired by the state. The format of the high-stakes tests has helped to set up unrealistic learning goals (Hillocks, 2002). Teachers may feel pressured to teach the formulaic five-paragraph essay to help students prepare for a writing test. Teaching a standardized form of writing can do more harm than good (Ezarik, 2004; Hillocks, 2002).

Researchers and educators raise many concerns about standardized tests. One problem has to do with the inaccuracy of test results (Lewis, 2007). English Language Learners may have difficulty comprehending the vocabulary, and will thus be identified as lacking skills in the tested area. Another problem is the pressure that both teachers and students feel to be successful on the tests (Armstrong, 2006). Investigations have found that some teachers, schools, and even districts have misrepresented test results or tampered with materials (Easton, 2009; Goldberg, 2004).

Schools and districts that place their primary focus on passing a high-stakes test are shortchanging students. Because the consequences of not succeeding or showing improvement on these tests is so great, schools may be tempted to cut classes or programs that are not directly applicable to the tests. By doing this, they are creating a very narrow
curriculum for students (Armstrong, 2006; Goldberg, 2004; Lewis, 2007; Nathan, 2002; Sadowski, 2000). Some students feel a connection to school simply because of the elective courses. If a school has to remove those courses from the curriculum, it risks losing students who may not otherwise be interested in getting an education.

**Alternative Assessments**

Standardized tests provide a single snapshot into the educational progress of students. However, what do they really test? Goldberg (2004) and Gardner (2000) raise several questions about standardized tests. The essence of all their questions is whether a single test can accurately measure the educational development of a student. Educators in Iowa spend around 180 days in the classroom teaching and assessing student knowledge and skills. If a student has proven to a qualified teacher that he/she understands the material and has developed or improved his/her skills, then why should one test determine whether that student should graduate or move on to the next level? The job of an educator is to educate the whole child, not just to get him/her to pass a test. For Gardner (2000), the most important skills to instill in students are “love of learning, respect for peers and good citizenship.”

The movement toward more authentic assessment virtually disappeared after the passage of NCLB (Lewis, 2007). Trying to comply with the demands of NCLB, schools put aside alternative assessment practices and focused on teaching to the test. Some schools were discovered to engage in cheating in order to raise test scores (Easton, 2009). Despite the research that indicates that hands-on experiences, allowing students to explore areas of their own interests, and portfolio assessments can foster a love of
learning (de los Reyes & Gozemba, 2002; Fredrick, 2009; Sandaine, 2009), schools face losing federal funding if test scores do not improve (Flash Points, 2009). Putting students into situations where they have to work together as a team to solve a problem can help teach respect for their peers. Getting students out of the classroom and into real-life situations make students aware of community needs. This awareness can make them better citizens when they become adults. Allowing students to have a greater role in their educational development makes the information more relevant, so the skills they learn will stick with them longer. Some alternative assessments may rely on the professional opinions of the teacher, but they may also be less costly than standardized testing.

Teachers make decisions about a student’s educational progress through observations over an extended period of time. Standardized tests determine a student’s future based on one moment of time. If public schools are going to truly improve the educational development of students, they need to provide opportunities that will show growth.

The Importance of Reflection

Most educators would agree that for deep, meaningful learning to occur, students need time to reflect on their actions (Berman, 1999; Campbell, Campbell, & Dickinson, 1999; Collier & Williams, 2005; Dewey, 1910/1997; Ellis, 2001; Fink, 2007; Kolb, 1984; Paul & Elder, 2005). What can schools do to increase the reflective thinking ability of students? Service-learning is a real, hands-on, open-ended project that allows students to practice and refine their skills. Students are placed in situations where they must make important decisions, test hypotheses, and revise their solutions. Service-learning allows students to develop their skills, instead of asking them to choose the right answer on a
multiple-choice test. Service-learning gets students involved in their education, instead of asking them to sit back and be passive learners.

**Purpose**

The purpose of this study was to describe the impact of a service-learning project on the development of reflective thinking, communication and social interaction skills among high school sophomores. Because an important outcome of education is the preparation of students for civic participation, this study included a description of how students used reflective thinking to communicate about their social interaction.

**Research Questions**

The research questions guiding this case study were:

1. Does engagement in a service-learning project impact the individual's development of reflective thinking? If so, what is that impact?

2. Does engagement in a service-learning project impact the individual's development of communication skills? If so, what is that impact?

3. Does engagement in a service-learning project impact the individual's social interaction skills? If so, how?

**Organizing Framework**

The participants for this study were selected from sophomores enrolled in an advanced communications class. The objectives of the class were that students would develop effective communication skills, with an emphasis on critical thinking. In the beginning of the course, students were provided a foundation of communication
strategies and skills. Throughout the rest of the course, they were expected to demonstrate and analyze their communication skills.

A primary focus of the study was on how individuals communicated with each other to plan, develop, and implement a service-learning project within a single semester of a communications class. Students formed small groups of 4 to 6 individuals who agreed to work together toward the completion of a single service-learning project. This study analyzed the data from five students from the four different service-learning teams. To understand a variety of students, and to have a deeper understanding of data collected, students were chosen based upon (1) experience with community service outside of the communications class, (2) level of writing skills as determined by examples of writing completed prior to the service-learning project, and (3) level of communication skills as demonstrated in class presentations given prior to the service-learning project. For the purposes of this study, the writing skills were measured using the 6-trait writing rubric. High quality writing was distinguished by the student’s ability to effectively organize and develop ideas, use action verbs and descriptive words, include a challenging vocabulary, and write with a variety of sentence structures. The level of the students’ communication skills was based on his/her ability to get a message across to an audience. The assessment of communication skills took into consideration not only the words used and how they were organized, but also the body language, tone of voice, rate of speaking, and response to an audience. The level of comfort one has in speaking before an audience was also a characteristic that was considered when determining communication skills.
In the group of five students selected for this study, at least one student represented a strength in experience, writing, or communication. In addition, at least one student represented a weakness in experience, writing, or communication. For example, one student had a high amount of experience in community service, but weak writing skills. Another student was a great communicator, but did not possess very much experience in community service. Two of the five individuals were members of the same service-learning team, whereas the other three each worked on different teams. Therefore, four service-learning teams were represented by the five students selected for this study. Data were collected from the five individuals throughout the service-learning project as they prepared their projects, implemented the projects, and concluded the projects. Analyzing the data from five individuals with different experience and skill levels allowed for greater depth of interpretation of the data.

Service-learning teams were expected to set goals, determine grading criteria, write reflectively, and interact with the public. All students enrolled in the communications class participated in the service-learning projects, but only the data collected from the five chosen individuals were analyzed. Since reflective writing was an important component of this study, students had to be taught some basic reflective strategies as they worked to develop their own reflective thinking. Various reflective activities, such as small group discussions, needs assessments, weekly journal writings, letter writing, and conferencing (Berman, 1999; Ellis, 2001), were used to help students practice reflective thinking strategies. These activities took place throughout the study because reflective thinking is not a linear process. It involves moving a complex
interaction of abstract thinking and concrete thinking (Kolb, 1984). Through reflective thinking, the abstract can become more concrete, and the concrete can be applied in the abstract. This interaction of concrete and abstract thinking is how one’s experiences develop into an educational value (Kolb, 1984).

Students were also given the opportunity to discover their interests and strengths as they prepared a worthwhile project to complete. Since students worked in small groups (4 to 6 students), they needed to find common interests and decide upon a schedule that would permit each member to participate. Besides determining how and when they could work together, students also needed to consider the needs and availability of the organization they had planned to help. In preparing for the service-learning project, students had to step away from their own wants and think about what was best for others.

**Methodology**

This section of the chapter will provide a brief overview of the methodology. Details on how the study was organized, how data were collected, and how the data were analyzed are stated in Chapter 3.

As part of the regular curriculum in the advanced communications class, all students participate in a service-learning project. The data collected during that project were the subject of this study. Therefore, as students worked on their projects, I collected and saved their assignments for analysis.

In the service-learning project, students practiced reflective thinking as they connected their experiences to their education (Dewey, 1910/1997; Kolb, 1984). By giving students greater control over planning, designing, and implementing their own
service-learning project, students learned to set goals and determine how to meet those goals. Students were responsible for completing their goals because what they did had an effect on people outside the school as well as on people within the school.

Empirical data from the project were collected during this study. Data from the reflective writings, group and individual interviews, and direct and indirect observations were analyzed to get a better understanding of how students reflected upon their experiences and made changes based on those reflections and experiences. Details explaining the data and how they were analyzed appears in Chapter 3.

**Definition of Terms**

For the purposes of this study, the following terms will be defined:

**Authentic Literacy** – literacy activities “that replicate or reflect reading and writing activities that occur in the lives of people outside of a learning-to-read-and-write context and purpose” (Duke, Purcell-Gates, Hall, & Tower, 2007, p. 346).

**Community Service** – in terms of education, was defined by the Higher Education Act of 1965 as “services which are identified by an institution of higher education, through formal or informal consultation with local nonprofit, governmental, and community-based organizations, as designed to improve the quality of life for community residents, particularly low-income individuals, or to solve particular problems related to their needs” (University of Missouri, 2007). Some may use the terms *community service* and *service-learning* interchangeably. For this study, *community service* will be used as an introductory term for the service-learning project. *Service-learning* will be used in reference to the project for the communication class.
**Cooperative Learning** – “Cooperative learning is a successful teaching strategy in which small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. Each member of a team is responsible not only for learning what is taught but also for helping teammates learn, thus creating an atmosphere of achievement” (Balkcom, 1992).

**Experiential Education** – “the process whereby knowledge is created through transformation of experience” (Kolb, 1984, p. 38). Kolb’s Experiential Model is cyclical and includes concrete experience, reflective observations, abstract conceptualization, and active experimentation.

**Reflective Thinking** – For Dewey, reflective thinking combined action and thinking. He defined reflective thought as “Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends” (Dewey, 1910/1997, p. 6). Reflection is the link between what is experienced and how that experience is processed to produce learning. Successful reflection is continuous, challenges students to think in new ways, helps students to make connections, and is based on the context of the course (Collier & Williams, 2005; Eyler, Giles, & Schmeide, 1996; Wilczenski, & Coomey, 2007).

**Service-learning** – “a teaching and learning approach that integrates community service with academic study to enrich learning, teach civic responsibility, and strengthen communities” (National Commission on Service Learning, 2002, p. 3). Wilczenski and Coomey (2007) expand this definition:

Service learning is a form of experiential education where learning occurs through cycles of action and reflection as students work with others in applying their
knowledge to solve a community problem, and, at the same time, reflect upon their experience to gain a deeper understanding of complex issues for themselves. (p. 4)

The service must: be organized in relation to an academic course or curriculum; have clearly stated learning objectives; address real community needs in a sustained manner over a period of time; and assist students in learning lessons from the service through regularly scheduled, organized reflection or critical analysis activities, such as classroom discussions, presentations, or writing activities (National Center for Education Statistics, 1999).

Successful intelligence – a term used by Sternberg and associates to mean, “the use of an integrated set of abilities needed to attain success in life, however an individual defines it, within his or her sociocultural context” (Sternberg & Grigorenko, 2004).

Assumptions

Some assumptions that must be considered when setting up this research study:

1. Students involved in this study will be from a variety of social backgrounds and skill abilities.

2. Students participate in this activity for a grade. That grade is negotiated by the students and is not assigned by the teacher. Students will determine their own grading criteria at the beginning of the service-learning project, and will meet at the conclusion of the semester to negotiate grades based upon the previously determined criteria.

3. Students will self-report their changes in thinking, civic values, and reflective strategies through the use of reflective activities and interviews.
4. Students will need to be taught reflective thinking skills, and this will take time. It is hoped that through informal discussions and feedback on memos and journal entries, students will develop better reflective thinking skills as the project progresses.

Limitations and Delimitations

This study is delimited to include only those individuals enrolled in an advanced communication class at a large, Iowa high school. The service-learning project was designed to meet the specific standards and objectives of the advanced communication class.

There are three main limitations to this study. The first is that the population is limited to the students enrolled in the advanced communications class. Students choose from three communication classes: regular, creative, and advanced. Since the course is labeled as “Advanced,” there is a higher potential that the students who enroll in this class will have a greater work ethic than those in a class that is not labeled as “Advanced.” The experiences and perceptions of students in the study will not be compared to the experiences and perceptions of students in the other communication classes at the high school or at any other high school.

A second limitation is based on the process of data collection. Students’ responses regarding their self-perceived reflective thinking skills are highly subjective. Since students’ self-report on their learning, it is important that students are honest about what they perceive. Some students may feel the need to report information that they believe to be more favorable to my assessment of them. One way to check the accuracy or honesty
of the self-reported information is through triangulation. The triangulation checks are students' reflective writings, observations, and interviews. I will need to provide effective feedback after each reflective writing to assist the students in improving their reflective thinking skills. The observations will take place at various times throughout the nine-week period when students are working as a team. Finally, the interviews will take place in the Planning Phase, Implementation Phase, and Concluding Phase. Each data source will provide a check on the information used for the study.

Finally, the subject matter that is mentioned in the interview protocol and/or the community service survey may result in response bias. This may not be a real issue, as the interview questions will provide students with the criteria they can use to help them write honest reflections. If the students are aware of the areas of learning that are to take place during the project, they will be more conscious of how they are learning that information or how they are developing that skill. Also, the community service survey will allow me to better understand how they approach their project as it will provide information about their attitudes and experiences with community service.

These limitations and delimitations are important for understanding and evaluating the parameters of this study. The data collected and the conclusions reached can be useful in developing a more successful service-learning model for a communication class. It may also prove useful in creating a service-learning model that may be applied in other courses.
CHAPTER 2
LITERATURE REVIEW

The purpose of this chapter is to provide a conceptual framework that builds the foundation of service-learning, to examine the work that has been done with reflective thinking, to elaborate on the relationship between communication and literacy, and to identify the research on social interaction skills.

The first section will discuss the conceptual framework behind service-learning, beginning with Dewey’s ideas of progressive education. His belief that learning should take place in a “natural learning environment” (Clifford, 1981, p. 12) is at the heart of service-learning. From Dewey, I move to discuss theories of intelligence, from Binet’s test of intelligence to Gardner’s concept of multiple intelligences. Service-learning allows students to use both their stronger intelligences to develop their weaker ones. Finally, the conceptual framework section ends with the importance of giving students a choice in their own education. The concepts and theories discussed in the first section lay the foundation for the application of service-learning programs in education.

From the conceptual framework, I move to a discussion of the research on service-learning. This section explains what the literature tells us about service-learning and engagement, self-image, and cognitive development. Next, I undertake an examination of reflective thinking and the impact it has on learning. To better understand reflective thinking, I investigate the literature on methods used to teach reflective thinking, as well as literature on the importance of scaffolding ideas and activities. Since reflective thinking requires the individual to process his or her own actions and thoughts,
a subsection discusses the impact of the learning environment on education. And finally, an explanation of how one can assess reflective thinking is included. After reflective thinking, I discuss the literature related to the development of communication skills and how communication skills are an important part of literacy development. I end the section by examining the literature surrounding social interaction skills.

Conceptual Framework

Three overarching concepts influence the development of this study. The first concept is that of Progressive Education as put forth by John Dewey. The second is Howard Gardner's theory of multiple intelligences, and the third concept is Dr. William Glasser's concept of Choice Theory. These three theoretical concepts are discussed in this section.

Progressive Education

The ideas behind service-learning can be traced back to over a century ago, when John Dewey first examined the relationship between education and society (Dewey, 1900). John Dewey (1859 - 1952) was an influential philosopher and educator who spent much of his life developing and practicing his educational theories. In 1884, Dewey earned his doctorate in philosophy from Johns Hopkins University, and he eventually taught at the University of Chicago (Ornstein & Levine, 1985, p. 131). While in Chicago, he opened an educational laboratory school where he “became convinced that children needed a natural learning environment and active involvement in their own learning processes” (Clifford, 1981, p. 12). This subsection will discuss his ideas of progressive
education and reflective thinking in more detail and their relationships to service-
learning.

Dewey conceived of education as a social process (Dewey, 1900; 1902; 1916). As
students explore their environments, they encounter personal and social problems. In
their efforts to solve these problems, they use their knowledge of society to develop their
intelligence. “The social environment of the young is constituted by the presence and
action of the habits of thinking and feeling of civilized men” (Dewey, 1916, p. 73). When
students interact with their environments, they use previous knowledge to explore and
understand new experiences. Schools, Dewey believed, should encourage active student
involvement in their own education. Students should be free to experiment with their
beliefs and values without the pressure of finding the correct solution. This child-centered
focus of education became known as progressivism.

Dewey’s concept of reflective thinking. In addition to the natural learning
environment and active involvement, Dewey also believed reflective thinking is an
important part of education. Dewey (1910/1997) explains:

Reflective thinking is always more or less troublesome because it involves
overcoming the inertia that inclines one to accept suggestions at their face value;
it involves willingness to endure a condition of mental unrest and disturbance.
Reflective thinking, in short, means judgment suspended during further inquiry;
and suspense is likely to be somewhat painful. (p. 13)

Schools need to be organized in such a way as to provide appropriate environmental
conditions in which students can investigate problems without direct influence and
judgment from teachers. Introducing students to a service-learning program in which they
can identify a social need and collaborate to alleviate that need is in direct correlation
with Dewey's progressive education. In the process of identifying and working on the
social need, students will experience deeper academic development when they are
expected to reflect upon the decisions that they make during the service-learning project.
Using reflective thinking enables students to test several solutions to the problems.

Dewey's term **reflective thinking** requires that the individual not accept the first
reasonable solution. It is important to understand that there are no right or wrong
answers, only a raising of conscious awareness. Rather than accepting the first solution
that comes to mind, the individuals involved in the service-learning project are
encouraged to inquire into alternative means and ends. Reflective thinking moves the
individual away from thoughtless routine and into conscious control. "As problems
emerge and are dwelt upon, observation is directed less to the facts that bear upon a
practical aim and more upon what bears upon a problem as such" (Dewey, 1910/1997, p.
191). Through this reflective thinking, the individuals can grow and adapt to future
situations.

**Implication of progressive education.** Based on Dewey's concept of education as
a social function, the important feature of service-learning is not the stated goal of the
service project, such as volunteering time or raising money, but the interaction amongst
the parties involved, such as the teacher, students, and community members. This
interaction, a social activity, can build positive relationships amongst the various parties
and establish a cognitive understanding of one's behaviors. Current educational practices
concentrate only on the linguistic and logical-mathematical styles of thinking (Gardner,
1985; Wilby, 2007). This practice endangers the social aspects of education, which are essential to how people relate to others. Grey (1977) believes that:

We interpret our biological classification as homo sapiens as a limitation rather than as a starting point, and fail to recognize the full range of human sensitivity as we apply one aspect of our sensitivity, our ability to think, to repress the other, our capacity for feeling. We are using only one half of our sensitivity, and we are using that half destructively. (p. 141)

Service-learning fits well with Dewey’s ideas of progressive education. Students interact with people in the community, as well as with their peers in the classroom. Service-learning is a social activity that requires that students are put into real situations and encouraged to solve real problems. Service-learning programs also ask that students use a variety of thinking styles, or intelligences, to complete their projects.

**Multiple Intelligences**

Traditional classrooms ask students to remember information and be able to repeat that information through a test or some other assignment. Service-learning takes students out of the traditional classroom and asks them to figure out information on their own. Because service-learning is a student-centered teaching method, it reinforces the idea of multiple intelligences.

Schools are a place of learning, so finding ways to measure one's learning is important. In some cases, learning is equated to intelligence, which means that tests can be designed to determine how intelligent an individual is. Alfred Binet is credited with developing the first test to measure intelligence (Siegler, 1992). Binet’s test was meant to compare the mental abilities of a child to that of his/her peers. When the test was brought to the United States, it was revised and became a test to determine one’s intelligence.
Schools have relied on tests such as Binet’s or other standardized tests, to provide evidence of a person’s intellectual ability. From these tests came the concept that “intelligence” is based upon the linguistic and/or logical-mathematical abilities (Gardner, 1995).

When students are consciously aware of their actions and intentions, they are making connections to something that already exists in their quality worlds. “It is very rare in everyday life that actions and obtained outcomes cannot be related to some persisting project in which the actor is engaged” (Nuttin, 1968, p. 133). Sometimes these connections are made to old information, and sometimes they are made to the people who are in the quality worlds. Whatever one learns, it changes his/her quality world just a little. “As we attempt to satisfy our needs, we are continually creating and re-creating our quality worlds” (Glasser, 1998, p. 48). Individuals are more apt to learn information that they can use and place in their quality worlds. Glasser explains that one’s quality world is based on what is important to the person, such as family, friends, aspirations, etc.

Since the introduction of the first standardized test, psychologists have been trying to determine a clear definition of intelligence. Howard Gardner introduced his theory of multiple intelligences in 1983, with the publication of *Frames of Mind: An Introduction to the Theory of Multiple Intelligences* (Gardner, 1985). Gardner conducted several studies to conclude that each individual has at least seven different intelligences: interpersonal, intrapersonal, linguistic, musical, spatial, logical-mathematical, and bodily-kinesthetic (Gardner, 1985). Since the introduction of his seven multiple intelligences, Gardner has added two more: naturalistic and existential (Armstrong, 1999; Gardner, 1995).
1999). His theory has led to criticism from other psychologists, but praise from many educators (Gardner, 1995). For educators, the Theory of Multiple Intelligences seemed to answer questions as to why some students with potential in some areas, just could not get the basics.

Some have criticized Gardner for using the term intelligence to identify the special talents and/or skills of individuals (Gardner, 1995). Whether one calls it intelligences, talents, or skills, it is clear that every student is different and should not be treated or taught in the same manner. Sternberg (1985; 1996; Sternberg & Spear-Swerling, 1996) takes a different approach to intelligence. He argues that individuals have three different ways of thinking: analytic (componential), creative (experiential), and practical (contextual). Although not as specific as Gardner's theory, Sternberg believes that by knowing and understanding these three types of thinking, educators will be able to teach for successful intelligence (Sternberg & Grigorenko, 2004). Students can be much more successful and better prepared for the world outside of school if “they were taught in a way that better matched their patterns of abilities” (Sternberg & Grigorenko, 2004).

When educators understand that students have different ways of being intelligent, or different abilities, they can use those abilities to keep the students interested and make the subject matter relevant to each student. Educators should not expect all students to possess the same skills at the same time. It is important to do our best at individualizing education, to the extent that is possible under most formal school settings. Individualizing education is difficult for any teacher, but especially for high school teachers who
encounter over 100 students each day. Teachers need to find ways to: teach to the child’s abilities, not to a predetermined test; draw out the strengths in each child and help him/her use those strengths to improve areas of weakness; and focus on the positive skills instead of criticizing the weaknesses (Hatch, 1997). Service-learning allows the teacher to individualize the educational process for each student because students work at their own pace and on projects of their own interests. Students determine what they will do to learn the skills introduced in the class. Giving students the opportunity to decide on projects that fit into their interests is a powerful motivator.

Choice as a Motivator

Students rarely have much choice in what they do for class assignments. This can be damaging to some students who do not have a strong passion or interest in a particular academic course. No matter what the subject, service-learning allows students to make some very important decisions. Whether students choose their project or not, they at least make decisions as to how they will perform the project and to solve problems when they arise. Service-learning projects give students many ways to make their own decisions.

Because students have different learning styles and intelligences, giving students choices can be a powerful motivator, if the conditions are right (Katz & Assor, 2007). Teaching in one mode may not be the best way to reach all students. Teachers want to find ways that will allow all students to become engaged in the material and learn the skills being taught. This often means teaching one concept in a variety of ways: visually, orally, and with hands-on activities. However, it is also important to reach out to students’ individual interests as well. When a student can connect the information being
taught to something he/she is interested in, he/she will learn better (Glasser, 1998; Katz & Assor, 2007). Since all students have different interests, allowing for some choice is beneficial.

Teachers know that the key to motivating students is different for each child, each teacher, and each situation. Brain-based research tells us that students learn best when they enjoy their educational experience and when the information is relevant to their lives (Kohn, 2004; Pawlak, Magarinos, Melchor, McEwan, & Strickland, 2003; Willis, 2007). Jehlen (2007) recommends 7 approaches to motivate students:

1. Build strong relationships.
2. Tell them why it matters.
3. Give them a voice and a choice.
4. Make it fun.
5. Make it relevant.
6. Make it real.
7. Use technology. (pp. 40 – 41)

The National Commission on Service-Learning (2002) and Dr. Glasser (1998) agree that it is important to give students choices and to make the information relevant. For students to be engaged in learning, they must feel that what they are doing is valuable and meaningful to them (Katz & Assor, 2007; Steinberg, as cited in National Commission on Service-Learning, 2002, p. 9; Willis, 2007). Studies have shown that when teachers get the students involved by following approaches similar to those stated above, students have greater opportunities to experience success (Anderson, Pruitt, &
Courtney, 1989; Guthrie & Wigfield, 1997; Lumsden, 1999; Maehr & Midgley, 1991; McDill, Natriello, & Pallas, 1985; Reyes & Laliberty, 1992; Stipek, 1988). Allowing students to choose how they demonstrate their skills is one way of helping them to make the information relevant to their own lives. When giving students choices, it is important that the teacher guides the students into making reasonable and appropriate decisions.

The elements of Choice Theory. Control theory, which Dr. Glasser (1998) later renamed Choice Theory, teaches that individuals will have better relationships if they exert control over their own decisions, rather than blaming someone else for their failures. The ability to use the information one learns is a key characteristic of Glasser’s (1998) Choice Theory psychology. Glasser believes that many of the problems in society, and in our schools, can be explained by the use of external control psychology. External control psychology is explained as “an attempt to force us to do what we may not want to do” (p. 5). Psychologists, such as Skinner (Clifford, 1981), believe that all behavior can be shaped using external control of stimuli. Through this practice, teachers are more likely to expect students to do exactly as instructed, given the student no choice in the matter. Glasser (1998) believes that this type of external control psychology is ineffective not only because it destroys our personal freedom, but also because it harms everyone involved. “Choice theory explains that stimuli, in the sense that they can consistently control a human being to make a specific choice, do not exist” (Glasser, 1998, p. 17). Involving the student on a conscious level enables the student to explore the problem and experiment with solutions.
How a teacher relates to his/her students is an important determinant of how a student will perform. Insisting upon a single correct answer will place undue stress on the student to perform exactly the way the teacher envisions. A teacher who is open to multiple solutions and encourages students to experiment and relate experiences to previous knowledge, will encourage the students to learn.

It is important that educators recognize students as individuals, with different needs and different perceptions. “Man acts on his social and physical environment, attempting to make them conform to his personal projects and plans” (Nuttin, 1968, p. 11). The more value one places on a person, event, or object, the more one’s perception differs from someone who does not value those same items. “Choice theory explains that the reason we perceive much of reality so differently from others has to do with another important world, unique to each of us, called the quality world” (Glasser, 1998, p. 44). By connecting new information to information that is valued in one’s quality world, the individual is able to utilize and learn the new information. Giving students choices allows them to make connections to their unique quality worlds because they can connect their choices to their interests.

Teachers have good intentions when they plan lessons designed around their own experiences, but the students rarely have the same interests. There is no way to force students to have the same interests as the teachers, so teachers must concentrate on building better relationships. If a student can place the teacher in his/her quality world, he/she will be more willing to learn the material. This requires that the teacher be open to different perspectives, express genuine concern for students’ interests, be supportive, and
allow the students to discover information on their own. "Too many teachers and bosses
do not realize how much they are needed just to be warm, friendly, and supportive to
those they teach and manage. It doesn’t take much; a few minutes of attention a day
works wonders" (Glasser, 1998, p. 51). Spending time to communicate with students will
build better student-teacher relationships and improve the ability to motivate students.

Glasser is not just concerned with students doing the work; he insists that students
must produce quality work. "The students rarely learn the basics of quality, which is
continual improvement based on feedback" (Glasser, 1998, p. 276). Regular
communication with students as they proceed through the learning process provides the
feedback that leads to continual improvement. As teachers assist students in reflecting on
their assignments, they are also helping students to connect the new knowledge to
something that already exists in their quality worlds. Teachers can help make these
connections by allowing students to explore the reasons they chose to take each action
and what could be done differently. As they work to develop an assignment that fits into
the image they have, they must bring their actions to their consciousness.

Service-learning allows students to have both a choice and a voice. Students
choose a project that fits with their interests and their skills. They are motivated to do
quality work because they choose what they do, how they do it, and how they will be
graded. Teachers act as mentors or guides as they help students find ways to improve
their communication skills. When students are motivated, they tend to become more
actively involved in their education.
Engagement

While choice is an important factor in reaching some students in high school, it is also a method used to engage students in the information being taught. Engagement can be described as the level of participation and the amount of interest one shows in school (Newmann, 1992). Not only does service-learning allow students to make choices, but it also compels students to become engaged in their learning. Service-learning projects require that students interact with their peers and others in the community to complete the project. This component of the project ensures that all students will be engaged in the activity in a way that will help them feel competent with their skills. An exploratory analysis by Akey (2006) indicated that both engagement and perceived academic competence play a role in student achievement. Service-learning is an activity that allows students to work in their areas of interests, to show off their skills, and to be involved in something beyond textbook learning.

When students do not feel competent in a subject or in school, they may not feel connected with their school, resulting in poor grades or dropping out. Reasons for student disengagement can range from boredom in the classes to feeling as though no one cares (National Commission on Service-Learning, 2002). The results of disengagement can be slightly annoying, or even life-damaging. As a classroom teacher, I have witnessed some results of disengagement. Some students act out in class because they are bored, others choose not to complete assignments. Some students skip classes that do not interest them, and then end up in In-School Suspension where they miss out on the educational experience. Some students purposely do not try and fail the class, over and over again.
Some drop out and miss out on chances to secure a good career. Students who are not involved in school, who feel as though no one cares, or who do not believe that the subject is relevant to them may become disengaged in school, resulting in a lack of development of valuable skills. Academic disengagement may translate into civic disengagement (National Commission on Service-Learning, 2002), meaning that schools are not producing caring and productive citizens who will continue to promote our democratic ideals.

Studies have shown that students learn more and have a greater interest in their education when they are engaged (Dowson & McInerney, 2001; Hancock & Betts, 2002; Lumsden, 1994). To help students feel competent so that they want to be engaged, teachers need to set high expectations and provide a support system (Akey, 2006; Hancock & Betts, 2002). Service-learning projects are designed to provide the support that students need, from the teacher and from the community, as well as providing high expectations for students. The more support the student feels he/she is given, the more likely the student is to be engaged in school (National Research Council, 2003). Other research has indicated that when students are introduced to new concepts or asked to solve new problems, they are more likely to learn more (National Research Council, 1999). In addition, if students are able to draw on prior knowledge or experience to solve the new problems, they are even more likely to improve their cognitive development (Cohen, McLaughlin, & Talbert, 1993; Glasser, 1998). Service-learning allows students to solve problems that are real to them and that represent a personal interest to them. Because the problems are unpredictable, students are forced to approach each problem as
a new problem and find new solutions. This personalized component of the service-learning project keeps students engaged, and the more engaged they are, the more likely they are to learn and retain new information and skills.

**Motivating Students**

The key to getting students engaged in education is to motivate them. The debate between using intrinsic verses extrinsic motivation has been around for years. Mary Ward (2007), a business skills teacher, advocates the use of extrinsic rewards for students from low-socioeconomic homes. Rewards such as food, money, or extra points can motivate students to want to be successful.

John Perricone (2007), a health teacher, has a different perspective on using extrinsic rewards. He fears that when extrinsic rewards are given, students only care about getting the reward, and the skill does not stick with them. If a reward isn’t offered, students may be less likely to want to be successful. Instead, Perricone endorses having teachers put themselves in the seats of the learners. What will make the lesson more interesting and relevant to the students? By considering the students, teachers can find ways to engage the students in the lessons, thus making them intrinsically motivated to learn. The debate on whether intrinsic motivators are more successful than extrinsic motivators has been going on for a long time. Many psychologists have studied different ways of motivating students, yet there is not a single answer to the question. Service-learning incorporates both intrinsic and extrinsic motivation.
Learning Theories

Exactly how individuals learn is up for debate. Do students learn best when given some type of reward? Or does learning depend on the physical and emotional development of individuals. Fortunately, service-learning is not dependent upon one learning theory. Service-learning can be viewed through the lenses of three major learning theories – developmentalism, behaviorism, and experientialism. Service-learning practices the ideas behind the behaviorist theories, but it also recognizes that students do not develop in the same way at the same time. Students are able to work on projects that fit into where they are developmentally, and they learn from the rewards they receive, both internally and externally.

Success can be based upon getting a good score on a test or actually being able to apply the information learned. If all one wants to do is pass a test, then he/she simply needs to place the information in short-term memory. However, the process of learning is much more than just knowing a collection of facts; it is knowing the facts and finding use for those facts (Nuttin, 1968). Many psychologists consider the ability to adapt and improve a key characteristic of learning (Glasser, 1998; Montpellier, 1970; Nuttin, 1968; Piaget, 1972). Through the use of knowledge, the student can adapt and improve the knowledge to fit into various situations. Several theories have been developed to explain how people learn.

Developmental theory. The developmental theory of learning suggests that learning takes place over time and in stages (Piaget, 1969). High schools attempt to reach the final stage, which focuses on thinking and analyzing (Orlich, 2000). In this stage, the
individual builds upon information gained in the previous stages and is able to use the information in a deeper and more analytical way. The individual should be able to find a way to adapt the new information into his/her world. In his introduction to Piaget's *The Principles of Genetic Epistemology* (1972), Wolfe Mays explains that accommodation “refers to the way in which objects act on the subject, so that he adapts (or accommodates) his behaviour to these objects” (p. 6). Therefore, the new information must be able to connect to something that the individual has previously learned. Using previous experience, the individual fits the new information into his/her world and adjusts it to fit new experiences.

**Behaviorism theory.** Behavior theorists suggest that learning is based on “an observable change in behavior” (Orlich, 2000, p. 471). B. F. Skinner popularized this theory of behavior in the 1930s after working with animals (Strickler, 2006). If a reward is given each time an individual behaves as desired, and a punishment is given each time the individual behaves inappropriately, then that individual will learn that the desired behavior is more satisfying. This concept encourages external forms of motivation for getting students interested in learning. A problem with this type of motivation is that it does not have long-term effects (Strickler, 2006). Students will learn the information to get the reward, but once the reward has been given, the student has no reason to hold on to the information. Learning is associated with the reward and not with how the information will be useful in the individual’s daily life.

**Experiential learning theory.** The experiential learning theory places its focus on the learner. Rogers (1969) makes two very important points about learning: (1) Students
learn better if the subject has relevance to his/her own life, and (2) significant learning is achieved through doing. For Rogers, a person learns best when he/she is actively involved in the subject matter. Kolb’s (1984) Experiential Learning Model represents four learning tasks within the learning cycle: concrete experience, reflective observation, abstract conceptualization, and active participation (Kolb & Fry, 1975). The experiential learning theory is related to the ideas of Dewey, Piaget, and Lewin in that it expresses the desire to include students in active participation and reflection to enhance their learning (Smith, 2005; Svinicki & Dixon, 1987). The Experiential Learning Model does entail many problems, such as not having enough research to support it (Jarvis, 1987; Smith, 2005; Tennant, 1997) and not spending enough time on reflection (Boud, Koegh, & Walker, 1985; Smith, 2005), it is helpful in demonstrating learning as a multidimensional function (Smith, 2005).

Whereas all three theories of education are significant, the key is helping students to find the relevance to their own lives. When teachers allow students to make choices that are within the child’s area of interest, and they also allow students to have some control over their learning, students are more motivated to learn and find the relevance to their lives (Eccles, Midgely, & Adler, 1984; National Commission on Service-Learning, 2002). When determining a service-learning project, students are choosing topics that are relevant to their lives. Their choices are not dependent only upon their perspectives, but they must also consider the interests of those on their teams. Ideas from all the learning theories go into the service-learning projects.
Service-Learning

Even if society accepts that reflective thinking does increase an individual’s learning capability, the use of service-learning as a tool for engaging students has been questioned. The controversy involving community service, or service-learning, in schools has existed for years. In fact, the requirement of community service in some schools has been challenged in court (Institute for Justice, 1994). The first lawsuit challenging community service was brought against Liberty High School in Bethlehem, Pennsylvania, in 1990 (Institute for Justice, 1994, p. 375). This lawsuit failed, resulting in more school districts implementing mandatory community service requirements. The basics of the arguments against community service in school is whether or not students should be forced to complete community service for graduation or some other advancement.

Those who believe that mandatory community service is wrong argue that it is against the 13th Amendment, which prohibits involuntary servitude (Perrone, 1993). Others argue that students who are doing poorly in a subject should spend more time in the classroom, not in the community doing a service (Noll, 2001). Many mandatory community service programs have resulted from legislation, not from the educators themselves (Conrad & Hedin, 1991).

On the other side of the argument, community service is viewed as a necessity in the fight against lacking morals and an increase in selfishness among our youth. Schools may see mandatory community service as the only way to involve young people in their community (Noll, 2001). Without community service, they argue, schools are taking the
chance of producing individuals who are detached from their communities, resulting in a
deterioration of our society. A move from community service to service-learning has
helped to put the service projects in the hands of the educators and away from policy
makers.

Courses that include a service-learning component tied to the course objectives
have found that students not only enjoy the class more, but they gain academic
knowledge, improve reflective thinking skills, and improve their confidence (Sterling,
2007; Thomsen, 2006). Thomsen (2006) acknowledges that low-quality service programs
are less likely to yield improvements in any areas. High-quality service-learning
programs must include: a link to standards; students having direct contact with those
being served; cognitively challenging reflective activities; and giving the students both
voice and choice (Thomsen, 2006, p. ix). Service-learning has been linked to several
academic and personal benefits.

Engagement in Education

One benefit of service-learning is that it can help students feel more involved in
their own educational process. Sometimes, a student may feel as though he/she is a small
cog in the big wheel of education. Such feelings may cause the student to not get
involved in classroom or school activities, making him/her feel alone and isolated.
Service-learning activities can decrease an individual's feelings of isolation from both
small communities and large communities (Calabrese & Schumer, 1986). Students who
participate in service-learning projects feel more involved with their communities
(O'Connell, 1983; Switzer, Simmons, Dew, Regalski, & Wang, 1995; Youniss & Yates,
Procter (1992) found that female students in a private, parochial high school did have a decrease in social isolation, but students in a public high school showed an increase in feelings of powerlessness.

Service-learning involves students in real-world experiences, which can increase engagement in their education (Feller, Gibbs-Giffith, D’Acquisto, Khourey, & Croley, 2007; Turnley, 2007). Since service-learning requires students to explore community needs, students must actively participate in the project. Students learn to care about their project, so they are motivated to learn course objectives (Hart & King, 2007). When students feel a connection to what they are doing, they can become empowered and have an increase of self-esteem.

Self-Image

A second benefit of service-learning is that students can strengthen their self-confidence and how they perceive themselves. Several studies involving service-learning have focused on the attitudes, self-image, and social interaction of individuals involved in service-learning activities. Research has found that well-organized service learning programs and/or projects do result in greater self-image (Braun & Watkins, 2005; Cohen, Kulik, & Kulik, 1982; Conrad & Hedin, 1982; Crosman, 1989; Rutter & Newmann, 1989; Switzer et al., 1995). Students become more confident in their abilities as they work through the service-learning project and see their success.

A greater self-image can come from feelings of empowerment. Students involved in service-learning projects become empowered when they realize that they have the ability to make a difference (Avenatti, Garza, & Panico, 2007; Hoffman, Knight, &
Wallach, 2007). Service-learning can give students the power to recognize real social concerns and determine solutions to address those concerns. When students discover that they have the power to address social issues, they may become more self-confident, thus improving both their self-image and their intellectual skills.

**Cognitive Development**

A third benefit of service-learning is that students must work to solve problems, so they are developing higher order thinking skills. An abundance of anecdotal evidence supports the benefits of service activities in education (Cairn & Kielsmeier, 1991; Hart & King, 2007; Kinsley & McPherson, 1995; Obert, 1995; Schine, 1996). The inclusion of a reflective component to the service-learning project has a positive impact on academic achievement (Hart & King, 2007). Studies have been done on programs in all levels of education.

Students involved in service-learning activities also develop critical thinking skills (Braun & Watkins, 2005; Feller et al., 2007). Students must decide on the needs of the community, then determine ways to meet those needs. Since there is not a single answer, students use critical thinking skills to evaluate the problems and the various solutions.

Service-learning activities, therefore, provide many benefits to students and the community. Improving personal development and social interaction skills, becoming more engaged in education, increasing their self-image, and strengthening cognitive development are just a few benefits that students can receive from participating in service-learning activities.
Reflective Thinking

For service-learning to be highly successful, it is important to include reflection as one of the components. Reflective thinking, a type of metacognition (Brown, 1987), helps the student become aware of his/her own thinking and knowledge. Reflection is an important skill because it helps students to connect what they are learning in the classroom to the outside world (Harvey & Goudvis, 2000; L’Allier & Elish-Piper, 2007; Pintrich & Schunk, 2002); helps to expand how students see the world and make decisions (Guthrie & Davis, 2003), and provides an avenue for new learning (Guthrie & Humenick, 2004).

As stated earlier, reflection is an important component in deep, meaningful learning. For Dewey (1910/1997), reflective thinking “involves not simply a sequence of ideas, but a consequence – a consecutive ordering in such a way that each determines the next as its proper outcome, while each in turn leans back on its predecessors” (pp. 2 – 3). In other words, reflections are not thought processes that occur after an action; they occur before, during, and after the action to help create meaning (Ellis, 2001; Wilczenski & Coomey, 2007).

Dewey (1910/1997) and King and Kitchener (2002) suggest that learning occurs when individuals encounter problems. Through reflective thinking, students face those problems and come up with possible solutions. Song, Koszalka, and Grabowski (2005) found three key areas for promoting reflective thinking: teaching methods, scaffolding tools, and the learning environment.
Teaching Methods

How a teacher introduces new knowledge can have an influence on the development of reflective thinking skills (Virtanen, Kosunen, Holmberg-Marttila, & Virjo, 1999). Inquiry-oriented activities, such as service-learning projects, encourage students to ask thought-provoking questions (Song et al., 2005). The real-world application of service-learning projects creates a more meaningful relationship between the new information being taught and how students build knowledge. As new skills are being introduced to students, students learn to reflect on the new concepts as they apply to the service-learning project (Moon, 1999; Virtanen et al., 1999).

Scaffolding Tools

Not all students will develop reflective thinking skills at the same rate (Wellington, 1996; Williamson, 1997). The individual’s level of reflective thinking is dependent upon his/her cognitive development, and how he/she perceives situations (Stein, 2000). Using a variety of reflective thinking tools can help individuals strengthen their reflective thinking skills. Journals, questions prompts, discussions, and concept maps are all useful tools in promoting reflective thinking (Andrusyszyn & Daive, 1997; Griffith & Frieden, 2000; Kinchen & Hay, 2002). Interaction between the student and another person, whether it is the teacher, a community member, or a peer, provides the student with the opportunity to express his/her own thinking about the situations and problems he/she encounters (Andrusyszyn & Daive, 1997). Reflective writing alone may not help strengthen reflective thinking skills, but reflective writing along with input from others can go a long way.
Learning Environment

In a traditional classroom, teachers determine what is to be taught and how it is to be taught. In a service-learning classroom, the teacher still determines the skills to be taught, but students decide on how they are going to learn those skills. When a classroom is set up so that students are able to make many of their own decisions, the learning environment is more conducive to long-term learning (Duffy & Cunningham, 1996). A student-centered classroom promotes reflective thinking because students are asked to face problems and determine a solution to those problems. Students learn that a single solution may not be the best answer, and they may have to find alternative solutions.

Service-learning, as it is being used in this study, requires that students work together to address the social needs. As a team, they will encounter problems that will need to be discussed and addressed together. The team and the community member may need to discuss the best way to address the issue. Collaboration amongst team members and community members helps to strengthen reflective thinking skills (Aldred & Aldred, 1998). As students work with others to solve problems, they must think about what they already know and what they need to know. They must also consider the point-of-view of other individuals with whom they work. Collaboration encourages students to reason through their own thinking process.

Assessment of Reflective Thinking

Assessing reflective thinking can be a difficult task (Paoletti, Segal, & Totino, 2007; Stein, 2000). Determining whether someone is learning is often dependent upon the evaluation of the students' self-assessments. Research does show that reflective practices
help to improve performance in some areas, yet it is also true that it is difficult to measure reflective thinking (Lee & Sabatino, 1998). Many attempts to measure reflective thinking have relied on models created by Van Manen (1977), Mezirow (1991), and King and Kitchener (1994, 2002).

In a qualitative study concerning the reflective thinking development of student teachers, Wenzlaff (1994) used Van Manen’s Categories of Reflective Thinking to analyze reflective journal writing. Van Manen’s first level of reflective thinking is called the *technical* level (1977). At this level, a person is more concerned with identifying a strategy to reach a goal than with understanding the value of that goal. Van Manen’s second level, the *practical* level, is concerned with the relationship between theory and practice. The individual is more likely to relate the goals or objectives to values. The third level of Van Manen’s model, *critical*, is where individuals evaluate ethical, political, and social concerns. Individuals at this level consider how their goals are connected to the greater world.

Wenzlaff used Van Manen’s three levels of reflective thinking to categorize journal entries and to identify themes. The instructors spent time discussing the guidelines for writing journal entries, and they modeled their expectations before students were asked to write their entries. The guidelines that were given to students included explanations of four reflective questions: (1) Describe a recent event, (2) Explain why the event turned out as it did, (3) Discuss what could be done to modify the event, and (4) Identify issues, questions, or concerns that need further investigation (Wenzlaff, 1994). In addition to the journaling, participants participated in conferencing sessions with their
peers and supervisors. This study was set up to determine if conferencing and journaling produced higher levels of reflective thinking than journaling alone. Van Manen’s model was used to categorize the data from the journal entries as well as the data from the conferences.

The study found that conferencing is not necessarily more effective than journaling when trying to improve reflective thinking. Discussion is a key aspect of helping students move to Van Manen’s second level of reflective thinking, the practical level. The researchers determined that moving students to the third level of reflective thinking requires training the peers and supervisors to utilize more effective discussion methods.

Lee and Sabatino (1998) researched the measurement of guided reflection. Researchers did not rely on a particular model to evaluate reflective thinking. Instead, they considered the literature on reflective thinking, and looked for four key elements in their participants’ reflective writing: (1) “the learning experience was clearly and completely described,” (2) “an attempt was made to analyze the situation or experience,” (3) “learning theories or principles were applied in forming a hypothesis,” and (4) “thought was given to future actions” (p. 167).

Participants were first instructed in strategies for writing their reflections. The instructors provided structured questions upon which the participants were to write their reflections. Rather than giving the participants a numerical grade on the reflections, the participants were given written feedback. The feedback was based on the quality of the reflection and identified examples of reflective thinking. To analyze the data, the
researchers assigned one point for each element found in the reflective writings. The results of this study were inconclusive due to several alternative possibilities. Researchers did not consider the quality of the reflective thinking when assigning points. Also, some students may not have fully expressed their ideas on paper, so a true evaluation of the reflective thinking was impossible.

In an effort to create a usable instrument to measure reflective thinking, Kember et al. (2000), developed a questionnaire using Mezirow's Model of Transformative Learning. Mezirow (1991) discussed the difference between reflective action and non-reflective action. His non-reflective actions include: habitual action, thoughtful action, and introspection (Kember et al., 2000, p. 383). The researchers developed four questions to correspond with habitual action and thoughtful action, but did not feel that introspection would offer insight to the purpose of their study.

Mezirow's reflective action had two levels: the lower level, which they termed reflection, and the higher level, premise reflection. After identifying the two levels of reflective action, the researchers developed four questions to reflect the degree of each level of reflection. With a questionnaire of 16 questions representing Mezirow's Model of Transformative Learning, researchers tested their instrument. The final version of their questionnaire was given to 303 university students in Hong Kong (Kember et al., 1999). Using Cronbach alpha, it was determined that the questionnaire was reliable and could be used in various academic disciplines. The researchers suggest using the questionnaire at the beginning, middle, and end of the course to measure the effects the course has on reflective thinking.
King and Kitchener (2002; 1994) developed the Reflective Judgment Model to explain the stages people go through as their reflective thinking skills develop. Cama, Ferguson, and Huyck (2006) used the Reflective Judgment Model to measure the level of reflective thinking in university students engaged in service-learning projects. Their findings suggest that the level of reflective thinking may be based more on the types of questions students reflect upon than an actual growth pattern of reflective thinking.

In the Cama, Ferguson, and Huyck (2006) study, students were given a set of reflection questions to answer throughout the course. Each time students were given the reflection questions, the focus was on a different objective for the course. Students were never asked to reflect on the same set of questions a second time. Students were not trained in reflective thinking prior to the first set of questions, nor did provide guidance for answering the questions.

By using the King and Kitchener Model of Reflective Judgment (Wood, 2000) to code the responses to the questions, researchers found that most student responses demonstrated lower levels of reflective thinking. In three of the four sets of questions given throughout the course, student responses were coded in the Pre-Reflective Thinking stages and the Quasi-Reflective Thinking Stages.

The Pre-Reflective Thinking stage is when knowledge is considered absolute. In this stage, the individual believes that “knowledge is gained through the word of an authority figure or through firsthand observation” (King & Kitchener, 2002, p. 39). Individuals at this stage do not investigate knowledge on their own. Instead, their beliefs are based on the information provided by the teacher or some other authority figure.
In the Quasi-Reflective Thinking stages, “knowledge – or more accurately, knowledge claims – contain elements of uncertainty” (King & Kitchener, 2002, p. 40). Individuals begin to realize that the information upon which their knowledge is based may not be accurate. Knowledge is situational and may be based on the individual’s unique perceptions of the information. Students begin to understand that people have different views on the world, so solutions or ideas may differ. However, at the same time, individuals may not thoroughly investigate the problems, and they may simply find information that supports their own beliefs.

However, in a fourth set of questions, those dealing with ethical issues, researchers found that student responses could be coded in the higher level of the Reflective Judgment Model. In the Reflective Thinking stages, “Knowledge claims cannot be made with certainty” (King & Kitchener, 2002, p. 40). Individuals at this level of reflective thinking understand that knowledge is constructed and not an absolute. They justify their judgments by comparing evidence and ideas from a variety of perspectives on a subject. Individuals realize that knowledge can change as the situations change. Reflective thinkers use evidence and reasoning to support their knowledge claims.

Cama, Ferguson, and Huyck’s (2006) study did have some limitations that affected the results of the study. By giving the students four different sets of questions, researchers were not able to compare the progress of reflective thinking. They did, however, determine that students demonstrate higher levels of reflective thinking when the questions covered ethical issues.
Assessing reflective thinking for this study. The King and Kitchener (2002; 1994) Reflective Judgment Model (Wood, 2000) is an appropriate way to assess reflective thinking skills for this study. As a qualitative study, I am interested in examining the progress of reflective thinking throughout a service-learning project. The King and Kitchener model will allow me to set up categories as I read through the data and code the information. Because the reflective questions continue throughout the project, I will be able to assess whether or not students' reflective thinking skills do improve. Some of the above studies suggest that using guided questions and teaching students how to write reflective journal entries can be effective strategies in helping to improve reflective thinking. Through journal writing, letter writing, and team discussions, students will be able to explore their own actions and the ethical issues of their project. The King and Kitchener Reflective Judgment Model (Wood, 2000) allowed me to look for patterns of growth as students move from one stage to the next.

Communication Skills

Communication, and oral communication in particular, has been related to success in academics and careers (Curtis, Winsor, & Stephens, 1989; Morreale & Hackman, 1994; Rubin, Graham, & Mignerey, 1990; Rubin & Morreale, 1996). The development of reasoning skills is related to communication competency (Vygotsky, 1934/1986). Service-learning utilizes various forms of communication, in the forms of reading, writing, listening, and speaking. Students are required to practice their communication skills as they work with members of the community.
Communication is difficult to define because it involves almost every aspect of our lives. Around 100 definitions of communication have been published over the years (Dance, 1970), and it seems unlikely that experts will ever settle on one definition. Communication is a process with no clear beginning and no clear end. It is constantly changing based upon what has happened and what is happening at the time. One cannot separate communication from the context in which the communication is occurring (Wood, 1982). Communication involves the spoken word as well as the nonverbal indicators, such as body language, facial gestures, and spatial relations. Also, communication is the coming together of at least two perceptions. When those perceptions match, the message is understood. When they do not, there is a breakdown in communication.

Effective communication involves the message reaching the receiver as close to the intention of the sender. In other words, for one to be an effective communicator, he/she must understand the best way to arrange and deliver the message. He/she must also have a good understanding of the receiver so that he/she is arranging and delivering the message in the most appropriate way. For example, if I wanted to communicate with a blind person, I would not write a letter in pencil and mail it to her. I would, instead, consider having a verbal conversation with her so that I could be assured that she received the message I intended.

Part of being able to function well within society is being able to communicate well. Employers desire individuals with the ability to express themselves through reading, writing, speaking, and listening (Harris Education Research Council, 1991). To
add to this, people need to be able to read, write, speak, and listen in a variety of ways, and they need to be able to determine the best way to communicate in a given situation. How do schools help the students improve their communication skills in different situations? It is not enough to describe those skills and situations; educators must also allow the students to practice those skills in real situations.

**Literacy as Communication**

Literacy is one branch of communication. The concept of literacy continues to evolve as society changes. Since this study takes place in a communications class, literacy will involve competency in speaking, reading, writing, listening, and behaving, as well as the ability to interpret and understand information from various sources. The development of literacy skills are not limited to what is taught and learned in school (Alvermann, 2001; Moje, 2000). In our ever-changing world, it is important that students be able to function appropriately in a variety of situations with a variety of people. To me, literacy is also understanding the world around you and being able to function within the norms and expectations of that world.

Writing is a form of communication in which students are physically engaged in the assignment, but are they emotionally and intellectually engaged? When students do not see relevance to their lives, they may go through the motions, but they may not be benefiting from the activity. Giving students opportunities to explore issues that are important to them helps them to make sense of their lives (Fairbanks, 1998, Smith & Wilhelm, 2002; 2004). Csikszentmihalyi (1990) states that “knowledge that is seen to be controlled from the outside is acquired with reluctance and it brings no joy” (p. 134).
Students who feel as though they have no choice in what they write about and how they write about it may come to despise writing (Bigelow & Vokoun, 2005; Smith & Wilhelm, 2002; 2006). Even though they are capable of writing, they may not strengthen their writing skills because they have no desire to write about canned items that are only for the teacher.

Literacy, then, is an activity that involves the whole brain (Armstrong, 2003). Drawing from Gardner’s (1985) theory of multiple intelligences (MI), Armstrong recognizes that students who do not feel competent in their linguistic intelligence, may suffer in other academic areas. Building a classroom around multiple intelligences can help students use their stronger intelligences to improve their weaker intelligences (Armstrong, 2003; 2006; Gardner, 1993). In the traditional classroom, literacy is taught through direct instruction (Gardner, 1993). The teacher is in charge of determining the assignments that are meant to improve literacy. Student interest is seldom considered. On the other hand, in the MI classroom, instructors consider the different talents and skills of the students to design meaningful lessons. Schools that incorporate multiple intelligences in their curricula have seen gains in academic achievement (Campbell & Campbell, 1999; Campbell et al., 1999).

Communication and Service-Learning

Communication is a social activity (Dewey, 1900) and should not be taught in isolation. No matter what the purpose of communication is, communication is about building relationships (Galvin & Book, 1987). Communication involves having a sender and a receiver, which means that when someone wishes to send a message, he/she must
consider the audience, or the receiver (Galvin & Book, 1987). Too often in schools, the audience is the teacher (Smith & Wilhelm, 2006), so students may not feel a real connection with the work they are asked to do. Assignments that are isolated to the classroom are not helping students learn how to build relationships. Literacy skills should be taught in a social setting where students can discuss their reading and writing skills with others (Smith & Wilhelm, 2006). Putting students in situations where they can communicate with someone who has a real investment in the topic can help make the assignments more relevant to the students.

Service-learning engages the whole student in his/her education. It requires the student to be able to express him/herself effectively in writing as well as speaking. It requires the student to be able to interpret information they read and hear. Service-learning is a real-world project that engages students in some very important and essential communication activities.

Assessment of Communication Skills

A single definition for communication competency does not exist (Dunbar, Brooks, & Kubicka-Miller, 2006; Jones, 1994; McCroskey, 1982; Rubin & Graham, 1988; Rubin et al., 1990; Weimann & Bucklund, 1980). Littlejohn and Jabusch (1982) identified four components to communication competency: cognition, behaviors, affect, and ethics. The National Communication Association (NCA) held a series of academic meetings and identified eight skills related to communication competency:

1. (Allen, 2002) being able to choose an appropriate topic and restrict it according to the purpose and the audience,
2. (Borko, 1997) communicating the purpose of the speech in a manner appropriate for the audience and to occasion,

3. (Dannels, 2001) using appropriate supporting material to fulfill the purpose of the oral discourse,

4. (Dannels, 2002) using an organizational pattern appropriate to the topic,

5. (Dougan, 1996) employing language appropriate to the designated audience,

6. (Erwin, 1991) employing vocal variety in rate, pitch, and intensity,

7. (Erwin & Sebrell, 2003) articulating clearly, and using correct grammar and pronunciation,

8. (Morreale, Moore, Taylor, Surges-Tatum, & Hulbert-Johnson, 1993; Morreale, Rubin, & Jones, 1998) demonstrating nonverbal behavior that supports the verbal message. (Dunbar et al., 2006, p. 118)

Several approaches are necessary when evaluating communication competency (Erwin, 1991; Rosenbaum, 1994). In schools, teachers use a variety of methods to assess the development of skills, including tests, rubrics, observation, and portfolios.

Criterion-referenced evaluations are necessary when the teacher wishes to evaluate performance based on standards for the discipline. For criterion-referenced assessment, a teacher may utilize rubrics, observations, and/or portfolios. The NCA developed a rubric, called the Competent Speaker, based upon the eight skills listed above. This rubric has been tested for reliability and validity (Dunbar et al., 2006; Morreale et al., 1993).
Assessment of communication skills for this study. For this study, a rubric based on The Competent Speaker rubric was developed to match the targeted skills for the semester-long course. Rather than focus on all eight of the skills identified by the NCA, I concentrated on those skills that best fit with group work: (1) using appropriate supporting material to fulfill the purpose of the oral discourse, (2) employing language appropriate to the designated audience, (3) employing vocal variety in rate, pitch, and intensity, (4) articulating clearly, and using correct grammar and pronunciation, and (5) demonstrating nonverbal behavior that supports the verbal message.

To assess communication competency according to these five skill areas, I modified The Competent Speaker rubric by eliminating the three skills more associated with giving a speech and not with communicating within a group. The Competency Rubric (Appendix J) describes three skill levels (Excellent, Satisfactory, and Unsatisfactory) that correspond to the descriptions offered by Morreale and Hackman (1994). The Competency Rubric was used to assess communication skills I observed during the interviews and the observations.

Social Interaction Skills

Social interaction is a crucial part of cognitive development (Vygotsky, 1978). Erikson agrees that social interaction is a major factor in the development of personality and behavior (Huit, 2008). In addition, social skills have been related to success in school and other areas (Dwyer, Osher, & Warger, 1998; Elliott, Malecki, & Demaray, 2001). DiPerna and Elliott (2000) and Wentzel (1993) reported that research has indicated a strong relationship between positive social behavior and school success
Studies have shown that prosocial behavior has a positive effect on empathic behavior (Feshbach & Feshbach, 1987), interaction with peers (Cobb, 1972; Green, Forehand, Beck, & Vosk, 1980), positive classroom conduct (Wentzel, Weinberger, Ford, & Feldman, 1990), and compliance (Kohn & Rosman, 1973). Wentzel (1993) also found that how a student behaves in class has a direct effect on his/her grade-point average. Developing positive social behavior not only improves how one interacts with others, it also has an effect on academic achievement.

In a traditional school setting, the students are expected to listen as the teacher provides the information (Hausfather, 1996). Sometimes, students work in small groups on projects and have the opportunity to interact with their peers. Often, students are encouraged to work alone, such as on tests or worksheet assignments. The focus of most classrooms is on the development of academic skills, while social skills are put to the side. However, social skills are essential to helping students adapt to various situations and work toward their personal goals (Junge, Manglallan, & Raskauskas, 2003).

Junge et al. (2003) refer to the development of social skills as life skills, which they define as “non-academic abilities, knowledge, attitudes, and behaviors that must be learned for success in society” (p. 166). Because their definition of life skills concerns how individuals are to function in society, their research is related to the concept of social skills.

The development of social skills is an important goal in education because with improved social skills, students can feel a greater sense of self-worth, feel competent in working with others, be able to solve problems, and be open to new experiences (Rosen,
Experiential and cooperative learning activities have been found to have a positive effect on the development of life skills (Deen, Bailey, & Parker, 2001; Johnson & Johnson, 2003; Junge et al., 2003; Slavin, 2000). One aspect that may contribute to the development of social skills in the afterschool programs is the interaction with competent adults (Quinn, 1999; Roth, Brooks-Gunn, Murray, & Foster, 1998). Others believe that hands-on learning experiences contribute to the development of social skills (Bredekamp & Copple, 1997; Johnson & Johnson, 2003; Slavin, 2000). Several studies have shown that participation in afterschool programs increases social competence and reduces behavioral problems (Junge, Riley, Steinberg, Todd, & McClain, 1994; Vandell & Pierce, 1999).

The environment where learning takes place should be considered just as important as the material being taught to the students. Evidence suggests that teaching social skills in isolation is less beneficial than integrating social skills with academic learning (Forness & Kavale, 1996; Lewis, 1994). Teachers can create an environment that is comforting and welcoming for students, but they cannot predict all the situations that students may encounter. For this reason, putting students in a natural environment, such as giving them opportunities to practice their skills in the social world outside of school, can have a greater impact on their social interaction skills. Vygotsky's (1978) Social Development Theory suggests that the teacher act more as a partner in helping the students discover new learning. Hawkins and Weis (1985) point out that young people who are given opportunities to experience positive social interactions, with guidance from others, are less likely to exhibit delinquent behavior. Students should be able to
collaborate with their peers, the teacher, or others to find meaning in the world around them.

Social Interaction and Service-Learning

Service-learning is an activity that promotes personal development and social interaction skills. Studies concerning the personal development and social interaction of adolescents involved in a community service, or service-learning, project have mixed results. In service programs that were mandatory, Crosman (1989) found that students did not show significant gains in social and personal responsibility. This may suggest that programs where students do not have a choice do not have a positive effect on personal development and social interaction skills. However, Williams (1993) did detect a significant increase in development, despite the mandatory status of the projects.

Other research results suggest that there can be significant gains in social and personal responsibility for students involved in service-learning projects. Where the service-learning projects were voluntary, students showed a greater increase in social, civic, and personal responsibility (Conrad, Hedin, & National Center on Effective Secondary Schools, 1989; Crosman, 1989; Youniss & Yates, 1997). Service-learning projects have also been used to help teens with emotional and behavioral problems improve their sense of personal development and social interaction skills (Avenatti et al., 2007). The research indicates that the quality of the service-learning program is a key determinant in the positive results.

Service-learning projects can help students evaluate the needs of their community, raising their social awareness. Russell and Hutzel (2007) found that involving students in
service-learning art projects improved their social learning. Through art, students explored social issues in their community. In China, students worked to benefit themselves as well as their community by becoming involved in service-learning projects (Johnson, Johnson-Pynn, & Pynn, 2007). Service-learning requires that students become involved in the classroom experience as well as the community.

Service learning is an educational strategy that promotes active engagement with the information and skills being taught in the classrooms. Because service learning takes the student beyond the classroom and allows him/her to interact with competent adults, he/she is able to connect the skills being learned in the classroom to real situations in the world, thus helping the student to understand the relevancy of the information being taught.

Dewey’s concept of education as a social activity promotes the idea of service learning (Dewey, 1900), though Dewey did not specifically call for service learning as a teaching method (Conrad & Hedin, 1991). The first person to encourage using a project method to meet real community needs was William Kilpatrick in the early 1900’s (Conrad & Hedin, 1991; Waks, 1997).

In 2006, the ASCD Board of Directors visited a school in India where service learning is more than just an educational strategy (Hanzelka, 2007). The Katha school places emphasis on “creating a caring and sharing society” (Hanzelka, 2007, p. 68), and they do this by concentrating on four “capitals:” wisdom capital, emotional capital, cultural capital, and social capital. Each of these capitals is achieved by engaging students in “learning that is relevant to life” (Hanzelka, 2007, p. 69). Students at the
school experience authentic learning by opening up the entire community as their classroom. They are encouraged to ask difficult questions and find reasonable solutions, not to pass a test, but to improve their community. The integration of service and community into the curriculum offers students the sense of belonging, and the sense that their education has a purpose.

Assessment of Social Interaction Skills

Junge et al. (2003) conducted a study to determine the development of life skills in a 4H afterschool program. To determine the development of social skills, they used the Life Skills Evaluation (Deen et al., 2001) designed by Washington State University (Junge et al., 2003). The Life Skills Evaluation is a pre/post questionnaire that asked students involved in the 4H afterschool program to rate themselves on various life skills. Junge et al. (2003) utilized a retrospective study, asking students to complete the pre/post questionnaire after they had completed the program. Since students were asked to rate their social skills before they started the program and at the completion of the program at the same time, it is possible that students had inaccurate recollections from the beginning of the program. Merrell (2001) cautions using self-reporting data to assess the development of social skills because such instruments have not been researched enough.

Using interviews to assess social interaction skills is a widely accepted method because it is highly adaptable (Merrell, 2001). Interviewing allows for structured questioning as well as unstructured questioning, based upon the information provided. Also, interviews can provide information about the environment where the social skills are being practiced (Merrell, 2001).
One of the best methods for evaluating social skills is through naturalistic observation (Gresham & Elliott, 1987; Merrell, 2001). Naturalistic observation does not rely on a particular instrument to gather data; instead the observer must develop criteria that meets the needs of the situation (Merrell, 2001). Other instruments, such as the School Social Behavior Scales (SSBS; Merrell, 1993), the Social Skills Rating System (SSRS; Gresham & Elliott, 1990), and the Walker-McConnell Scales of Social Competence and School Adjustment (SSCSA; Walker & McConnell, 1995a, 1995b) are all useful in assessing social skills and behaviors, but the SSBS and the SSRS focus on behavioral problems rather than just the development of social skills. The SSCSA is concerned with social competence (Merrell, 2001).

Assessment of social interaction skills for this study. This study utilized a naturalistic observation approach to determine the development of social skills. Because the primary focus of the study was on the development of social skills through group interaction during a service-learning project, the observations were limited to just those social skills that were most appropriate in accomplishing a service project.

The specific skills addressed through naturalistic observation were (1) participation in problem-solving, (2) cooperation, (3) willingness to offer help to others, and (4) ability to negotiate. Bredekamp and Copple (1997) found that working in group activities improved the four social skills indicated above. Therefore, during team work time I observed and took note of how often the students participated with their team, if students contributed to solving problems, how well students cooperated with their
teammates, if students offered assistance to their teammates, and how whether or not students participated in negotiation activities.

Part of the observation journal included a checklist of the four behaviors listed in the previous paragraph. During the five to ten minute observations, I used the checklist to mark down behaviors that fit into one of the four categories. After the class was finished and students were dismissed, I used the checklist to complete my observation journals, making sure to include information about the various behaviors as well as the communication competencies.

Summary

The ideas behind service-learning can be traced back to the educational theorist John Dewey (1900; 1902; 1910/1997). His concept of progressive education laid the foundation for the social aspects of education. In recent years, the idea of individuals possessing more than one type of education has become a common consideration. Instead of the limited perspective of intelligence, as indicated through intelligence tests such as the SAT or ACT, Gardner is working on identifying at least nine different types of intelligences. His work has helped teachers in the classroom to rethink their approach to education. In addition to the concept of multiple intelligences, Glasser (1998) and others have suggested that it is important to provide students with choices to help them reach their full potential.

Service-learning incorporates a social component while also allowing students to build on their unique strengths and weaknesses. Service-learning gives students choices, which can aid in personal development and social interaction as well as improving
several other skills. Utilizing a qualitative research method will help me understand the benefits of service-learning on students in my communications class.
CHAPTER 3
METHODOLOGY

The purpose of this study was to describe the impact of a service-learning project on the development of reflective thinking, communication and social interaction skills among high school sophomores. Because an important outcome of education is the preparation of students for civic participation, this study included a description of how students used reflective thinking to communicate about their social interaction skills.

This chapter will explain the methodology used to collect and analyze data that will answer the following research questions:

1. Does engagement in a service-learning project impact the individual’s development of reflective thinking? If so, what is that impact?
2. Does engagement in a service-learning project impact the individual’s development of communication skills? If so, what is that impact?
3. Does engagement in a service-learning project impact the individual’s social interaction skills? If so, how?

The first part of this chapter will discuss a pilot study that I conducted to determine the best methods to use for assessing reflective thinking skills. The methodology used and the analysis of the data will be described, as well as information learned from the pilot study.

Next, I include an overview of the methodology I used for the current study and the research design, including a brief description of the setting and participants. Finally, I
explain the data sources and how I collected the data, as well as how I analyzed and interpreted the data.

**Pilot Study**

In preparation for the dissertation study, I conducted a pilot study using retrospective data from courses that had already completed the service-learning project. For the pilot study, I was mostly interested in analyzing the reflective memos using a rubric based on one designed by Wood (2000) using King and Kitchener’s (1994) Reflective Thinking Judgment Model (Appendix H).

**Data Collected**

Four portfolios were chosen from a collection of over 50 service-learning portfolios that had been completed over 12 semesters of doing this project. The four portfolios were chosen based on the recency of the project (because I often change how I approach the project, I wanted the most up-to-date examples), the different types of organizations represented, and the interactions of the team members. The reflective memos in each portfolio were coded with a team code (1, 2, 3, or 4), an individual code (A, B, C, or D), and a memo code (.1, .2, .3). For example, Team 1 had four students, each of whom had 3 memos in the portfolio. The first memo, in chronological order, of one member of the team was given the code 1A.1; the second memo was 1A.2; and so forth. Having the codes represent the team, the individual, and the order of the memos allowed me to analyze how the teams worked together, how the individual worked/thought, and how the reflections progressed.
Description of Teams

Of the four teams analyzed, two teams consisted of four members and two teams consisted of three members. Three of the teams were made up of all girls and one team included two boys and one girl. Since I was not looking for gender differences, I did not attempt to have equal representation of gender. Two of the teams came together because they were friends and wanted to work together. One team developed because one person had an idea and she recruited others to be on her team. One member of this team was not a student in the same class period, so communication was a concern. The last team ended up working together because they did not take the initiative to join any other team. Since the service-learning project is a team effort, all students must be members of a team, so those three students were thrown together.

Three of the teams completed their project according to the goal they had set, but one team failed to meet their goal. I chose the last team because I wanted to know if anything in their reflections would help shed light as to why they did not complete their goal.

Each team worked for a different organization: two worked for different elementary schools, one created a project that did not have a formal organization, and one worked to help a local homeless shelter.

Analysis of Data

I first made duplicates of all the memos and coded them according to the team, individual, and memo number. Then, I developed a rubric based on one that Wood (2000) set up to explain King and Kitchener (1994; Appendix H). As I read each memo, I color-
coded the stage of reflection that was represented in each applicable sentence. Sentences that offered no valid information about the project were not considered "applicable" sentences. Sometimes, a single idea seemed to take more than one sentence to complete. In those situations, I considered the complete thought (2 or 3 sentences) to be a single example of a statement.

I based my coding on the following criteria:

Stage 1: Sentences or phrases that described what the individual saw or did. Statements that were coded for this category included factual descriptions about what one did or what one saw, and they included no opinions or explanations. Examples from the data include:

"...over three hundred dollars was in the envelope!"

"Most of the people in the mall this early are either elderly or middle-aged."

"At the end of the day I had fifty signatures."

These statements simply tell what occurred and offer no personal opinion or evaluation of the events.

Stage 2: Sentences or phrases that discussed the individual doing something because of the instructions of another (teacher, teammate, etc.), or believing something that another did was true/real. Statements coded for this category included a reference to someone else. The student did or believed something because another person told him/her to do it or that it was true. The student does not question the instructions or the information given to him/her.
"I read with several different students who all had very different reading levels and skills."

"Our group also needs to start discussing our winter clothing drive because we didn’t get to it last time..."

"Mrs. [contact person] told us that Mrs. [teacher], the art teacher, needed us to help some students finish up with their art projects."

Stage 3: Sentences or phrases that represent the individual’s personal beliefs of a situation. The individual does not attempt to consider other alternatives.

"I think everything is running very smoothly and that we are making a difference in the kids’ schoolwork."

"I was a little disappointed that we did not make up our hours and that we did not try harder to figure out a day to go instead of the Tuesday that we missed."

"I was glad to see that the teacher was helping certain individuals and I am glad that we go their (sic) and help so that the teacher can have one on one time with a student."

These examples demonstrate the individual considering only his/her personal beliefs or feelings and not considering the perspectives of others.

Stage 4: Sentences or phrases that show that the individual may realize that there are alternatives, but uses only his/her personal interpretation to understand a given event or situation.

"I really have no excuse at all except for that I just forgot, but that
really isn't a good excuse.”

“Our next plan was to do it on Sunday the next weekend but then [teammate] was sick with the flu.”

“...or how being immersed in the environment of a soup kitchen gave us new ideas about [community] and ultimately, the world and the misfortune of its inhabitants.”

“I have room to improve my speaking skills because you can always do better.”

Examples for Stage 4 indicate that the individual is able to consider an alternative, as long as that alternative is based on the beliefs that he/she already has.

Stage 5: Sentences or phrases that indicate that the individual understands that alternative methods or ideas exist, and he/she is willing to consider some alternatives.

“Spending time with [tutored student] was a lot different than spending time with [tutored student].”

“I think we missed out because we weren't able to go to [school].”

“Finding new ways to teach what I already know would be very beneficial for this project.”

In these examples, students realize that there are other ways of looking at a problem or a situation; however, students are not ready to evaluate the pros and cons of the possible solutions.
Stage 6: Sentences or phrases that show the individual as someone who is beginning to construct his/her own interpretations that may differ from what was previously thought.

“We could have approached everyone we saw even though some would say no. Because at least we tried to make a difference and everyone is entitled to their own opinion.”

In this stage, students are beginning to make evaluations about themselves, the situation, and their beliefs. They are applying their knowledge to situations outside the

Stage 7: Sentences or phrases that indicate the individual is evaluating the various alternatives and any evidence that supports each alternative. No student had information that fell into Stage 7.

After color-coding based on the King and Kitchener (1994) model, I discovered that I could put 183 sentences or phrases into one of the above stages of reflective thinking. Each stage was represented at least once, except for stage 7, which requires the individual to analyze and evaluate information based on several sources.

Table 1

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<th>Distribution of Reflective Stages in the Pilot Study</th>
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<td>Stage 1</td>
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<td># of sentences identified</td>
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Pre-Reflective level. Sentences in stages 1 through 3 fall into the Pre-Reflective Thinking Level of the Reflective Judgment Model. Out of the 183 sentences that were identified, 143 sentences, or 78%, fell into the Pre-Reflective Thinking Level. Statements at this level of reflective thinking persisted throughout the memos from the beginning of the project to the end. The Pre-Reflective statements varied in terms of how students addressed certain situations. At the first stage of reflective thinking, students take what they observe as the truth, and that is the basis of their knowledge.

In the second stage, people rely on authorities to build their knowledge base. To be identified as a stage 2 statement, I looked for statements where students were either directly told something, or they based their actions on what they thought an authority or teammate would want. Students assume that an authority, or another person or rule, supercedes their own perceptions. They have no reason to question the authority or the rule, so they take it as truth. Sometimes the rule is based on past experience, such as when the student states that “group also needs to start discussing our winter clothing drive.” This is something that was brought up at the beginning of the project, and since it had not been addressed, this individual felt that it was an issue that should be discussed. Even though an authority did not make the statement, the student’s own expectations set the rule.

The third stage of Pre-Reflective thinking involves students basing their knowledge on their own beliefs. At this stage, students may agree with an authority, but it is because it is something that they already believe. They are not trying to gather new
information; instead, they are making the ideas of an authority fit into their own belief structure. Their feelings and ideas are justified by their prior experiences or beliefs. Students in the final stage of the Pre-Reflective Level begin to express their thoughts in terms of “I think” or “I believe.” They do not extend their statements with further explanations; rather, they let their statements stand alone as truth. Students in the Pre-Reflective Level do not consider other alternatives, unless those alternatives are introduced by an authority or fit into their own belief system.

**Quasi-Reflective level.** Stages 4 and 5 represent the Quasi-Reflective Level of Reflective Thinking. In these stages, students are more likely to consider alternatives, but they are cautious about going beyond their personal belief system. As they consider the alternatives, they use criteria that are familiar to them to help them understand the various options. Because they use familiar criteria, they do not truly evaluate each alternative.

Stage 4 reflective thinkers realize that there are other options, such as ways to improve or that other excuses might exist, but they fail to explore those other options. They have moved beyond the Pre-Reflective Thinking Level to realizing that there are other ways of thinking, but they may not know how to get to those other ways of thinking.

Stage 5 reflective thinkers make an effort to understand the alternatives, even if they don’t quite get to that point. Students at this level are beginning to contemplate the alternatives, although they do not continue with their thought-process. Without exploring the options too deeply, they at least realize that options exist.
Reflective level. Stages 6 and 7 represent true reflective thinking. At these stages, individuals are evaluating the evidence on all sides of an issue. They not only realize that alternative perspectives exist, they realize that there is conflicting evidence for each perspective. Reflective individuals will consider the various evidence and evaluate its meaning to them and their own perspectives. Reflective thinkers may not come to a final conclusion, but they will be aware of what others believe and why those other perceptions exist. Students in this study did not have any statements that could be placed in stage 7.

Students who had statements that fit into stage 6 of the Reflective Judgment Model show a tendency to evaluate themselves as well as their beliefs. They are looking at their situation from a more worldly perspective, going beyond the obvious to the possible.

Conclusions of Pilot Study

Whereas this was a small study, I feel that it taught me quite a bit about how to approach teaching reflective writing. I realize that I could continue to analyze the information and learn more about how the individuals progressed or how the individuals interacted with their teammates, but the stages of the reflective thinking demonstrated to me that students need more structure if they are going to improve their reflective thinking skills. While some students did manage to make statements that fit within stage 6, those statements represented only 4.3% of the overall statements pulled from the memos. It is clear to me that by only instructing students to write about what they learned and how they will apply it to their future, students are not learning reflective thinking skills. Some
students have a natural tendency to think reflectively, but others have difficulty getting past the Pre-Reflective Stages.

When I conduct the study for this dissertation, I will devise a plan to implement strategies to teach reflective thinking, rather than just expecting students to reflect.

Overview of Methodology for This Study

This section explains why a qualitative research format is best for this study and the research design that was followed. I also describe the setting and participants for the study, and how those participants were selected.

Qualitative Format

Service-learning employs a variety of strategies and methods, so qualitative research is an appropriate way to study the benefits and effects it has on students. Students are diverse and carry unique personality and intellectual traits that make it impossible to determine a one-size-fits-all educational program that will work for everyone. While some studies attempt to use quantitative research to evaluate the effects of programs, these studies do not dig deep enough into the true effects the programs have on each student. Qualitative research can allow the researcher to delve into the thoughts and feelings of the participants concerning the methods or programs that are being evaluated. While those thoughts and feelings are unique to the individual, they give the researcher a better understanding of what works and how it works on various individuals. Taking into consideration the effects service-learning has on a few students will help me to better understand the overall benefits of service-learning in my communications class.
Case study. When a deeper understanding is wanted, the case study method is one of the best types of qualitative research to perform (Feagin, Orum, & Sjoberg, 1991). The case study method is a widely used method in qualitative research studies. Several researchers, such as Yin (1984; 1989; 1993; 1994) and Stake (1995), have developed sound procedures for this methodology. Using these procedures help to make the qualitative study just as valid as any quantitative research method. Because the case study method uses various sources of data to focus on the different perspectives of individuals involved in the study, it is the best method to bring out the unique details of the program being studied.

Yin (1993) identified three specific types of case studies: Exploratory, Explanatory, and Descriptive. Exploratory cases are often viewed as an introduction to social research, while Explanatory case studies are used for investigating causal relationships. Case studies that fall under the Descriptive category require that the researcher develop a descriptive theory before starting the project. Based on Yin's categories, case study research can be used to investigate a variety of issues.

Stake (1995) includes three additional types of case study: Intrinsic, Instrumental, and Collective. When the researcher has an interest in the case, it is considered Intrinsic. If the researcher wishes to understand more than what is obvious to the observer, he/she will use Instrumental case study research. And, if the researcher wants to study a group of cases, this is considered Collective. These six types of case study research are not isolated and can be combined to get to the heart of an investigation. It is important, however, that the researcher carefully select the cases to be
studied so that he/she can maximize what is to be learned within the given amount of time for the study. For this reason, the researcher needs to determine a specific unit of analysis for the study. Rather than trying to understand the entire program, the researcher focuses on one or two critical issues that will help to evaluate the entire program.

The ability to concentrate on a minimum number of issues and a minimum number of participants, the case study researcher is able to develop a multi-perspective analysis. Case study analysis allows those who are directly affected by the program to have a voice, rather than concentrating on those in charge of implementing the program. Allowing the participants to have a real voice in the study makes gives the researcher more relevant information concerning the program so that he/she can truly study the effects on the participants. With this information, others who wish to replicate the study or implement the program can adjust the program to fit into their own needs.

The validity of case study research relies on triangulation of the data. Stake (1995) explains that triangulation relies on the protocols that are used to ensure accuracy and alternative explanations. Triangulation is used to confirm the validity of the processes, and this is based on using multiple sources of data (Yin, 1984). Denzin (1984) identified four types of triangulation: Data source triangulation, Investigator triangulation, Theory triangulation, and Methodological triangulation. Data source triangulation is when one researcher looks are various sources of data and expects the data to remain the same in different contexts. Investigator triangulation involves several investigators examining the same phenomenon, and Theory triangulation asks investigators with different view points to interpret a set of data. Finally, researchers use
Methodological triangulation when they the interpretation is based on using various approaches to evaluate the programs. The main goal in case study research is to establish meaning, and meaning that is extracted from various sources is more reliable.

All research must be concerned about validity. Yin (1994) suggested using multiple sources of evidence as the way to ensure construct validity. He identified six sources for data collection: documentation, archival records, interviews, direct observation, participant observation, and physical artifacts. Of course, all six types do not need to be used in every case study. External validity is more difficult to attain in a single-case study. Yin (1994) asserted that external validation could be achieved from theoretical relationships from which generalizations could be made. Internal validity can be assured as the theories are developed and the data collection and analysis test those theories. The reliability is based on the development of a formal case study protocol.

The methodology designed by Yin (1984; 1994) has four stages:

1. Design the case study protocol,
2. Conduct the case study,
3. Analyze the case study evidence, and
4. Develop conclusions, recommendations, and implications based on the evidence.

By following the set structure of the case study methodology, the researcher will be following a proven research method, and this will ensure the reliability of the study.

A major criticism of case study research is the generalization of results. Since the results are based on the thoughts and feelings of the unique individuals participating in
the study, the results are not easily transferable to other individuals and programs, no matter how similar. Yin, however, explains that "In analytic generalization, previously developed theory is used as a template against which to compare the empirical results of the case study" (Yin, 1984). Yin (1994) introduced four applications for a case study model:

1. To explain complex causal links in real-life interventions,
2. To describe the real-life context in which the intervention has occurred,
3. To describe the intervention itself, and
4. To explore those situations in which the intervention being evaluated has no clear set of outcomes.

Yin (1994) goes on to state that single cases may be used to confirm or challenge a theory, or to represent a unique or extreme case. Therefore, rather than creating generalizations from the case study research, case study allows the researcher to test already established generalizations.

Stake (1995) suggested a more intuitive, empirically grounded generalization called "naturalistic" generalization. He contended that the readers would relate their own experiences with the case study. This relationship would create a natural generalization of the results as individual readers make personal connections to the studies. When personal connections can be made, a deeper understanding of the phenomenon can exist. The case study approach to this study will help me to have a deeper understanding of the effects of service-learning on my students.
**Action research.** This study will involve observing and reflecting upon the projects that take place in *my* classroom. Since I am using service-learning as a teaching method, the study fits under the category of action research.

Action research, also known as teacher research, is an appropriate research method to use for this study. With its roots in Dewey (Mills, 2000; Schubert & Lopez-Schubert, 1997), action research asks the researcher to work within her own environment to find a solution to a problem. Sagor (2000) defines action research as “a disciplined process of inquiry conducted *by* and *for* those taking the action. The *primary* reason for engaging in action research is to assist the ‘actor’ in improving and/or refining his or her actions” (p. 3). Put simply, action research involves the researcher or teacher’s commitment to improving the quality of education for the school, the teacher, the students, or all the above (Holly, Arhar, & Kasten, 2005; McMillan & Schumacher, 2001; Mills, 2000; O’Brien, 2001; Rogers et al., 2007).

The term *action research* was first popularized in the 1940's in the writings of Kurt Lewin, a German social and experimental psychologist (Holly et al., 2005; McTaggart, 1997; Mills, 2006; O’Brien, 2001). For Lewin, the focus of action research was to help participants become more objective observers of themselves (Holly et al., 2005). Based on the Eight-Year Study (Aiken, 1942), Stephen M. Corey (1953) published *Action Research to Improve School Practices* in which he relied heavily on the ideas of Dewey and Lewin (Schubert & Lopez-Schubert, 1997). One possible downfall to Corey’s guidebook is that it did not call for the researchers to reflect upon their research.
Lawrence Stenhouse reinvigorated the “teacher-as-researcher movement” in the 1970's (Schubert & Lopez-Schubert, 1997, p.215). Stenhouse (1975), May (1982), and Skilbeck (1983) declared that reflection upon one's own work to be a “viable form of research” (Schubert & Lopez-Schubert, 1997, p. 215). As teachers reflect on their work, they are able to develop theories to apply to their practice. This practical application of the information gathered from teacher research validates the use of action research.

Around the same time that Stenhouse was advocating for the teacher-as-researcher, Joseph Schwab developed his idea of practical inquiry (Schwab, 1970; 1973; 1983; Schubert & Lopez-Schubert, 1997). Schwab believed that practitioners should study issues within their own environments to give them the insight to help them make better decisions. Practical inquiry involves people from within the organization, making the study more relevant and the solutions more practical for their particular situation.

Today, action research takes on various forms: educational action research (Elliott, 2006; Holly et al., 2005), participatory action research (McTaggart, 1997), and teacher research (Mohr et. al., 2004). Whatever the name, the purpose remains the same: Participants examining and reflecting upon their own work/actions in order to effect a change.

Educational action research is based on “common sense inquiry rather than science” (Elliott, 2006, p. 170). It is difficult to pin down one theory of education because theories do not always play out in the practical sense (Elliott, 2006; Schubert & Lopez-Schubert, 1997). Teaching is a process, which is why action research is the best form of research to utilize in a classroom. Serious teachers automatically reflect critically upon
their teaching and the impact it has on their students (Schubert & Lopez-Schubert, 1997). Educational action research allows the teacher to build relationships with her students and to better understand her students as learners (Rogers et al., 2007).

Action research involves identifying a problem, asking critical questions, collecting data, acting on the data gathered, and reflecting upon those actions (Holly et al., 2005; McTaggart, 1997; Rogers et al., 2007; Sagar, 2000; Schoen, 2007; Schwab, 1970; 1971; 1973; 1983). This process is similar to other forms of research, making it a valid way to conduct research. Since teachers are studying issues in their own classrooms, the findings are relevant (Mills, 2000). Other teachers in similar situations can learn from the experiences of teacher researchers.

Recently, educational action research has been used to address a variety of needs in education. Schoen and Schoen (2003) used action research to study language development of an English-language learner with special needs. Rogers et al. (2007) used action research to examine the impact of teacher research on students. Kerr (2007) observed reluctant learners in an effort to make her classes more beneficial to them.

Action research is a viable form of qualitative research that has the potential to be generalized to other teachers in similar situations. Teachers doing the research have a real, practical purpose for finding a solution to the initial problem. Rather than relying on outsiders to hand down universal programs, the teachers discover what works for them.

Justification of qualitative research. Service-learning involves the interaction of students, instructors, and community members within a real-world context. Because the variables are unpredictable, quantitative research methods are not appropriate for
studying the benefits of service-learning on reflective thinking. Qualitative research allows researchers to examine the social and cultural phenomena involved in a particular activity. Qualitative research helps researchers to understand people and the social and cultural world around them. By using observation, fieldwork, interviews, documents, and personal reactions, I will be able to interpret the human aspects of the phenomenon being studied.

The underlying philosophy of this research study is based on the assumptions of interpretive research (Walsham, 1993). I will assign meaning to the phenomena by focusing on the complexity of how humans make sense of the situation as it emerges (Kaplan & Maxwell, 1994). The case study method will be used to reach an interpretation of the service-learning activity.

Yin (2002) describes case study as:

A case study is an empirical inquiry that:

*investigates a contemporary phenomenon within its real-life context,

especially when

*the boundaries between phenomenon and context are not clearly evident.

The case study research method is the most appropriate research method since the intent of the study is to observe the interaction of the participants as well as the academic benefits of the students who design and implement the service-learning activity.

Information gathered from this research will focus on the social, or communication, interactions of the individuals involved.
Research Design

Students in the advanced communication course were introduced to the service-learning project after the foundation of communication studies had been set. The project was formally introduced in the 8th week of the semester. Students were given instructions explaining the steps to follow during the service-learning project (Appendix A).

Setting. The study took place in a single, sophomore communication classroom at a large high school located in Iowa. The city in which the high school is located is a middle-sized community in the center of Iowa. It has an increasingly diverse population of about 26,000 citizens. For the past several years, this mid-Iowa city has been experiencing an explosive growth in its Hispanic population.

The high school, considered large in comparison to other schools in Iowa, enrolls over 1,500 students, and it reflects the changes in the community. As the only high school in the community, it provides educational opportunities to students from a variety of socioeconomic and cultural backgrounds. According to the February 2006 data from the community school district, the high school consisted of 26% minority students, 14% of the students were identified as English Language Learners (ELL), 17% had Individualized Education Plans (IEP), and 42% were on free and reduced priced meals. With the increase in the minority population, it has become imperative that teaching strategies change to match the needs of the students and the community.

Sophomores at this high school are required to take a communication course to fulfill graduation requirements for English. Within this requirement, students have the option of taking the regular communications class, the creative section, or the advanced
section. All communication classes are offered as block classes, where students spend two 50-minute class periods each school day studying communication over the course of a semester. A small percentage of high school students opt for the advanced communications class. Many of these students are conscientious workers with high personal expectations. This study involved students enrolled in one advanced communications class.

The advanced communication class focuses on critical thinking and leadership skills. The course is designed for students interested in developing higher-level thinking skills through persuasive writing and speaking, analytical writing, and debating techniques. Students are periodically engaged in both long- and short-term projects; the projects are completed in small groups as well as individually. Since the course is for both oral and written communication skills, students work on both skills simultaneously.

The classroom used for the study is set off from the main high school building. The targeted classroom is the only portable, or temporary, classroom on campus. Students sit in individual desks that are arranged in rows facing the white board. Though this is not the ideal arrangement for a course that relies on group work, it is the most efficient arrangement for the dimensions of the classroom. When working in small groups, students move the desks to fit their needs.

Besides the instructional classroom, students also spend class time in one of the two computer labs designated for the language classes. These computer labs are located on the second floor of the main building, and each lab contains about 28 IBM-clone computers. Each computer is connected to the Internet, and each student has his/her own
school e-mail account. One laser printer in each computer lab serves all the computers in that lab. For the printer to work, students must log on to the computers using their own user name and password. When a student skips this process and tries to print, he/she can lock the printer, keeping others from being able to print. Not logging in properly also inhibits the student’s ability to save to his/her personal file. Most computers in the computer labs do not have disk drives, so it is important that students log in correctly and save to their personal files.

Though the two computer labs are designated primarily for the language courses, other departments use the labs as well. Teachers must reserve the labs in advance to ensure access for the entire class. Even when labs are reserved, teachers from other classes might send a few students to the lab to work on the open computers, or sometimes a teacher may bring an entire class, which usually crowds the room. Use of the computer labs is under less than ideal conditions much of the time.

The communication courses do not have textbooks. Each teacher finds or creates his/her own materials that will best meet the communication needs of his/her students. At the high school, all entering freshmen are required to purchase the latest edition of Writers Inc. and keep it as a resource throughout high school. Teachers for the communication courses rely on the Writers Inc. book as a resource for teaching the necessary grammar, writing, speaking, and research skills for the class. Writers Inc. provides examples of various types of writing and speaking situations. Teachers generally refer to the pages in the book, expecting students to independently use the book as a resource.
With no official textbook, the course was taught using a variety of activities and resources. Activities included, but was not limited to: lecture, whole class discussion, small group discussion, individual conferencing, individual writing activities, small group writing activities, individual speaking activities, small group speaking activities, student presentations, silent reading, videos, long-term projects, and short-term projects. For the purposes of the advanced communication class, service-learning is considered a long-term project consisting of several other activities.

Selection of participants. The purpose of using the case study method of research is to develop a greater understanding of the case being studied (Stake, 1995). Therefore, this study was limited to five individuals from the class, even though all students enrolled in the class participated in a service-learning project. Information learned from the five individuals can be transferred to similar situations (Eisner, 1998). According to Stake (1995), "balance and variety are important" (p. 6) when choosing a sample to study. The five individuals were chosen at the conclusion of the semester in which the data had been collected to prevent students from feeling as though they needed to perform to certain expectations because of the study. By focusing on a few individuals, I was able to obtain a deeper understanding of the themes that arose.

In an effort to learn the most about the impact of service-learning, participants were selected based on their unique characteristics and approaches to the project. Some criteria for selecting participants for the study included: (1) experience with community service outside of the communications class, (2) level of writing skills as determined by examples of writing completed prior to the service-learning project, and (3) level of
communication skills as demonstrated in class presentations given prior to the service-learning project. It was important to choose “a sample from which the most can be learned” (Merriam, 1998, p. 61). Although students completed their projects as service-learning teams, participants in this case study were members of different teams.

Consent of participants and parents. All students in the class completed assent forms (Appendix G) and were expected to perform the same duties and be interviewed as part of the project. The parents of the students enrolled in the class also were asked to sign a consent form (Appendix F). The consent forms were sealed and collected by the secretary of the department until the end of the semester.

After grades had been submitted and report cards printed for the semester, the secretary returned all the consent forms to me. Twenty-six students had agreed to have their data used for the study, and of those twenty-six students, twenty-one also had permission from their parents. I then collected all the reflective writings from the twenty-one students and found that only eight students had five or more reflective writings completed.

Using the data from the pre-project survey, I compiled a list of the students who had little to no experience with service to the community, those who had some, and those who reported that they had an extensive amount of community service. I then compared that list to the returned assent forms and identified eleven students who were eligible candidates for the study. To ensure a representative sample of the class, I chose three girls and two boys. For the girls, one had an extensive amount of community service, excellent writing skills, and excellent communication skills; one girl reported little
experience with community service, had average writing skills, and average communication skills; and the third girl said she had little experience with community service but also stated that she helped several organizations, had average writing skills, and had above average communication skills. Of the two boys, one had an extensive amount of experience with community service, average writing skills, and excellent communication skills; the other had extensive experience with community service, poor writing skills, and poor communication skills.

Human participants. Following the requirements of the University of Northern Iowa, an IRB was completed and approved for the study of individuals in my communication class. As mentioned above, both students and parents completed a permission form (Appendices F & G) that was placed in a sealed envelope. As a requirement for conducting a study with human participants, I completed the NIH Office of Human Participants Research training course, entitled, “Protecting Human Research Participants.” I also obtained permission for the study from the principal of the high school and the superintendent of the school district (Appendix E). The interview protocol and all permission forms were included in the IRB application.

Data Collection

Data were collected over a nine-week period of time, with that nine weeks being further divided into three phases: Planning Phase, Implementation Phase, and Concluding Phase. Each phase was equally divided into three weeks. Information was gathered through a variety of methods, as tends to be the norm in qualitative research. Using multiple methods of data collection ensures an in-depth analysis of the phenomenon.
This section will describe the three types of empirical data that were collected for this study. Data from the reflective writings, group and individual interviews, and direct and indirect observations were analyzed to get a better understanding of how students reflected upon their experiences and made changes based on those reflections and experiences.

Table 2

*Data Sources*

<table>
<thead>
<tr>
<th></th>
<th>Planning Phase</th>
<th>Implementation Phase</th>
<th>Concluding Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflective Writings</td>
<td>2 reflective journals</td>
<td>2 to 3 reflective journals</td>
<td>1 to 3 reflective journals</td>
</tr>
<tr>
<td>Interviews</td>
<td>1 group interview</td>
<td>1 or 2 individual interviews</td>
<td>1 to 2 individual interviews</td>
</tr>
<tr>
<td>Observations</td>
<td>1 group observation</td>
<td>1 group observation</td>
<td>1 group observation</td>
</tr>
</tbody>
</table>

**Reflective Writings**

One source of data was obtained from the reflective writings that the students completed from week 2 through week 9 of the study. The reflective writings were grouped into three categories according to when they were handed in: Planning Phase, Implementation Phase, or Concluding Phase. Using the King and Kitchener (1994, 2002) rubric found in Appendix H, the reflective writings were analyzed to determine if there was growth in reflective thinking. The procedures for analyzing the reflective writings are discussed later in this chapter, under the heading of Pilot Study.
Beginning the week after the students were officially given the assignment for the service-learning project, each student on the team was assigned to write from five to eight reflective journals. The first reflective journal was written in class as I explained the organization of the journal entry. I directed students to organize their reflective writings into three main sections: (1) a description of an activity or event that occurred as part of the service-learning project, (2) an explanation of what the student learned about communication or the community needs from that situation, and (3) suggestions for how that student can improve the outcome of the situation (Appendix D). Feedback on the reflective journals was given orally rather than in writing. This approach allowed me to immediately answer questions students had about their reflective writings.

**Interviews**

Theoretical basis for interview procedures. A second source of data for this study was collected through group and individual interviews. Collecting information through interviews is an important method for qualitative studies. To truly understand how the methods or programs affect the targeted individuals, the students, it is essential to talk to the students about their experiences. Eisner (1998) explains that "the interview is a powerful resource for learning how people perceive the situations in which they work" (pp. 81 - 82). Yin (1994) indicates that interviews allow the researcher to keep the focus on the case study topic and provides insightful responses as to how the participants perceive the cause/effect relationship. Stake (1995) further explains that the interview helps the researcher, and the readers, to discover multiple views of the case.
Interview questions can take several forms: structured, semi-structured, or unstructured (McMillan & Schumacher, 2001, pp. 268 - 269). Structured questions are limited to a selection of responses. This method is best used when the researcher wants to gather data that can be quantified. For example, the responses may follow a Likert Scale, having respondents rate their feelings or opinions about a given situation. To compare the responses, the researcher needs to make sure that all interviewees are asked the same questions. Structured interviews do not allow in-depth explanations of phenomenon as perceived by the interviewee.

Semi-structured questions are more open-ended than structured questions. The questions do not require that the respondent choose an answer from the given choices. Respondents are allowed to provide individual responses, and they can elaborate on those responses to some extent. The questions, however, are specific and usually asked in a particular order. The interviewer develops questions that keep the focus on the study and do not allow the interviewee much room to stray.

Unstructured questions, or open-ended questions, are the least restrictive of the three. The interviewer asks broad questions in whatever order seems most appropriate. The respondent is allowed to elaborate on a particular question, and his/her response may lead the interviewer to ask questions not originally planned. Completely unstructured interviews can be chaotic, and it may take a long time for the interviewer to get the information he/she desires. Many researchers use a combination of structured and semi-structured questions so that there is some type of structure and purpose to the questions, but with room to ask probing follow-up questions.
Interviewing does have some weaknesses (Tuckman, 1999; Yin, 1994). Instrument bias can occur if the questions are not written well or do not get to the purpose of the study. Data analysis can be difficult if the interview does not follow some type of formal structure. With different individuals being asked different questions, the researcher may have difficulty coming up with common categories for the analysis. Also, if the interviews are not conducted within a timely manner, the participants may not have a clear recollection of the events being discussed. Another weakness is the possibility that the interviewee will answer questions according to what he/she believes the interviewer (or researcher) wants to hear. This is especially true when the researcher is also the participant's teacher. If the respondent tries to answer the questions to fit into the preconceived categories of the researcher, the responses may not be accurate depictions of what the respondents truly mean.

Interview procedures for this study. For the purposes of this study, I used a combination of the structured and the semi-structured interview questions. Stake (1995) suggests that the interviewer prepare a short list of "issue-oriented questions" before conducting the interview (p. 65). Because I was interested in how service-learning projects impact the participants, I prepared a set of open-ended questions (Appendix C) that correlated to the reflective thinking stages in the King and Kitchener (2002) and asked used the Interview Protocol questions as starting points for each interview. Probing questions that were not part of the Interview Protocol were used to follow up on the answers provided by students. Participants were encouraged to go beyond a simple answer to those questions. I attempted to guide the students to explain what he/she had
done with the project, instead of asking limiting questions that may have elicited less genuine responses (Eisner, 1998, p. 183).

Three planned interviews took place over the course of the nine-week service project (see Table 2). The first interview took place during the Planning Phase of the project. This interview was a group interview as I asked students about their plans and the formation of their teams. The second interview took place during the Implementation Phase of the project. Individuals were interviewed about the progress they were making and what they contributed to that progress. Some interviews detoured from the planned course as students wanted to discuss issues that had arisen within their teams. Such detours allowed me to guide the student into understanding the problems and determining a solution to the problems. The third and final interview took place during the Concluding Phase of the project. During this interview, individuals were asked about the successes and obstacles they had encountered over the course of the project. These three interviews provided information concerning how the participants felt about their projects and the decisions they had made. For some, those feelings and how they made decisions changed over the course of the project as they became more involved and worked toward their goal. Whenever possible, interviews were tape-recorded and transcribed. Some interviews took place at the request of the individual who wanted to discuss a particular issue, so those were not recorded. During the non-recorded interviews, I took notes over any issues that were pertinent to the study. At the first available moment, I read over my notes and wrote the interview in my observation journal to the best of my recollection.
Since the interview questions were open-ended, specific topics for the questions were often based on the information received in the weekly reflection journals or from my observations. The purpose of the interviews was to provide a check on the reflective thinking stages as described by King and Kitchener (2002). The interviews afforded me the ability to ask probing questions that were meant to move the student to a higher level of reflective thinking.

The interview questions were based on King and Kitchener's Reflective Judgment Model (2002), so if students tended to offer responses in the first stages of the model, I attempted to move them to a higher level by asking them questions from the higher stages. When students stumbled for an answer, I knew that they were not ready to respond at the higher stages. However, if students answered the questions with insightful responses from the next higher stage, I continued to push them to even higher levels of reflective thinking. The interviews allowed me to follow up on the information I received from my observations and the reflective writings.

A research specialist not involved in this case study checked the set of questions that were asked of all participants. Having a person with research expertise check the questions allowed me to be sure that the questions were well-written and without bias. Stake (1995) suggests that the researcher first practice the questions before going into the interview. This practice will help the researcher and the interviewee feel more at ease so that the interview is more like a conversation. Since the interview questions were open-ended, a version of the questions were asked of the students as part of the regular teaching pattern.
Observations

Theoretical basis for observations. The third data source (see Table 3) was collected through both direct and indirect observations of the students working with their teams. In education, teachers are constantly making observations to determine the success or failure of lessons and units being taught. Observations lead to better understanding the material being taught. In research, observations are also important for gathering pertinent data about the phenomenon being studied. The researcher has the knowledge and background to focus his/her observations on issues that are important for the study. During the observations, the researcher carefully observes the details, such as descriptions of the people, events, and locations, and records information pertaining to the case study. Using descriptive details in the write-up makes it possible for the reader to experience the events being discussed.

There are two main types of observation: participant observation and field observation (McMillan & Schumacher, 2001). In participant observation, the researcher is participating in the situations being studied. Because the researcher is also a participant, it is important that the researcher take careful notes, including discussing his/her role in the study and the effect that may play on the analysis. In this study, I gathered information using participant observation. As the teacher of the class, I guided the students as they developed and implemented their service-learning projects. Another aspect of the service-learning project is reflective thinking. This is a skill that needs to be taught, so I participated in team discussions to help students practice reflective thinking. During the team discussions, I asked probing questions to help students think about their
past, present, and future actions. An observation journal was used to take note of how the students were communicating, solving problems, and expressing their thinking.

Observational procedures for this study. As the researcher, I kept an observation journal detailing the information that was told to the teams and how it was received. When students are asked to work with their teams on the service-learning project, I observed them and made notes concerning how the team members interacted with each other. I looked for nonverbal cues, such as posture, tone of voice, eye contact, etc., that would help me understand the students' attitudes about the project or the team. The information in these observation journals were used to help develop questions for the weekly reflection memos. Team members were also given the opportunity to look over my observation journals to make sure that the information was accurate according to the participants' perceptions.

In order to assure that the data collected were reliable, I focused on recording factual information and did not include judgments about the behaviors or the students. During observations, I used a checklist to record specific social behaviors, which I later recorded in my observation journal. I also made sure that students were given the opportunity to read the notes pertaining to them in my observation journal shortly after the entry had been made. This way, if I did include more than factual data, students noticed and brought it to my attention. I also asked a third-party, the department secretary, to read over the journal entries to make sure that I was not including personal opinions. Having my journal entries checked by the students and a third-party reduced the
potential for bias. The use of multiple data collecting techniques also helped to ensure accuracy of the journal entries (Stake, 1995; Yin, 1994).

Since I am also the instructor, participant observation should have reduced the problem of reactivity. The students had become accustomed to my participation in the discussions, so it was a natural method of gathering information. Students did not feel as though they needed to change their behavior because they are being observed; it was a natural part of the classroom experience. By asking probing questions, I was able to help students think about their decisions and plans without giving them my own advice. As the teacher, I acted as a guide to help the students become more reflective thinkers, allowing the students to be responsible for their own actions. Building this type of relationship between the students and myself enabled the students to be more trusting. The more the students trusted me as the teacher and mentor, the more at ease they were in discussing problems and solutions to those problems.

Data Analysis and Interpretation

Once the data had been collected, the task turned to finding meaning in the phenomenon being studied. This section of the chapter will explain how each set of data were analyzed.

Theoretical Basis of Data Analysis

Analysis of the data gathered during the study can result in a variety of interpretations. For this reason it is important to set up a study with a specific purpose. Stake (1995) defines analysis as "a matter of giving meaning to first impressions as well as to final compilations" (p. 71). For Stake, analysis is an ongoing process that does not
just begin when the data have been collected. Analysis begins when the study begins and can influence the type of data that is collected throughout the study. Hamner (2002) explains that analysis is "breaking down the notes into parts and critically reorganizing them in terms of discovering patterns, processes, themes, or topics" (p. 42). Yin (1994) concurs: "Data analysis consists of examining, categorizing, tabulating, or otherwise recombining the evidence to address the initial propositions of a study" (p. 102). The researcher must determine the meaning of the information collected and then find a way to express and explain that meaning to the readers.

Yin (1994) suggested three possible analytic techniques: \textit{pattern-matching}, \textit{explanation-building}, and \textit{time-series} analysis. \textit{Pattern-matching} compares a recognized pattern from the field notes to a predicted pattern. If the researcher continually builds an explanation for the case, from the theoretical beginnings, through the proposition, and on to the final narrative, then he is using an \textit{explanation-building} technique. The \textit{time-series} technique, which is used in experimental and quasi-experimental studies, has the researcher take a series of measurements at different times throughout the study. For any of these techniques to be reliable, the researcher must demonstrate that all relevant evidence was used and carefully and accurately explained.

McMillan and Schumacher (2001) present three similar techniques: \textit{inductive}, \textit{narrative structure and representation}, and \textit{data management}. Like pattern-matching analysis, \textit{inductive analysis} expects the meaning to emerge as the study is being conducted. Instead of beginning with a theory, inductive analysis asks the researcher to find the patterns and categories as the data are being collected. For \textit{narrative structure}}
and representation, the researcher relies on the statements of participants. Field notes and interview transcripts are cited as sources, and the results are given in a narrative format. This method helps the reader to hear the voices of the participants. Schaafsma and Vinze (2007) explain "effective narrative gives the reader a door to open and walk through" (p. 277). The reader compares the narrative to his/her own experiences, asking his/her own questions along the way. The questions that are asked by a reader help him/her come to a better understanding of his/her own teaching and motivations.

Data management analysis relies on the researcher creating a filing system to store and retrieve data. With the data in one place, the researcher can easily reorganize and code the data to be analyzed in a quantitative manner. The purpose and audience of the study need to be considered when determining the analysis technique.

Case study research includes "description, analysis, and naturalistic generalizations" (McMillan & Schumacher, 2001, p. 490). Description will play a major role in the analysis of the data. It is imperative that the reader understands the context of the phenomenon being studied. The data collected from the interviews, reflective journals, and observations provided sources for the descriptions. Bogdan and Biklen (1992) say that description may include:

1. portraits of participants
2. reconstructions of dialogue
3. descriptions of physical settings
4. accounts of particular events
5. depictions of activities, and
6. notes about the observer's behavior.

For this study concerning the use of service-learning as part of an established curriculum, it is important that the audience (those in the field of education) be able to relate to the setting, the program, and the participants. By making this relationship, the reader can then make his/her own assessment of the value of such a program.

Data Analysis Procedures

Analysis of Reflective Writings

The various collections of reflective writings were collected and analyzed to determine the level of reflective thinking students demonstrated, as well as to determine any changes in their communication skills (see Table 3). Using a rubric based on Phil Woods’ (2000) explanation of the King and Kitchener (1994) Reflective Judgment Model, I was able to assess if the reflective thinking skills of students improved as they worked through the project. I compared the statements students used in their reflective memos, as well as those I heard during my observations and interviews, to the stages in the Reflective Judgment Model.

In the Pre-Reflective Thinking stages, knowledge is considered absolute. The individual believes that “knowledge is gained through the word of an authority figure or through firsthand observation” (King & Kitchener, 2002, p. 39). In the Quasi-Reflective Thinking stages, “knowledge – or more accurately, knowledge claims – contain elements of uncertainty” (King & Kitchener, 2002, p. 40). The Reflective Thinking stages involve higher levels of reflective thinking. “Knowledge claims cannot be made with certainty” (King & Kitchener, 2002, p. 40).
Table 3

Data Sources and Research Questions

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does engagement in a service-learning project impact the individual's development of reflective thinking? If so, what is that impact?</td>
<td>Reflective Writings Interviews</td>
</tr>
<tr>
<td>2. Does engagement in a service-learning project impact the individual's development of communication skills? If so, what is that impact?</td>
<td>Reflective Writings Interviews Observation Journals</td>
</tr>
<tr>
<td>3. Does engagement in a service-learning project impact the individual's social interaction skills? If so, how?</td>
<td>Observation Journals</td>
</tr>
</tbody>
</table>

Analysis of Interviews

Interviews with the students allowed me to collect data concerning the students’ thoughts and perceptions concerning reflective thinking, communication skills, and their social interaction skills (see Table 4). Information from the interviews was recorded, either through the use of a tape-recorder or through notes taken during the interview, and compared to my observations. First, the data from each source were collected and categorized according to the King and Kitchener Reflective Judgment Model (1994). The transcribed interviews were read carefully, with each statement or complete thought being compared to one of the seven stages of reflective thinking. The interviews took place at three different times over the course of the project. Statements from the three interviews were compared to see if students consistently moved toward higher stages on the Reflective Judgment Model as the project progressed. These transcriptions and notes were also compared to the reflective writings, providing a way to triangulate my findings.
Analysis of Observations

Observations provided an opportunity for me to witness situations from both a teacher’s and a researcher’s perspective. My professional knowledge and experience helped me to recognize patterns of behavior as they were emerging. The observation journal entries described the events, participants, and behaviors of the participants. Through my observations, I could detect behaviors concerning how students communicated within a group setting, and if they showed any changes in their social interaction skills while working with a team (see Table 3). My observation journals were helpful in understanding the context surrounding the writing of the weekly reflective journals. For example, if I noted in my observation journal that a particular student was not working well with his team, I could use that information to help me interpret the information in the reflective writing for the week.

Analysis takes place at every instance (Stake, 1995). The researcher must constantly break apart what he/she is observing and put it back together to find meaning. As the data were being recorded in the observation journal, I looked for patterns that were emerging, paying particular attention to the context and the statements from the participants. The perceived patterns that came together from one observation guided my decisions about what to observe in the following observation. Eventually, the patterns led to categories or themes from which meaning could be drawn.

Summary

In summary, the data for this case were collected through reflective writings, pre- and post-surveys, group and individual interviews, and direct and indirect observations.
The information in these sources were analyzed for patterns, providing a multi-perspective interpretation of the data. By using a variety of sources, and by analyzing the perceptions of the various people involved, triangulation ensured credibility of the interpretations. The patterns and/or relationships were then framed as a narrative for the readers in Chapter 4. My own knowledge and experience is explicitly discussed in the final analysis so that the reliability of the information can be trusted. The detailed descriptions were analyzed for meaning, which led to patterns or relationships. The patterns that arose were interpreted into naturalistic generalizations so that the readers can apply the information to similar cases.
CHAPTER 4
FINDINGS

The purpose of this study was to describe the impact of a service-learning project on the development of reflective thinking, communication and social interaction skills among high school sophomores. Because an important outcome of education is the preparation of students for civic participation, this study included a description of how students used reflective thinking to communicate about their social interaction skills.

This chapter will explain the methodology used to collect and analyze data that will answer the following research questions:

1. Does engagement in a service-learning project impact the individual’s development of reflective thinking? If so, what is that impact?

2. Does engagement in a service-learning project impact the individual’s development of communication skills? If so, what is that impact?

3. Does engagement in a service-learning project impact the individual’s social interaction skills? If so, how?

Through the analysis of various reflective writings over a nine-week period during a single semester, and by using observations and interviews to corroborate the findings, I have found that students can improve their reflective thinking skills if they participate in a project that is meaningful to them.

In this chapter, I will first explain the information and activities that led up to the introduction of the project. Then I will present my findings from three different time-frames of the project: Planning Phase, Implementation Phase, and Concluding Phase.
During each phase, I will discuss what I observed, the interviews, and the reflective writings for each subject.

Laying the Foundation

The project began in the eighth week of the first quarter. During the seven weeks before introducing the project, I taught concepts about communication to lay the foundation for the project. The information taught included understanding the communication process, reading verbal and nonverbal messages, understanding different perceptions, controlling our interpersonal communication skills, examining our intrapersonal communication skills, and organizing analytical essays.

Planning Phase

The Planning Phase of the project covered the first three weeks. During this phase, students created teams, brainstormed to determine organizations to help, created needs assessments for each organization, and made contact with that organization. Once contact was made, teams developed a plan of action that addressed how they would meet the determined need for their chosen organization. Students were given two days of class time each week to work with their teams. I interviewed each team at least once during the Planning Phase. Each interview lasted approximately seven minutes, with small teams taking less time and larger teams taking longer time. The first group interview focused on how the teams formed and how their plans were progressing. I also took copious notes in my observation journal as teams worked together to plan their project. To prepare students for their reflective writings, I used one class period during the second week of the Planning Phase to instruct students in how to set up their reflective writings. In that
first reflective writing, I asked students to describe how their teams were formed, what role they played in forming the team, and what they would change or keep if they were to do it again. Students were then told that they were to write five to seven more reflections over the remaining weeks of the project.

**Implementation Phase**

The Implementation Phase covered the middle three weeks of the project. Within these three weeks, teams implemented their plans of action. Teams also worked on putting together a portfolio of information concerning their project. The portfolio included their needs assessments and plans of actions, as well as other documents created for the project (see Appendix A). Students were given one day of class time to work with their teams and one day of class time to work in the computer lab each of the three weeks. During their work time, I interviewed each individual once about their progress and their teamwork. Each interview lasted between five and ten minutes. Many interviews were conducted in the hallway outside the computer lab, with a few conducted in the classroom during work time. I also continued taking notes in my observation journal as teams worked together both in the classroom and in the computer lab. Students were reminded to write reflective journals, and many of the students wrote a journal each week, while others followed a different pattern.

**Concluding Phase**

The Concluding Phase finished the last three weeks of the project. Teams finished the service part of their projects, finished all the documents for their portfolios, and presented their projects to the rest of the class. They were given two days of class time
each week in the computer lab to work on their portfolio documents. I conducted individual interviews with all students during this phase of the project. Just as in the Implementation Phase, I conducted the interviews in the hallway of the computer lab as well as in the classroom. I continued to write in my observation journal during team work time, and continued to remind students to do their reflective journals.

**Review of Data Sources**

**Reflective writings.** Students were assigned to write at least five reflective journals entries over the entire course of the service-project. They began by writing their first reflective journal entry in class, following detailed guidelines as instructed by the teacher. This first reflective journal entry was written by hand and turned in on the same day it was assigned. They were then instructed to write at least four more reflective journal entries at various times until the end of the project. Each week, students were given a journal topic, and if they chose to write on that topic, they would compose an e-mail message to me following the same guidelines that were given to them in class. Since seven weeks of the project remained after the in-class reflective journal entry, students had the opportunity to write up to seven more reflective journal entries. The benefit of writing more than five reflective journal entries was that I graded the five best journal entries. For this study, however, I used data from all journals handed in by the students in the study and did not choose reflective journal entries based on their received grades.

Students who were unable to send a reflective journal to me via e-mail had the opportunity to print the reflective journal and hand in a hard copy. Since visiting the computer lab during one or two class periods each week was a regular part of our routine,
students without access to computers were able to complete their reflective journals
during class time. Many students worked on their reflective journals at home.

The reflective journals were analyzed using the King and Kitchener (1994; Wood,
thinking in three levels, which are further divided into seven stages. Using the examples
that King and Kitchener (1994; 2002) provide for each stage of reflective thinking, I
identified selections that corresponded to the examples for the given stages. A selection
could be as short as a single, simple sentence, or as long as a paragraph. Using the King
and Kitchener (1994; 2002) explanation of each stage in their Reflective Judgment Model
(Wood, 2000), I considered a selection to be the complete development of a single
thought. For example, as students moved to higher levels of reflective thinking, they
expanded their ideas to include examples or explanations that supported a single idea.

Statements in the Pre-Reflective Level of Reflective Thinking were presented as simple,
factual statements that did not include extensions.

The examples included for each stage in the King and Kitchener Reflective
Judgment Model (Wood, 2000) include:

Pre-Reflective Thinking Level

Stage 1: “I know what I have seen.”

Stage 2: “If it is on the news, it has to be true.”

Stage 3: “When there is evidence that people can give to convince
everybody one way or another, then it will be knowledge; until then, it’s
just a guess.”
Quasi-Reflective Thinking Level

Stage 4: “I’d be more inclined to believe evolution if they had proof. It’s just like the pyramids: I don’t think we will ever know. Who are you going to ask? No one was there.”

Stage 5: “People think differently, and so they attack the problem differently. Other theories could be as true as my own, but based on different evidence.”

Reflective Thinking Level

Stage 6: “It’s very difficult in this life to be sure. There are degrees of sureness. You come to a point at which you are sure enough for a personal stance on an issue.”

Stage 7: “One can judge arguments by how well thought out the positions are, what kinds of reasoning and evidence are used to support it, and how consistent the way one argues on this topic is as compared with other topics.” (see Appendix H for the rubric)

Interviews. Interviews were conducted at each of the three phases of the project. Each student was interviewed at least once during each phase, and some students were interviewed more than once. Whenever possible, interviews were recorded using a digital voice recorder. Before recording the interviews, students were asked for their permission to record their voices. Each student agreed to have his/her interview recorded, and most of them asked to hear the recording at the end of the interview.
The interviews followed an unstructured, or open-ended, style (McMillan & Schumacher, 2001) in which I asked a question from a pre-developed (Stake, 1995) list of interview questions (Appendix C), then asked follow-up questions if needed. The list of interview questions were meant to guide the students in developing their thoughts so that they did not provide simple, one word responses (Eisner, 1998). If students provided extended responses and no follow-up questions were needed, I chose another question from the Interview Protocol page.

The first interview was a team interview. The purpose of the team interview was to determine if students on the team held similar perceptions, and to see if students aided each other in responding to questions. The first interview lasted no more than ten minutes per team, with the shortest one lasting only five minutes. It was essential to limit the time for the interviews so that I could get to each team.

The remaining interviews were conducted with individuals. Students were removed from their teammates, and the interview was conducted either at my desk or in the hallway outside the computer lab. The purpose of these individual interviews was to see if the students could separate their roles and responsibilities on the team from the team as a whole. Stake (1995) supports the use of the interview to find multiple perspectives of a situation. These interviews were also meant to last no more than ten minutes, but depending on the information provided, some interviews lasted up to twelve minutes. Other interviews did not exceed six minutes.

Observations. During each of the nine weeks that students worked on the service project, they were given at least two class periods to work with their teammates. Each
team work session was held either in the classroom or in the computer lab, depending on the work that needed to be done. While in the classroom, teams moved desks to form circles or squares where they could discuss their projects. Each team staked out a place in the classroom where they could work without being interrupted by the work of the other teams. Although the size of the classroom did not allow large space to exist between the teams, each team was able to keep separate from the other teams.

Using the naturalistic observation strategy (Gresham & Elliott, 1987; Merrell, 2001), I strolled around the room monitoring their behavior. I used a clipboard to hold my observation checklist (Appendix I) as I made tally marks for each behavior that I witnessed for each student (Bredekamp & Copple, 1997; Morreale & Hackman, 1994). To keep students from being distracted by my presence, I stood near each team for no more than two minutes. However, I was able to observe communication and social behaviors from a distance and could make tallies without standing next to the teams. Students did not seem to notice the marks I was making as I walked around the classroom.

**Introduction to the Participants**

In this section, the five participants selected for the study will be introduced. The brief description of each student is provided as a way to get to know the students and their personalities. Using the information from the Pre-Service-Project Survey, experiences with community service are included in the descriptions. Also, the students' involvement in sports and other activities are discussed, as well as their classroom behavior.
Annie

School has always come easy for Annie, and because of that, she sets high expectations for herself. She is a rather social person and has many friends in her class. Annie is the type of student that seems to want to be in school. When the teacher is talking, she keeps her eyes focused on the teacher and does not interrupt. When an assignment is given, she gets to work on it right away. Annie often works alone, but when directed to work with a partner or in a small group, she complies.

Annie is active in school and in her church. She is involved in several athletic activities as well as being a member of the student senate. Being an athlete takes up a lot of her time, and when there is an away game, she misses her last afternoon class. However, as a responsible student, she keeps up with her work and is able to keep her activities organized.

She does not see herself as having much experience in community service, but on her Pre-Service Project Survey, she indicated that she helps with community activities through her church, such as working at the homeless shelter. On that same survey, she provides a simple definition of community service as “Doing something to help the community.” When asked to explain how she came up with her definition, she wrote, “from class.” Most of her responses on the Pre-Service Project Survey were vague and did not show much personal connection.

Bill

Bill shows a lot of enthusiasm during class. He is one of the first students to arrive in class, and tends to enter the classroom with a wide grin. He is well-liked by his peers
and is friendly to everyone. Bill prefers to work with others on his assignments, but when asked to work alone, he does not complain. He does take his studies seriously and is not satisfied with “average.” He likes to see himself as a leader, and he takes an active role in any group assignment. Bill does not get upset easily, but if he feels that others are not doing their part, he will put away his class clown antics for his serious student side. When Bill is serious, he does not interact well with his peers. Instead, he will sit by himself and do as much work as he can in silence. Bill is most productive when he can joke around with his peers, trust the other members on his team, and when his personal life is where he wants it. If any of those three items are missing, Bill has difficulty focusing.

Bill is also active in many school activities. He is in several extracurricular activities, non-school sponsored clubs, and a couple of sports. His family is active in the community as well, with his father holding office in a service-oriented social club, and his mother being a teacher. He takes great pride in the service he performs for his community and his school. Bill's definition of community service was a little more detailed than Annie's: “Giving and doing what you can for the people in your community who are less fortunate.”

Cathy

Cathy sets high expectations for herself in everything she does. If she makes a mistake while writing an essay, she will tear up her essay and start over. Erasing does not seem to be an option for her. She also dedicates a lot of her time to her sports. When not practicing at school during scheduled practices, she practices at home with family and
friends. Cathy also has several friends in class. Many of her friends are involved in the same sports as she is, so they have a close bond.

As mentioned above, Cathy is involved in many sports. Because of this, she indicated on her Pre-Service Project Survey that she is not very involved in community service. She has had some experience, however, through church programs. Cathy, though, did not consider those experiences as examples of community service.

Debbie

Debbie does not speak during class very often. At times, I may see her whispering something to a friend that sits near her, but when it comes to answering or asking questions, she does not volunteer. Despite the fact that she seldom speaks up in class, Debbie seems to prefer working with others on her assignments. If the option is available to work with others, she will at least take advantage of sitting with her friends, even if she does the assignment alone. Debbie seems to enjoy the social aspects of working with others, but she does not enjoy speaking up in class.

Debbie seems to be serious about her work, which could explain why she is so quiet in class. During class, she maintains eye contact with the teacher and immediately starts working on assignments. If she cannot begin working before the end of class, Debbie will get out her planner and write the assignment down. She is involved in school activities, and writing in her planner is how she keeps herself organized.

Debbie described herself as having very little experience with community service. On her survey, the only activity she marked down as community service was "cheerleading." She also did not indicate that any family member was involved in
community service. Her definition of community service was “Doing something for others in your community.”

Eric

Eric has a lot of determination and drive. When Eric is given a writing assignment, he does not begin right away. Instead, he will spend time thinking about the assignment from different angles. Sometimes he will use graphic organizers to plan his essays; often he discussed his plans with me before he began writing. When his graded assignment is returned to him, he carefully peruses it, reading every comment. If he is not sure how to improve the next assignment, he will ask. He wants to improve his skills and isn't satisfied with just getting his work done.

Eric is also involved in sports, but did not list any other extracurricular activities. He works hard at his sports and puts in a lot of practice outside of the scheduled practices. His school schedule would seem to be less hectic than those students who are more involved in school, but Eric has an active life outside of school.

Eric is one that cares a lot about his community and is involved in service-projects outside of school, several of his own design. His family is also community-oriented according to the responses on his survey. Eric listed working with his church, with Boy Scouts, and with his family as part of his community service experiences. He also stated that his parents and siblings were involved in different community activities. Eric defined community service as “taking an active role in your community to make it a better place for everyone.”
Analysis of Annie’s Data

The data collected from Annie is discussed in this section. First, I examine the reflective writings as they were completed in the Planning Phase, the Implementation Phase, and then the Concluding Phase. Next, I examine data from the interviews conducted with Annie in the three phases of the project. Then, I examine the data from the observation journals that I kept throughout the project. Finally, I provide a summary of how the data collected from Annie’s reflective writings, interviews, and my observations of Annie can be interpreted to answer the three research questions concerning the impact of a service-learning project on reflective thinking skills, communication skills, and social interaction skills.

Reflective Writings

Overall, Annie’s reflective writings included a relatively evenly distributed amount of selections in the Pre-Reflective Level, Quasi-Reflective Level, and Reflective Level of the King and Kitchener Reflective Judgment Model (see Figure 1).

Planning phase. Annie completed two reflective writings during this time period. Using the King and Kitchener Reflective Judgment Model (King & Kitchener, 1994; Wood, 2000), I pulled five selections that corresponded to descriptions of the stages in the model.

In the first reflection, Annie’s writing demonstrated mostly Pre-Reflective Levels of thinking. She started her reflection with a description, then later added more details
and explanations. By the end of her first reflection, Annie was able to include one excerpt that edged into stage 4 of the Quasi-Reflective Level of thinking. “Both [teammate] and I took charge as soon as we knew we weren’t going to be in the original group,” is an example of stage 1 thinking because she states this as a fact but offers no evidence to support it. Her reason for having to take charge is because she was forming a new group, therefore she sees herself as the leader.

As her reflection continues, she jumps to stage 3 by adding more details. She is still in the Pre-Reflective Level of thinking, but is no longer relying solely on her words as the truth. “I learned that in a team it’s not always a good idea to go in a group with your friends because if you aren’t all interested in the same goal it won’t be fun and you’ll get stressed.” This is still in the Pre-Reflective Thinking Level, but it is at the highest stage in that level. She is basing her knowledge on her own experiences and
beliefs and not on outside evidence. She sees her experiences as a way to get to the truth, rather than discussing her ideas with others or trying to determine if her ideas are corroborated by anyone else.

The last three selections, one from reflection 1 and two from reflection 2, are examples of the Quasi-Reflective Level of thinking. In each of these excerpts, Annie does not rely only on her own objectives; instead, she is thinking about how her actions could affect others. A good example of this is a statement in reflection 2: “A great success is that we are all putting in our hours to help meet our goal. If we didn’t do this we would let down the people counting on us at the [organization] and our grades would suffer.” With this statement, Annie realizes that her opinions are not the only ones that matter because she is working with a team and with an organization that relies on her.

In the two reflections written in the beginning stages of the project, Annie has moved from thinking mostly in the Pre-Reflective Level of thinking to branching off into the Quasi-Reflective Level of thinking.

**Implementation phase.** In the three reflective writings submitted by Annie during the middle weeks of the project, I was able to identify six excerpts that represented reflective thinking. Of these six excerpts, one was in the Pre-Reflective Thinking Level, two were in the Quasi-Reflective Thinking Level, and the other three were in the Reflective Thinking Level.

In reflection 3, Annie’s thinking is on the border between the Pre-Reflective and the Quasi-Reflective Thinking Levels. In her efforts to justify her mood, she is looking to outside sources that are responsible for her short temper. By looking to outside sources,
she is still in the Pre-Reflective Level. Later in the same reflection, she begins to acknowledge that the answers cannot always be found by turning to someone else. Her statement, "There really is nothing we can do to solve this problem. We just need to realize that it's no one's fault and the dogs just want to have some fun." Her rationalization is based on a very narrow perception of the problem. First, she states that there is nothing that she can do, so she is not looking to alternative solutions, only to what she knows. Second, she determines that there is not a fixable cause to the problem. Dogs are dogs, so one must just accept that. Her willingness to accept the unknown is an indication of Quasi-Reflective Thinking.

Reflection 4 moves Annie into the Reflective Thinking Level, where she stays for reflection 5. She begins her fourth reflection with thoughts in the Quasi-Reflective Thinking Level, but of the three excerpts identified in this reflection, two of them are in the Reflective Thinking Level. Annie continues to rely on her own interpretations of what the world should be like as she works through the problems that arise while working on her project. Then she begins to turn her experiences into new knowledge. She demonstrates that she is learning from her experiences, which puts her into the Reflective Thinking Level.

In the beginning of the project, Annie described success as the ability to accomplish a goal. She sees success as an act that can be recognized easily. In her fourth reflection, Annie describes success as a feeling. "We enjoy going to the [organization] together and I think that is essential to having a successful team." In this example, she is not looking at her team's goal of completing a number of volunteer hours; instead, she
realizes that success comes from enjoying what you do. She creates new beliefs based upon her experiences. The ability to create new knowledge, or at least to recognize that knowledge is not set in stone, is a clear indication of Reflective Thinking.

Finally, in Annie’s fifth reflection, Annie demonstrates true growth in her thinking by writing an extensive examination of her beliefs. One excerpt from reflection 5 falls into the highest stage of the Reflective Thinking Level, stage 7. This one excerpt demonstrates her ability to think reflectively because she uses multiple ways to justify her actions. She not only speaks from her own point of view, but she also looks into how others would perceive her actions. Even though she does not rely on the other person’s opinions, she at least acknowledges that hers is not the only perspective. Also, the long narrative of this example shows that she is willing to spend time examining her beliefs and actions as she draws her conclusions.

I have learned that I like to have some control in a team but I don’t want all the decisions to be left up to me. For example, on Wednesday the weather wasn’t looking so great and I didn’t want to risk heading out there and getting into an accident. I tried to find everyone in my team and let them know that we wouldn’t be going. I found 2 out of my 3 group members and they agreed that we shouldn’t go out there. I called the [organization] during CATS time to let them know that we weren’t coming and they completely understood. When we got to class I let the third member know that we weren’t going and she was not happy about it. I just said there was nothing I could do about it and walked away. I realize that I do possibly have more control because I am the only one that can drive but I would never use that control in a negative way.

Annie details her actions and rationalizes her knowledge about her desire to have control. She uses concrete examples to show how she has control, and she provides two examples to support her (the two members agreeing with her and the organization understanding). She also realizes, although it is not explicitly stated, that she does not like to hear
opposing viewpoints. The fact that she is able to examine her thoughts about control in such a manner puts this into the Reflective Thinking Level.

**Concluding phase.** Annie completed three reflective writings during the Concluding Phase. In the two examples that I identified, Annie used forms of comparison to generalize about her experiences. She is examining the project as a whole and identifying what she learned from the project. As she expresses what she learned, she defends her new knowledge with examples that support her conclusions.

In her earlier reflections, Annie discussed what she did to complete her project. In this last reflection, she discusses how she felt about what she was doing for the project.

One thing that made me feel good about myself and my project was when we went to Wal-Mart and bought supplies for the [rescue league]. It made me feel really good because we were using our own money to help them out, I felt that it was a bigger sacrifice than just our time and that’s why it felt more special to me. By comparing the two actions, she determines that spending her hard-earned money was a greater sacrifice than spending her free time volunteering.

Another example from this reflection goes on to explain this new learning a little more. “This experiences shows that you don’t need to have material things to be happy because giving back and being a good person makes you truly happy.” Even though she sees the purchase of supplies as the greatest sacrifice for her project, she at least has developed new knowledge about what happiness means to her. She realizes that happiness does not come from possessing something, but from giving something you do possess to someone who truly needs it.
Interviews

Planning phase. I sat down with Annie’s team once during the second week of the project. This interview was very casual, as I simply wanted to know how well they were working together. At this point in time, I was not interested in asking formal questions about their project since they had not had time to do much work on the actual project. As I went around to each of the teams, I asked two main questions and a few follow-up questions based on their responses:

1. Why have you decided to work together as a team?
2. What strengths does each of you feel you can contribute to the team?

Annie did most of the talking for her team, which forced me to call on the others for more information. As a team, they all agreed that they decided to work together because they were all interested in doing the same project. Annie explained that she first joined her original partner because she knew that they would work well together. Then when the other two asked to join their team, she accepted them because they were interested in doing the same project that Annie and her partner were planning.

When it came to the strengths that each student could contribute, Annie spoke up first stating that she was very organized and could keep the team on track. All three of the other girls nodded as she said this. Two of the girls said that they were hard workers and were willing to do whatever was needed to make the team a success. One team member said that she liked the organization they had chosen and so it would be a fun project.

Annie ended the interview by saying that, “We all like each other and want to work with
[this organization], so I think it is pretty clear that we will work well together as a team.”

Again, the other girls nodded in agreement.

**Implementation phase.** I had the opportunity to interview Annie on a day when students were working with their teams on various parts of the project. While the rest of Annie’s team went to the computer lab to type up some documents for their portfolio, Annie stayed in the room getting the portfolio organized and working on other documents. She was sitting alone at her desk with a small stack of papers, carefully adding them to the portfolio when I asked if she had time for an interview. Annie agreed to be interviewed if she could continue working during the interview.

The focus of the interview was on Annie’s perception of teamwork, especially as it applied to her service-learning team. When asked about how well her team was working together, Annie responded, “Fine, I guess.” Curious as to what the “I guess” meant, I asked her to elaborate and to explain her feelings:

Well, we get along and work well when we are at the league, but they are not getting their other work done. Look. They are in the computer lab typing up all the stuff they were supposed to have done by now! See all this work? This is mostly my stuff. . . . I want to get a good grade on this, but they just want to play with the animals! By waiting until the last minute, they aren’t going to do very good work, and our portfolio is going to *sip* (this is a word students use in my classroom instead of “suck”).

Annie continued to express her frustration with the team because they did not give her the paperwork when she requested it. She felt that the work the others did would not be quality work because they had waited until this point in the project to complete it. Annie wanted to get an A on the project, but she felt that her team did not care about grades. Annie said, “They have had weeks to do them, and if they get them all done
today, it won't be done well. They just don't take anything seriously.” I then reminded Annie that the project was not due for several more weeks, but she restated that she was frustrated because her teammates were not keeping up with the paperwork.

Wanting Annie to see the situation from another point of view, I asked her to examine her teammates using Glasser’s Basic Needs or the Johari Window that had been discussed in class. After several minutes of thought, Annie stated:

I guess they want to meet their need for fun. When we go to the league, they are happy and playful, but when I try to talk to them about the paperwork, they get all grouchy. Or maybe they are trying to have power! Could that be why they are not getting their work done?

Her question about power started her thinking in a new direction. I pressed her to follow that line of thinking. I asked, “Why would they be trying to have power?” Annie replied:

Well, none of them want to make any decisions, so I basically took over. They all said that they were fine with it, but when I tell them what they need to do, they don’t get it done. Didn’t you say that people can meet their need for power by not doing something that they are supposed to do?

After a little more discussion about how her teammates may be trying to have power, I asked Annie to examine her own need for power. She admitted that she exerted her need for power by yelling at her teammates and getting mad at them. I then asked if her methods for handling the situation were working, and she admitted that they were not. Still, Annie could not come up with an alternative method for pushing her teammates to get the work done. Instead, she determined that the only way to get the work for the team done was by doing it herself: “I am going to work on it, and the other items that need to be in the portfolio, when I am done putting these papers in. I am not even going to ask them to do anything from now on.”
Trying to get Annie to come up with a solution that would include the entire team and not just putting more work on her, Annie insisted, “This isn’t about teamwork. This is about getting the project done so I don’t fail.”

The interview with Annie continued in much the same way for a few more minutes. She seemed resigned to the fact that she was the only one who cared about her grade, so she was the one who would have to do the paperwork for the project.

During this interview, Annie was able to step outside of herself and come up with a reason why the other girls may have been resisting doing the work, but she did not examine her own role in their behavior. Instead of thinking of ways to get the other girls to step up and be more responsible, Annie gave up on them. Her attention shifted from working together as a team to getting a good grade. Also, it is clear that she sees the paperwork as “stupid.” If it were not for the paperwork, the team would be working together well because they enjoy working at the rescue league. In Annie’s eyes, the paperwork is the real problem, not how she communicates with her teammates.

Concluding phase. The week before the final project portfolio was due, I had one more interview with Annie. During the final weeks of the project, her team had not gathered together to discuss the project. Instead, each was working independently to get assignments done. Annie’s expression was less intense than when I had interviewed her during the Implementation Phase. She explained that her team was done with their project, except for a few paperwork items, but she did not appear worried about not having all the paperwork done.
In the beginning of the interview, I listened to Annie as she discussed how good it felt to be almost done, and how good it felt to have accomplished something for the community. She had learned that one of the animals they interacted with at the rescue league had been adopted, and Annie felt a sense of pride in knowing that she had something to do with helping the animal trust people.

I shifted the interview so that Annie could talk about what she learned from her service-learning project. Based upon previous discussions with her, I was curious if she had learned anything about teamwork or leadership. Annie first focused on her lack of learning, saying, “I don't think I learned anything about communication. All the paperwork that is required didn't really help me. I already know how to write, and it just took time away from going to the league. If anything, I learned that it feels good to help others.” She continued to emphasize that her speaking and writing skills did not improve over the course of the semester, so I asked her about her perceptions of herself, teamwork, leadership, or the community.

I am still the same person. I know that when you work with a team, not everyone is going to agree. We got everything done, well almost, so I think we worked well as a team. Nothing really changed. . . . I had fun going out to the rescue league, but I didn't learn about communication. The paperwork was really a waste of time. Most people just waited until the last minute to do it.

Our conversation continued with Annie denying that she had learned anything from the service project, yet when I asked her if her project had been a success, she quickly said, “Yes.” Her idea of success centered around completion and not on learning. Even if she did not learn anything by doing the project, she still felt it was a success.
Observations

Planning phase. During the first week that the project was introduced, students were asked to create teams of at least three. Like many other students, Annie immediately started looking to her friends scattered across the room. While I was still giving instructions, she gestured to a couple of friends indicating that she wanted to be on a team with them. At least one of the friends gestured back with an affirmative response. When students were given time to sit with potential teammates, Annie joined with two other girls to discuss possible project ideas. I watched her group closely because it appeared that there was a battle of ideas happening. Annie made a couple of suggestions, then one of the other girls, team member 1, would say that she did not like that idea and would offer one of her own. Annie said that she did not like the alternative ideas, and she would once again bring up her original suggestion. Both Annie and the other girl were showing signs of frustration. Annie’s jaw tightened each time the other girl put down Annie’s idea, and the other girl interrupted Annie with her objections.

After several minutes of arguing, the third girl, Debbie, stepped in as a peace keeper. She tried to point out the merits of both ideas, while also reminding them that they were to come up with three ideas altogether, so arguing was a waste of time. Annie agreed with Debbie, until team member 1 said, “But I don’t think Annie’s idea should be one of the three.” Finally, Annie said, “Fine. You do what you want and Debbie and I will work on our own.” Annie and Debbie stayed seated, while team member 1 got up and joined a different group. Annie immediately took charge of the discussion with her
partner. Annie can be a little outspoken at times, whereas her partner was very quiet and did not socialize with many others during class.

On the second day of discussing the project with their teams, I observed Annie making several suggestions to Debbie, while Debbie nodded her head to each one. Annie was doing all the writing and all the talking. At the end of that day, the two had come up with an organization to help, and a couple of alternative ideas if it did not work out. They had not found a third partner since splitting with their original group.

In the second week of this time-frame, I gave students two more days of team work. As a class, I introduced the first major assignment for the project, which was creating a Needs Assessment for each of the organizations that they were interested in helping. Annie and her partner moved their desks together and began discussing some potential needs of their first choice. Once again, Annie was doing all the writing, but this time, Debbie offered a few ideas about how they could meet the needs. Both girls were involved in sports, so they were able to come up with plans that could work around their busy schedules.

During the second work day in the second week, Annie and Debbie were finalizing their Needs Assessment when they were approached by two girls. The two girls told them that they did not like the ideas being discussed by the members of the team that they were in, and they asked if they could join Annie’s team. Annie spoke up and invited them to join. Then, Annie stood up from her desk, walked over to me, and announced that she was now in a team of four. After I smiled and told her that I was glad they found more people to be on their team, she went back to her team and began explaining their
ideas to the two new girls. Again, Annie did most of the talking, and the other three girls listened intently as she described her vision of the plan.

In the third week of the Planning Phase, I told students that they needed to make contact with the organization and set up a time to meet with someone there. At that first meeting, each team would have to present and explain their Needs Assessment to the contact person, and they would be expected to make any changes that came up in the discussion.

During this third week, the class had one day in the computer lab and one day that was used to continue planning their project as a team. In the computer lab, the three girls gathered around Annie as she worked on the computer. She had completed the Needs Assessment by hand, and was working on typing the information on a Word document. The other girls watched and chatted as Annie took charge of getting this activity done. After about ten minutes of typing, Annie turned to her original partner, Debbie, and said, "You need to call the [organization] to set up a meeting." Debbie looked perplexed as she was not the type of person to talk to people she did not know. One of the other girls volunteered to do that, and Annie agreed that the other girl could do it. Annie then went back to typing the information. The other girls continued chatting.

The day in the classroom working on their project was similar to the other days. Annie started all discussions and introduced many ideas. The other girls seemed to go along with her. One of the girls left the team to use the phone and call the organization. She had to call Annie over to the phone to find out what day they wanted to have the meeting. Annie gave her a date and time, and the girl relayed that information to the
person on the phone. When the phone conversation was finished, Annie and her teammate went back to the other two and started planning what they would do at the meeting. It was clear that Annie saw herself as the leader, and so did the other members of her team.

**Implementation phase.** In the fifth week of the project, Annie’s team had already taken three class periods (one class period each week) to go to the rescue league. Annie’s team set up a schedule with the league to work for about an hour during the school day every week. On a team work day before they were scheduled to go for their fourth weekly session, the team sat together to discuss their project.

While all the teams were sitting together, some working on paperwork and others planning and discussing, Annie’s team caught my eye near the beginning of the class. Not wanting to disrupt the natural order of their conversation, I stood toward the front of the room observing them.

The first thing I noticed was that Annie was the center of attention. The other three girls on the team left their assigned seats to gather around Annie. This had become the ritual on work days. Annie had a piece of paper and a pencil on her desk, the other girls took nothing with them when they sat with Annie. What caught my eye was that all the girls were giggling as they came together. One girl, team member 2, had her back to me, but the other three girls were smiling and laughing as they discussed something. Since I was not close to the group, and since all the other teams were talking, I could not make out what they were saying, but their body language indicated that they were enjoying their conversation.
When I first glanced at them, Debbie was talking the most. She seemed to be telling a story to her teammates, who would nod or make a comment once-in-a-while. Then team member 3 dominated the conversation as Debbie joined in with the nodding and commenting. When team member 3 was finished talking, Annie began her turn at talking. Immediately, the faces of the three girls that I could see, including Annie, turned serious. None of them were smiling anymore, and Annie had picked up her pencil and started writing on her paper. Her eyes focused on team member 2, she pointed her pencil at team member 2 while talking to her, then wrote something on her paper. While she wrote, none of the other girls said anything. Annie lifted her head and her pencil and focused on Debbie. Following the same routing, she said something to Debbie for a few minutes, then wrote on her paper. Finally, it was team member 3’s turn. When Annie was done writing on her paper, she looked at all of them, made a few comments, then dismissed the girls. While Annie stayed in her seat, the other three girls moved to the front of the room and sat together.

Annie did not seem to pay attention to the three girls after they left her desk. Instead, she came up to me and asked for an empty binder for her portfolio, then returned to her desk and continued writing. She seemed not to notice, or not to care, that the other girls were sitting together and carrying on a conversation. As Annie worked on whatever she was writing, the other three girls sat together talking and smiling, but not writing.

Concluding phase. In the final few weeks of the project, Annie's team did not meet as a whole group for long periods of time. They had met their team goal of hours for their project, so each team member was focused on getting her paperwork done. On work
days, the team would meet for two or three minutes, then each would go her own way. One girl might go to the library, while another went to the computer lab. The team was run more like a business than an actual team.

The best time to see how the team interacted with each other was in the computer lab. Debbie and team member 3 sat next to each other, team member 2 sat by her friends on another team, and Annie sat on the other side of the room away from her teammates. Each girl was in full work mode. Annie was still the center of the action, though. Once a girl finished a task and printed off the assignment, she took it to Annie who looked it over and either kept it for the portfolio, or pointed out problems and returned it to the author.

Walking around the room to monitor what everyone was doing and to answer questions, I noticed that Annie kept her checklist of paperwork to be completed next to her. Several items had been checked off. Annie continued to be the task-master, keeping everyone on track so that the team could be successful.

Summary

Annie starts the project with her focus on herself. She does not want to entertain ideas from others if they do not go along with her own ideas. She takes charge of her team because she wants to make sure that her plans are followed. She settles on a team of people who are not as strong-willed as she is, and she takes advantage of the group dynamics. However, as Annie and her team begin to implement their project, she realizes that just because she has her own opinions about how things should be done, she does have to look to how what she does will affect her team and the organization that she is helping. Annie’s writings and her actions do not necessarily agree, but my observations
your motives are a waste of time. Her idea of education is about learning new information about things outside of herself, not about learning about herself.

**Analysis of Bill’s Data**

The data collected from Bill is discussed in this section. First, I examine the reflective writings as they were completed in the Planning Phase, the Implementation Phase, and then the Concluding Phase. Next, I examine data from the interviews conducted with Bill in the three phases of the project. Then, I examine the data from the observation journals that I kept throughout the project. Finally, I provide a summary of how the data collected from Bill’s reflective writings, interviews, and my observations of Bill can be interpreted to answer the three research questions concerning the impact of a service-learning project on reflective thinking skills, communication skills, and social interaction skills.

**Reflective Writings**

Over the course of the project, Bill’s reflective writing selections were predominantly in the Pre-Reflective Level (see Figure 2). A small percentage of his reflective writing selections were categorized as being in the Reflective Level, with about a fourth in the Quasi-Reflective Level (see Figure 2).

**Planning Phase.** Bill completed both his reflections for the beginning of the project. A total of six excerpts were chosen to analyze from the two reflections. All but one of the statements could be placed into the Pre-Reflective Thinking Level. One statement inches into the Quasi-Reflective Level.
Bill’s Pre-Reflective Thinking statements fit into all three stages of that level. In his first reflection, Bill has two excerpts at the lower stages of the Pre-Reflective Level, stage 1, and one statement at the highest, stage 3. The stage 1 statements are found in the middle and end of his first reflection. In these statements, Bill states his ideas as facts without attempting to provide evidence or rationalizations. In one statement, he uses the term “obvious” to indicate that he does not need to explain. He is relying on his perception of events and his own personal beliefs to form his knowledge of the world, and he expects others to accept that knowledge as truth.

An earlier example from reflection 1 is placed into stage 3 because it uses a type of authority to make the statement true. This first example shows that the author is not using just his ideas to construct knowledge, but he is referring to a team effort. “We decided that working with a school was an excellent pick for our project.” The use of the term “we” shows that he is thinking outside of his own individual needs, yet he does not include information to prove that this was a team decision. This example remains in the
Pre-Reflective Thinking Level because it is stated as a fact, and he does not attempt to prove that it is true.

His second reflection begins to move into the Quasi-Reflective Thinking Level with one of the three statements. In reflection 2, Bill does not state his ideas as being “obvious” to others. He begins to justify his ideas with some evidence, “Based on the feedback we have received…,” but that evidence is written from his perspective and interpretation. He does not explain the feedback, only that it exists and therefore is support for his beliefs.

In the example from this reflection that fits in the stage 4 category, Bill defends his conclusions by providing several examples from his experiences. He looks at these examples as from his own perspective, but the fact that he uses more than one puts the excerpt into the Quasi-Reflective Level. “I have helped with propaganda ideas as well as decorating jars. I have also talked to the principal of [organization] about setting up dates to undergo the penny war. My teamwork and leadership in the group has also been a success.” He concludes that both his teamwork skills and his leadership skills have been successful because he has performed specific tasks for the team.

Implementation phase. Bill completed two reflective journal entries during the Implementation Phase of the project. The three statements taken from his two journal entries could be categorized in the Quasi-Reflective Level.

Two of his selections make an effort to evaluate his actions or the success of his team. As he evaluates, he constructs meaning: “I have learned that I follow up on what I say I will do, and therefore reliable. I also learned that working together can be a fun and
beneficial experience.” In this statement, Bill evaluated his actions of following through and his experiences from working together. Based on his interpretations of those actions and experiences, Bill determined that he is a reliable worker, and that he has fun while working with others. The practice of evaluating actions and making meaning puts this statement in the Quasi-Reflective Level at stage 5.

Bill includes a statement that is categorized as stage 6 of the Quasi-Reflective Level. In the one statement that is a stage 6, Bill uses various ideas or events from the project to explain how he feels about the project. In this case, Bill is not just constructing meaning, but he is applying the meaning to his life and drawing conclusions. “[T]his project and the situation that have come from it have made me feel good inside.” Bill concluded that feeling good was the result of the efforts he put forth to accomplish his goals.

**Concluding phase.** Bill completed two reflections during the Concluding Phase. Reflection 7 contains an example of reflective writing from the highest stage. In reflection 7, Bill analyzes what he has learned from the project.

Communication with younger youth is completely different then (sic) talking with adults. Voice inflections must change and an enthused tone must be used. I also had to communicate with individuals that held much authority, like the principal of [organization] and the executive director at the [charity].

In this excerpt, he is thinking beyond the project to understand the differences of communicating with two types of audiences. In his evaluation of those differences, he uses information from his personal experiences as well as what he has learned in class.

The other reflection contained excerpts that could be placed in the upper stage of the Quasi-Reflective Level, and one statement in the Reflective Level. In the three
statements, Bill used evidence from his experiences, and he constructed new knowledge. The excerpt that was placed into stage 6 of the Reflective Level included multiple ideas or events from the project to explain his thinking. He did not go into detail in his explanations, but the fact that he was able to examine his beliefs and that he can use different pieces of evidence to form his new knowledge put his selection at a higher level of reflective thinking.

**Interviews**

**Planning phase.** Although I had sat down and interacted with Bill’s team the most, I had not had a real discussion or interview about the project. Instead, my interactions were as a mediator, helping them to realize what they were missing and make their project complete. With six teams remaining to have a group discussion, I decided that Bill’s team was the best place to start.

Since I had already had some discussion with them about the organization of their team, I decided to focus on the progress that they had made so far. Bill’s team had already made contact with an organization and they were making plans to set up another meeting. Moving the discussion to teamwork, I asked how well the team was working together. Each team member called out, “Great!” at the same time. After a pause, I asked them to elaborate. Bill spoke up explaining that they were all friends, they agreed on a project quickly, and they worked together to complete their written assignments. Another team member mentioned that the team had not had any conflicts with each other.

The idea of teamwork seemed to be moving toward having everyone agree, so I probed this idea a little more. When I asked if agreeing was important to teamwork, team
member 4 stated, “It sure helps. Look how much we have accomplished. No other team has done this much.” I asked, “So, a successful team is one that agrees on everything?” Bill replied, “Of course. When everyone agrees, there are no problems to keep you from being successful. We all agree, so we are going to have the best project ever!”

For Bill and his group, success depended on putting forth effort in the planning so that everyone agreed on the plans. Bill admitted that he did not foresee any problems later, so he was not prepared to solve any problems that could arise. When I asked if anything could possibly go wrong, he immediately stated that nothing could. His optimism and enthusiasm helped to keep his team enthusiastic about their project as well.

Implementation phase. The next work session after Bill’s noticeable change, the class was in the computer lab. Bill sat at a computer with a blank Word document open before him. The other three boys on his team each sat at a computer working on various assignments for the project. When I saw that Bill had something written on his Word document, I walked over to him. Before I could get to him, he erased what had written. Since he was not working, this was a good time to interview him, so I called him into the hall where I could interview him without being interrupted.

During the interview, Bill’s head was down and he was focused on the floor rather than on me. It was clear to me that something was wrong and it was affecting his work. The purpose of this interview then became to determine what was wrong and how he could solve the problem so that he could once again be a productive member of his team. Bill did not want to discuss his problems, so he insisted that everything was okay. After asking several questions, I suggested that he talk to his team about his problems
because his nonverbal language was sending a negative message to his teammates. Bill agreed to have the conversation with his team, and the interview was postponed to a later time.

Two days later, Bill was still showing signs that his problem had not gone away. I approached him to determine if he had communicated with his team, and if so, how that went. Bill informed me that he sent a text message to his teammates letting them know that he was having some personal problems. He said that the response from his teammates was “Okay,” and he took that to mean that they did not think his lack of enthusiasm was a major issue.

I asked Bill if they said anything else, or if he talked to them face-to-face, and he said, “No. They understand.” To Bill, the issues that were afflicting him was not a team matter. Even if he was feeling down or upset about something in his personal life, he could not see how it was affecting his team. Letting them know that he was having issues was all he needed to do. He was not trying to be a good teammate, or trying to figure out how to divorce his personal life from his team life, he was just trying to appease me. He told his team, they said okay, so now he could sit and sulk without worrying about anything else.

**Concluding phase.** It was difficult to find a good time to interview Bill because he didn't want to talk about anything. I started to interview him a few times, but he gave short answers to my questions and would not elaborate. The last interview I had with Bill was when I sat with his group to listen to them negotiate their grades. I call this an
interview because I used this time to ask each of them some questions what they considered to be their greatest success.

Bill was the second one to respond to what he believed to be his team's greatest success.

I think everything was a success. We had a good plan from the beginning, and we all worked together to get it done. When we talked to the kids at the elementary schools about our project, they were very excited. I think we did a good job explaining to them why we were raising money for the Red Cross. Every Monday we would let them know how much money they raised and who was in the lead. I think that because we communicated well with them, they were excited about the project and that is why we raised a lot of money.

Bill went on to explain how he and his teammates provided regular reports to the classes and kept the enthusiasm up. The enthusiasm that Bill had lost in the middle weeks of the project was back. He bounced in his seat as he described how the students were excited every time the team went to visit with them.

The other members of the team focused on how much money they had raised, but Bill concentrated the relationships he built with the middle school students. He focused on keeping the kids enthusiastic about raising money, and how his team kept the spirit alive. It seemed to me that Bill's idea of success was less on the amount of money raised, and more on the effect he and his team had on the younger kids.

Observations

Planning phase. From the first day, Bill's team seemed to be on top of things. When directed to find groups, the first team to form was Bill's group, with three members. Bill, team member 1, and team member 2 had discussed being a team before
the actual project was introduced. They knew what was going to be expected from them, and they knew what they wanted to do.

As I walked around the room, I realized that Bill's team was not talking about the project. Bill was telling the other two boys a story about a family event. I walked up to them and said, "Shouldn't you be trying to figure out what you are going to do?"

Bill replied, "We already know. We are going to have a penny war at an elementary school."

"That's nice," I responded. "And for whom are you raising money?"

All three boys looked at each other with raised eyebrows. Bill took charge and said to his teammates, "Who do we give the money to?" A new discussion about the project ensued, as they tried to figure out a worthy organization.

The following Friday, when they were to give me the names of the members of their group and the three potential organizations, Bill handed me the paper with the three team members' names, but only one organization - an elementary school. I handed the paper back to him and told him that he needed to have at least three organizations in case his first choice did not work out. He took the paper back to his group to discuss other organizations.

When I made my rounds to his group, I noticed that he had three organizations written down, but they were all elementary schools. I explained that they needed to come up with the organizations that they wanted to help, not just a place to hold a fundraiser. Team member 1 threw up his hands and said, "Like what?"
I pulled up a desk and sat with the three boys. They all turned their attention to me as if I was going to solve all their problems. Instead, I gave them more to think about.

"Look, you know what you want to do, but why are you having this penny war? Who do you want to help?"

"I don’t know," said team member 2. "We just thought it would be fun to have a penny war."

"Then what do you do with all the money that is raised from the penny war?"

"Keep it?" Bill chimed in with a grin.

"No, that is not service to the community! Are you going to donate the money to the school’s library? To a club? To the Red Cross? To the animal rescue league? You need to come up with a place to donate the money. That is your organization."

Bill pondered my suggestions, then turned to his team and started talking about the different worthy organizations in the community. At about this time, a fourth boy walked over to Bill’s team and sat down. Bill’s team ignored him at first, but as they were discussing the various non-profit organizations, the new boy started adding his opinions. Bill turned to him and asked if he was spying. The new boy said that he didn’t like what his team was doing, so he wanted to join Bill’s team. The three boys agreed, and the new boy became the fourth member of Bill’s team.

At the end of the class period, Bill handed me a revised version of his paper with the names of four boys and three potential organizations to help. He had crossed off the names of the elementary schools and written down, “Red Cross,” a high school activity, and the animal rescue league.
The second week seemed easy for Bill and his teammates. Knowing that they wanted to have a penny war, each boy took one organization and created a Needs Assessment for that organization. I was giving them two class periods to figure out what the organizations’ needs might be and to come up with ways to meet those needs. Bill’s team had finished in less than half of the first class period. For each organization, his team had one need: money. Once again, I took a brief moment to explain to them that they need to think through all the needs of each organization. While money is always appreciated, a particular organization may have more pressing needs at the moment. I gave them the task of coming up with at least 2 more needs and different ways to meet each of those needs.

While his three teammates worked on revising the Needs Assessments, Bill took the initiative to call one of the elementary schools. This task had not been assigned to the teams yet, but Bill wanted to get a jump on the project. He left his team and interrupted my observation of another team to ask me if he could use the phone. Trying not to miss any details from the group I was observing, I nodded my head, and he went to the phone and made his phone call. A few minutes later I saw him return to his team. He had arranged for a time to meet with the principal of the elementary school.

Bill’s eagerness continued into the third week. On the first work day of the third week, Bill and his teammates immediately got started on typing up the Needs Assessments for each organization. Team member 1, team member 2, and team member 3 each took one Needs Assessment to type, while Bill used the computer to make labels for the canisters they were going to use for the penny war. Each person had a task to do,
and I noticed that when one member of the team was done, he would show Bill for his approval. When all their Needs Assessments were done, the entire team brought them up to me. I asked if they had made contact with one of the organizations yet, and Bill said that he had called the school. I told him that they needed to set up a meeting with someone from one of the organizations. It was then that Bill informed me that they had a meeting set up with the elementary school’s principal. I suggested that before they had that meeting, they should know which organization would receive the money raised from the penny war. They went back to their computers and began talking. After a few minutes, team member 3 stood up and asked to use the phone in the computer lab. I agreed, and he made a phone call.

On the last work day of this time period, Bill bounded up to me before class had officially started. I was standing at my lectern getting ready for the class to begin when I saw Bill out of the corner of my eye. He displayed a huge grin and bright eyes. His hands were clasped behind his back as he asked, “Guess what, Miss Hawk?”

“What?” I responded. His grin was contagious, and I felt a grin develop on my face.

“We had our meeting with the school principal yesterday. He is excited about our plan.”

“Good,” I said. “And have you talked with an organization yet?”

“Yes. Team member 4 finally contacted someone at the Red Cross, and we are going to meet with them next week.”
The bell rang, I congratulated him, then began explaining the task for the day. Bill sat with a stiff posture, arms crossed in front of him, still grinning from ear to ear. As the other students began moving their desks to form circles for their teams, Bill continued to sit in his desk, arms crossed, knowing that he had completed his task for the day. His teammates gathered around him, and they began to gossip. This, I thought, is a good time for an interview!

**Implementation phase.** Bill went through a noticeable change during these middle weeks of the project. At the beginning of this time period, Bill was full of energy and enthusiasm about his project. On an almost daily basis, he would approach me before class and describe something new that his team had done. During team work days, he could hardly sit or stand still as he worked with his team. Often I would see him pacing back and forth in front of his team as they discussed what they had done and what they had yet to do. If he was seated, he would be sitting on the top of the desk kicking his legs back and forth. When he became really excited about something, he jumped off the desk and would let out a loud, “Oh, yeah, and…. ”

Bill did not dominate the conversations with his team during these first two weeks, but he did seem to control the mood. His enthusiasm and cheerfulness rubbed off on his teammates. Bill didn’t have to control with his words, he used his nonverbal skills to set the direction of the conversation. All members of the team participated in any discussion they had, and after only a few minutes of being together, they all seemed to share the bright-eyed enthusiasm Bill displayed.
However, in the third week, Bill was not as cheerful. There was a noticeable change in his attitude that affected both his team and his other class work. It was a Tuesday when Bill walked into the classroom with his head hanging down. I noticed this right away because he usually bounced into the classroom with a huge smile on his face. On this day, he trudged in, head down, and his arms hanging lifeless at his sides. He went straight to his desk and plopped down, crossing his arms on the top of his desk and resting his head on his arms. The bell rang, and Bill stayed in this position as I gave the class their instructions for team work day.

While the other members of Bill’s team went to their regular meeting spot, Bill stayed at his desk with his head down. Unfortunately for him, he happened to be seated where another team normally met, so as they gathered around him, he lifted his head, looked around, and pulled himself up from his seat. He again trudged over to his team and plopped down in a desk near them. Instead of resting his head on his crossed arms, he crossed his arms over his chest and slouched with his legs stretched before him.

The other members of Bill’s team were discussing the activity for the week. I was not far from them, so I could hear them discussing a dilemma they were having. It seemed that most of the boys were going to be gone on Friday, their normal day for leaving class to work on their project, so they had to come up with another plan. Bill was not part of this conversation. He did not offer any opinions as they tried to determine another day that would work for them. Team member 3 eventually walked to the phone and called their contact person. While team member 3 was doing this, the two standing
boys continued to converse; Bill continued to stare at the walls as he slouched in the desk.

After team member 3 returned with a report concerning his phone call, team member 2 walked over to me to let me know that they were changing their work day from Friday to Thursday. He then returned to his team, and the conversation continued. A few minutes later, team member 2 turned to Bill and asked him a question. Bill looked up from his seated position, squinted his eyes, then responded to team member 2. His response was short, maybe two or three words, then he went back to staring at the space on the wall. Bill continued to stay apart from his team, both mentally and physically, throughout the entire period. The other three boys stood in the area in front of the desk where Bill was sitting and talked. There were moments when they would chuckle, but they mostly displayed serious expressions.

Concluding phase. Bill’s lack of enthusiasm continued for several weeks. It was not until the last project work day of the semester that Bill showed a hint of his former self. I was almost surprised to see Bill bounce into the classroom with a smile on his face. It had been several weeks since I had seen him smile. When he sat in his desk, he sat up straight, turned to the side, and chatted to his neighbor. When the bell rang, he turned to face the front, appearing ready to learn.

After giving the instructions for their final work day, Bill quickly moved to be with his team. His enthusiasm was coming through as he talked about what they still had to do. Instead of working on their portfolio, the team was talking about the party they were going to have for the class that raised the most money. Bill was actively involved in
the planning. There were moments when he became excited and threw in a new idea. Bill was not completely back to the level of enthusiasm he had at the beginning of the project, but he also was not keeping his distance from his team. For about four weeks, Bill had just been going through the motions, now he was helping to make decisions.

Summary

Through the observations, interview, and reflections, Bill’s focus is on the superficial aspects of the project. He knows what he wants to do and has a plan for how to do it. He feels that his team will be a success if they complete the project and have no problems along the way. Bill searches for external acknowledgement of his success, and does very little intrapersonal investigation. Bill’s sense of pride is based upon getting something tangible done, preferably before anyone else has it done.

Something in the latter part of this time period influenced Bill’s attitude about his school work. Bill displayed a drastic change in his behavior and mood as he went from being an integral part of his team, to acting like an outsider. At first, Bill was the energizer of his team. His enthusiasm and energy perked up his team and kept them excited about their project. In the last week, though, his lack of enthusiasm could be seen in the rest of the team. The other three members of the team picked up the slack and made sure that they were still working on their project, but they were not smiling and laughing as much as they had in previous weeks.

Even though Bill’s enthusiasm dwindled in the last week, he may have been having personal difficulties outside of class before that. Once the class started the project, and in the weeks before that, Bill was very conscientious about getting his homework
done on time. For the project, Bill did not complete any reflections during this time period, and he was turning other assignments in late or not at all. I could tell that the project took a back seat to whatever else was happening in his personal life, and those issues needed to be resolved before he could once again become an integral part of his team.

Bill had a rough time in the middle of the project, but he seemed to come back around at the end. Of all the students I followed, Bill seemed to be the most consistent reflective thinker.

Analysis of Cathy’s Data

The data collected from Cathy is discussed in this section. First, I examine the reflective writings as they were completed in the Planning Phase, the Implementation Phase, and then the Concluding Phase. Next, I examine data from the interviews conducted with Annie in the three phases of the project. Then, I examine the data from the observation journals that I kept throughout the project. Finally, I provide a summary of how the data collected from Cathy’s reflective writings, interviews, and my observations of Cathy can be interpreted to answer the three research questions concerning the impact of a service-learning project on reflective thinking skills, communication skills, and social interaction skills.

Reflective Writings

A higher percentage of the selections from Cathy’s reflective journal entries were categorized as being in the Pre-Reflective Level (see Figure 3). However, she had a larger percentage of selections in the Reflective Level than in the Quasi-Reflective Level.
Planning phase. The first reflection stays mostly in the Pre-Reflective Level with one excerpt moving into the Quasi-Reflective Level. The first excerpt demonstrates stage 2. Cathy uses her personal perceptions to explain her role in forming the group. “We just automatically went with each other because we get along and have done projects together before.” She does not consider the work that will need to be done on the project, just the people with whom she will work. The term, “automatically,” shows that very little thought was put into the decision, which would make one want to categorize this statement as a stage 1. However, she then includes a reason why the team formed, putting it into stage 2.

The second excerpt tries to explain why her team is not as far as other teams. First, she must have perceived that she needed to be at a particular point in the project by the time she wrote this reflection, and she must have felt that others were either at that point or beyond. “Our group formed before we knew what we wanted to do, and I think
that might be why we are behind.” She does not have any real justification for her belief, but by saying, “I think,” she is showing that her opinion may not be the best one. For this reason, I placed this excerpt into stage 3.

The third excerpt moves into stage 4 of the Quasi-Reflective Level. Cathy is starting to compare two situations and reconsidering her previous decision. “Looking at it now, I wish I would’ve joined the group working at [organization]. I love working with kids and I get along well with the girls in that group, too.” She searches for personal evidence to justify her new thoughts about her other option. However, she still is looking at the make-up of the team members and not on the project or her role in the team’s decision-making process.

Cathy’s second reflection includes information that can be placed in all three levels of the Reflective Judgment Model. Of the four excerpts analyzed from this reflection, three stay in the Pre-Reflective Level, while one includes thoughts that fall into stage 4 and stage 6.

The first two excerpts are categorized in stage 1 because they are simple statements that do not provide evidence of any type. “Success to me is overcoming some sort of obstacle.” Using the phrase, “to me” does imply that she realizes it is her definition and not an absolute truth. This could move it into a higher stage, but because she states it as a fact, it remains in stage 1. No matter how one looks at it, the statement does not go beyond the Pre-Reflective Level.

“We had gone through unreturned calls, missed meetings, and just having our ideas turned down.” This statement also falls into stage 1 because it is a list of what she
had experienced. She offers no comments about what these events mean to her or to the completion of her project.

The third selection moves to stage 3 because she recognizes that she needs to look outside herself for answers. After not being able to come up with a solution that all team members could agree upon, they “...take the time to talk with Ms. Hawk about our situation.” This reflects stage 3 because she believes the answers are with an authority figure, Ms. Hawk. She still feels that there is an absolute answer, but that she and her teammates will not be able to figure out that answer.

The final selection from reflection 2 is a little harder to pin down into one stage. Elements of her comment indicate that she is making a comparison to her previous experiences, yet another part is looking ahead and applying her knowledge to future events. “I think that we have learned that you have to make success happen, you can’t wait around for it because that leads to a waste of time.” If we divide this statement into two parts, the first part shows that she is not absolutely certain about what she has learned, and it implies that whatever she has learned, it is based upon her experiences. The second part of the sentence applies her new knowledge to a generalized concept and not just to the project. Therefore, the first half of the sentence is categorized as stage 4, while the second half actually demonstrates stage 6 reflective thinking.

Implementation phase. Cathy wrote four reflective journal entries during the Implementation Phase of the project.

Reflection 3 has one rather long excerpt that was analyzed. This excerpt falls into stage 4 because she is making an effort to evaluate what did not work well in the group.
I do feel that we spent a little too much time trying to fight for ideas that we just weren't allowed to do. We let that slow us down, and we used it as an excuse for being behind. . . . We also should have been more open to the other ideas that way it would have been easier to fall back onto a back up plan.

In her efforts to evaluate the progress of her team, she tries to reason through possible options they could have chosen. She does not explore those alternative options to determine multiple outcomes. Instead, she believes that the options would result in a better outcome.

Reflection 4 provided no new information. This short reflection was turned in late and mainly repeated information found in reflection 3. I found no new ideas that could be pulled for analysis.

Reflection 5 goes beyond repetition and description and has one long excerpt that covers all three levels of reflective thinking.

Cooperation is key in a group. You all have to work together to figure out a schedule for getting your project done on time. You also ahve (sic) o (sic) be able to work together to deal with problems that may arise. Trust is important in the fact that you know if you tell a team member to finish smomething (sic) it will get done and you can worry about what you need to do.

At the highest level on the Reflective Judgment Model, some of her comments appear to fit into stage 6. She seems to be applying what she has learned from her experiences to something more general. For example, “Cooperation is key in a group” and “Trust is important...” are two pieces of information that are not project specific. Therefore, this excerpt does show that she is able to think at higher levels of reflective thinking.

Having said that, one may also notice that the examples that she uses are specific to the project. The segments that fall into stage 3 include, “...getting your project done on
time," and ". . .if you tell a team member to finish smomething (sic) it will get done..."
These two comments appear to be about her project and not about teamwork in general.
Her focus on the project shows that she is not all the way into the Reflective Thinking Level.

Still, she also has some elements of stage 4 in this example. When she offers some justification for her generalizations, she is in the Quasi-Reflective Level. The fact that she is trying to rationalize her ideas moves her into stage 4, but it does not take her into stage 5 because she is not offering a variety of options to explain her thoughts.

All in all, this one section of reflection 5 seems to show that Cathy is able to think on many levels of the Reflective Judgment Model at once.

Reflection 6 is the shortest of her 8 reflections. Instead of following the assigned three-paragraph writing format, reflection 6 is written in one paragraph. Despite the paucity of words, Cathy actually writes at stage 6 in this reflection. 

"Through being on the receiving end of gratitude, it made me realize that it's important to show your gratitude towards others." This comment falls into the Reflective Thinking Level because it is not project-specific, and she is demonstrating that she can apply her knowledge to other areas of her life. She uses the actions of others as well as her personal opinions to determine a generalized rule about behavior. This is the closest she has come to actually reflecting on the process and not just examining the project.

Reflection 7 tends to include information that can be categorized into stage 5.

"Working with adults in a business setting has helped prepare us for the future. We will have job interviews, talk with colleges, and have to [missing word] with our peers and
elders and these meetings for this project have helped us. We now know how to speak and handle ourselves in these situations.” Looking into the future and applying one’s knowledge would normally put the writing into the Reflective Level, but this excerpt falls just short of that. I placed this excerpt into stage 5 because she has constructed her own knowledge about how communication can be beneficial to her future, but she is not looking at various outcomes. She does provide a list of tasks she may have to do in the future, but without providing examples of how she handled herself in those situations, she is not going far enough into reflective thinking.

Concluding phase. As an overview of the entire project, Cathy attempts to apply her learning to her future. The two excerpts that I pulled from this reflection fall into the Reflective Thinking Level.

In the first example, Cathy uses the comments she received from people at the organization to help her create her knowledge. This falls into stage 6 because she is using outside evidence to support her beliefs, and she is able to figure out how that outside evidence fits into her own ideas. “We’ve learned that the feeling of helping out just to help out can be a reward in itself. The appreciation shown towards us by the [organization] workers was just an added bonus to the fact that we knew we were doing a good thing….” She determined that her efforts were appreciated and good based upon comments and actions she received from others. These comments and actions helped her to feel good about herself and the work she has done. This new learning resulted in her drawing conclusions about helping others.
The second excerpt takes her thinking even farther.

...[W] learned about the problems of communication and when people don’t respond to you, and we worked on meetings with adults and discussing our ideas. We learned to face rejection, but still able to come out with a fun project. Through the project itself, I have learned that you can perform any tasks that you put your mind too (sic) and it always helps to have great friends around you to make it easier.

Cathy uses several different pieces of evidence to justify her beliefs about the success and the learning experiences of the project. She does not make a simple statement and let it stand alone. Instead, she realizes that one must try many avenues before finding the right one.

Interviews

Planning phase. The discussion with Cathy’s group took place on the final work day of this time period. As the girls sat together not really talking, I knew that something was wrong. They had been so excited just a few days ago, and now they were not even talking. This was not the time to ask about their team organization. Instead, I needed to help them figure out what to do next.

The girls immediately told me that they had no project because “everything that we have tried hasn’t worked.” They explained that they could not get some of the organizations to return their calls, so they tried another organization, but they were turned down. I sensed frustration coming from each team member, so I decided to get them talking about their interests. Their eyes brightened a little as they listed several interests, from sports, to working with children, to working with animals. Once they had a good list of interests, they began talking about how they could turn those interests into projects.
This first interview helped me to realize that Cathy, who shows concern about her grades and works to the best of her ability on every assignment, could be easily frustrated if her ideas were shot down. I got the feeling that Cathy was used to being told what to do, then doing it. She put a tremendous amount of thought and effort into everything she did, but she first needed to be told what to do. I could see her frustration as I let her work through this problem with her teammates, but I could also see that she was willing to open herself up to new ideas from her teammates.

Implementation phase. I had two interviews with Cathy early in this time period. One was with another member of her team, and the other was by herself. The first interview was student initiated, but it provided me with the opportunity to help the students examine what they really wanted.

Cathy and team member 2 approached me with a lot of frustration over the project. They had wanted to do something unique but fun, and all their ideas were being shot down. First, no one at the organization of their first choice would return their phone calls, and their second idea was not approved because they were too young. Both girls were at a loss and ready to give up.

I asked the girls to describe how they were organizing their plans for the project. They informed me that after not hearing back from the organization, they decided to work on their Needs Assessment. I then asked how they could work on a Needs Assessment without making contact with the organization. Team member 2 responded, “We knew what we wanted to do before we started thinking about the various organizations. Our project has been planned for a long time.” Cathy added, “We first
thought about some fun things that we could do, then we started thinking about where we could do it.” I then asked if their method of organizing a project was successful, and they both agreed that it was not.

Their second attempt at a project began in much the same way and ended in frustration as well. Again, Cathy’s team thought of what they would do for their project before they talked to the principal of the high school. As they talked to the principal about their plans, they became more excited because the principal was in favor of their plan. “So we contacted [the principal] and told her about our plans. She thought it was a good idea, and she called over to the maintenance people to see what they thought. They said that we had to be 16 to paint, and only one of us is,” Cathy recalled. Again, I pointed out that they had their plan before they had discussed ideas with the principal, and they recognized the pattern. They had their plans created before they knew the needs of the organization. When I asked how meeting with the organization before coming up with a plan would be different, Cathy responded, “I guess our focus would be on the organization and not on the work that we would be doing.” I told them to go back to their group and start over with their new focus.

It was the following week when I held my second, follow-up interview with Cathy. Team member 2 was absent, and the other girls on the team were working on other class assignments. I called Cathy over to my desk to discussed the progress the team had made since her last interview. She was excited to discuss their new project with me.
Cathy indicated that her team had come up with more organizations to help, and through their discussions they realized that they all liked working with kids. Several of the girls were members of a sports team, and their coach taught at the elementary level. They had decided to talk to their coach about helping her in the classroom. I asked if they started the discussion with their plans, or if they tried to ascertain the needs of the elementary classroom. Cathy admitted that they did “a little of both.” I asked her to elaborate, and she continued, “I think we still kind of thought of a plan once we decided to ask her, but we didn’t get too specific. We all just agreed that we wanted to work with kids.” She was satisfied with the direction her team was going with the new project, and she and her teammates were eagerly working on a plan that they could present to their coach. Cathy showed me the paper that listed some of the ideas they were planning to discuss with their coach. They had not settled on one project idea, but had left themselves open to a variety of ideas. Cathy glanced at her teammates, then turned back to me and said, “I can’t wait to get started.” Seeing her enthusiasm and change of attitude, I let her return to her team.

I watched Cathy walk back to her desk, and I noticed that her movements were much more natural than they had been earlier in the week. With the setbacks thrown at her by the other two projects, she was almost ready to give up on getting a project she liked. When she let go of the work details and put more effort into putting her interests together with different organizations, she allowed herself to be more open and relied on others to help her with the work details.
Concluding phase. I had the opportunity to interview Cathy one last time when she delivered her portfolio to me in the middle of our computer lab work time. Like the other interviews in the computer lab, I took Cathy into the hallway to discuss the success of her project. She explained that her greatest success as a team was finally determining a project. I asked her why that was considered a success, she explained,

Because we all had to talk about a lot of ideas before one finally ended up working. It wasn't just one person saying, "This is what we are going to do." We all made the decisions, and we were all disappointed when our plans didn't work out.

Cathy was able to see that teamwork involved everyone, so I asked her what role she played to ensure success for the team.

I was just a good team member. I kept everyone organized so that we didn't fall behind. Once we finally had our project approved, we had to get caught up with the other teams, so we worked out a schedule that would help us get everything done. I made sure no one procrastinated, but that was easy because we all did our work when we were supposed to.

Cathy did not identify herself as a team leader; instead, she credited all her teammates with taking on the leadership role at times. "Each person on our team designed an activity that we did with the students, and so we were all leaders of our activities."

Even this conversation with Cathy seemed more relaxed than the previous conversations. She was willing to share her experiences with the team, and did not take much individual credit. During this interview, Cathy found ways to include the other members of the team. It was clear to me that she had a difficult time separating her actions from the other members of the team. To me, she saw herself as one piece of the team, and not as an individual.
Observations

Planning phase. Over the course of the three week period, Cathy was leader of her team. The four girls immediately formed a team and began discussing possible organizations for their project. Cathy led the discussion and took notes. The first meeting, as well as the following meetings, were held in a democratic fashion. As the leader, Cathy brought up a question and allowed the others to offer their opinions. The three other girls seemed to respect Cathy, never questioning her ability to lead them.

Cathy kept the group organized by assigning tasks to each individual, including herself. By the end of the second work day, the team still had not determined three organizations. Cathy was becoming stressed. I could see the worry lines on her face when she talked with her group. She would glance at the clock, then at her paper, and back to the group. I overheard her say, "Come on, guys, we have to think of something." Each time a suggestion was offered, one of the girls would have a scheduling problem. Shortly before the bell rang to end the class period, Cathy jotted down three organizations and handed it in. She did not show the other girls what she had written. She knew that I had asked for the information by the end of the class period, and she wanted to have it done.

During the second week, Cathy started the team meeting by expressing her frustrations at not having any ideas of what they wanted to do. Team member 4 stood up and walked over to me. She explained the situation, including how they all had busy schedules with activities, and I gave her a few suggestions. She took those ideas back to the group.
As team member 4 reiterated the ideas I had suggested, Cathy's stress faded from her expression. Cathy came up to me to ask if she could have the paper with the three organizations back. I found it and gave it to her. She erased the organizations and replaced them with three new ones. Cathy immediately took charge and started guiding the other girls into coming up with ideas for the Needs Assessments. With new enthusiasm, Cathy directed team member 2 to call the organization to see if it was okay to do the project for them. Team member 2 made the call, but did not reach a human. So, she left a message on the answering machine.

Both team members 2 and 4 made several calls to the organization throughout the week, but never made contact with a person. I suggested that they try e-mail, so they looked up the person's e-mail address and sent a message. Each day after that, they would check their e-mail and find no reply. By the end of the week, they had decided on an organization to help, but they were unable to make contact with anyone at the organization. Once again, team member 4 approached me with her concerns. I explained that was the reason I had them think of three organizations, and I sent her back to her group to re-evaluate their situation.

In the computer lab, the girls decided to move on to their second choice. Team member 2 asked to use the phone in the lab, and she called the principal to set up a meeting. The meeting was set for the following day, so she rushed back to her team and told them. Cathy grew excited with the new prospect, and she gave each of her teammates a task to complete before their first meeting with the principal.
The next day, the girls waited patiently to be dismissed to go to their meeting with
the principal. When the time came, I released them, and Cathy gathered up all her notes
and walked proudly out of the room. About 15 minutes later, the girls returned to class.
Cathy's head was down and her body slouched. She was not smiling.

The last work day for this time period came around, and I was curious as to why
the girls seemed so glum. All four of them were sitting together but not talking. Cathy
was resting her head on her palm, playing with her pencil. Team member 2 was reading a
book, and the other two were just staring off into space. They were not working on their
project.

Implementation phase. It was obvious that Cathy was becoming more frustrated
with the project as the days passed. Now into the middle weeks of the project, Cathy and
her team had yet to find a project that would work for them. I wanted to help them, but I
also wanted them to work through the difficulties on their own. I decided to give the class
some work time so that I could observe how Cathy and her teammates interacted as they
tried to come up with yet another project.

As had happened in previous team discussions, the girls gathered around Cathy's
desk. Cathy began the conversation, but instead of prompting her teammates to come up
with new ideas, she seemed to have started a complaint session. The girls were close to
my desk, so after walking around the room once to check in with each team, I sat at my
desk and pretended to do some work. I did not want the girls to know that I was listening
to their conversation.
All the girls were complaining about the lack of progress they were making. Team member 1 brought up her opinion that it was stupid that the school would not let them paint because they were not old enough. That set off a spark, and each girl added her own opinion about that topic. Cathy also added her comments, but she was not as vocal as the other girls. Cathy's expression was one of defeat. As an athlete, she may not have won every game, but at least she knew what she was doing in the game. This project was completely different. It did not provide her with the guidance she wanted, so she was not sure which direction to go.

I observed the group for about fifteen minutes, and in that time, Cathy made two comments. The first being her complaint about not being allowed to paint, and the second was a response to a question asked by team member 3. Team member 3 turned to Cathy and asked, “What are we going to do now?” and Cathy replied in a somber voice, “I don't know.” All the girls sat in silence for about 30 seconds, then one by one they each stood up and went back to their assigned seats.

**Concluding phase.** The day after Cathy's team's last visit to the elementary school where they tutored, Cathy looked more relaxed than I had seen her in weeks. At the beginning of the project, Cathy's muscles were tightened as she worried about every detail of the project. When the team's ideas were rejected, her muscles tightened even more. Her frustration is apparent on her face and in her body language.

After the team began working at the elementary school, I saw Cathy relax and thought that she was finally at ease with the project. However, on this day after her last visit to the elementary school, she was even more relaxed. Her movements were looser
and eyes had a softer look to them. Her smile did not seem forced, and it lasted longer than I had previously noticed.

Not only were the girls finished with the tutoring, they were almost done with their portfolio. Each girl had one more reflection to add to the portfolio, then they would be done. Their task on this day was to determine what they would say during their presentation to the class. As the girls rehearsed their experiences, they laughed and teased each other. One girl would start the story, and another would finish. The information was not new to them. Each of them had been at the school when the events they were describing happened, but they all were having fun telling the stories to each other. On this day, they were not worried about getting assignments done; they were just happy to be finished.

Summary

In the Planning Phase, Cathy's first two choices did not work out for her, so she stopped trying. She looked to me for advice, but I wanted her to figure it out on her own. All four girls in the group were rather intelligent go-getters, so I felt confident that they would eventually settle on a project that would work for them. In the meantime, there was going to be a lot of frustration until they reached that point.

Cathy was seen as a leader by her peers because she was dedicated to getting her work done to the best of her ability. She helped the team to come up with plans, but when those plans fell through, she didn't know what to do. Her team followed her lead and gave up. Still looking to her as a leader, the rest of the team did not know what to do.
My interview with Cathy and her team member 2 allowed me to ask questions that helped Cathy find new ways to approach the project. In her sports, she knows that if something does not work the way she wanted, she just keeps practicing until she gets it to work. For this project, she could not get the ideas to work for her. Her perfectionism got in her way, and she could not see beyond the way she was used to getting her projects done. Only when she let go of the old ideas could she see that there were other ways to approach her project.

One of the aspects that make Cathy a leader is her enthusiasm. When that is gone, her leadership skills are put aside, but others still expect her to have the answers. Cathy's willingness to try new approaches is what will make her a better leader. Cathy embodies the attitude that one should have when working on a team. In her final reflections, she seldom uses the pronoun, “I.” She describes what she has done as what the team has done. It does not matter to her if she was the person responsible for the action, or if another teammate did it; she gives credit to the team. The perfectionist in Cathy was able to relax a little as she learned to trust her teammates and accept their skills.

Analysis of Debbie’s Data

The data collected from Debbie is discussed in this section. First, I examine the reflective writings as they were completed in the Planning Phase, the Implementation Phase, and then the Concluding Phase. Next, I examine data from the interviews conducted with Debbie in the three phases of the project. Then, I examine the data from the observation journals that I kept throughout the project. Finally, I provide a summary of how the data collected from Debbie’s reflective writings, interviews, and my
observations of Debbie can be interpreted to answer the three research questions concerning the impact of a service-learning project on reflective thinking skills, communication skills, and social interaction skills.

**Reflective Writings**

As indicated in Figure 4, Debbie’s reflective journal entries had the fewest selections categorized in the Reflective Thinking Level. The difference of the percentage of selections categorized in the Pre-Reflective Level is eight percentage points lower than the percentage of selections in the Quasi-Reflective Level (see Figure 4).

![Figure 4 Debbie’s Percentage of Statements in Each Level of Reflective Thinking](image)

**Planning phase.** Debbie began with one group, then switched to a second group before writing this first reflection. The first excerpt taken from this reflection is an example of stage 1 thinking. “In my first group, I played the role of a leader. It was working fairly well, I think, but we didn’t all agree.” She states that she was a leader in this group, yet she provides no definition of leadership, nor any examples of what she did.
to be the leader. Her word is expressed as the truth. Interestingly enough, she also claims that she was doing well as a leader even though she did not get her team to agree on anything.

The second selection from reflection 1 steps out of the Pre-Reflective Level and into the Quasi-Reflective Level. In this selection, Debbie tries to come to an understanding of why she behaves the way she does in a group. “I learned that if I’m in a situation that is disorganized, then I will take control. If I’m in a situation that everyone knows what they’re doing and we work well together, I kind of just sit back and go with the flow.” As she compares her behavior within the two groups, she draws the conclusion that she responds differently to in different situations. Her ability to evaluate her behavior in the two situations places this statement in stage 4.

Four selections were analyzed from reflection 2. Like reflection 1, this reflection demonstrates thinking in both the Pre-Reflective and the Quasi-Reflective Levels. The first selection is much like the first selection from reflection 1 in that she makes a statement and provides no real evidence to back it up. Her personal beliefs are treated as the truth. “I would consider this a success because all four of us were volunteering together for the first time. We work well together, and there isn’t much conflict between us.” Again, she does not provide any type of description for success other than she believes that the way her team worked together was successful. As long as she says that something is true, it must be true.

Later in her writing, she starts to provide some evidence to justify her beliefs. “Last time, it was hard to have more than dog out at a time because we were afraid we
might not be able to control it. This time we had a backup, just in case.” This is almost a stage 4 statement, but I kept it in stage 3 because she does not go far enough into explaining the success of the backup plan. She does compare two times when her team had the dogs out, and she clearly believes that the second time was better. Her reasoning for this is the fact that they had a backup plan. The backup plan is the authority that helps her believe this statement is true.

She finally provides enough reasoning to support her beliefs, and therefore moves the third statement into stage 4. “I think it is much easier to do it during class, because then we can all make it and not really have to worry about our crazy schedules.” Though she does not extend her reasoning, she at least provides some sort of rationale to explain why doing her project during class time is better. Based on her previous statements, she clearly feels that working together is more beneficial, which is one of her reasons for doing the project during class. In this statement, she is continuing to compare the idea of working together with working alone or only with one other member of the team.

While the first three selections from reflection 2 seemed to move into higher stages of reflective thinking, her fourth statement reverts to stage 3. As she finishes her reflections, she draws a conclusion that is based on ideas that she does not support with strong evidence. “Compromise is very easy with my group, and that minimizes the drama that goes on.” First, she does not explain what she means by drama, and second, she does not explain compromise. She seems to be trying to create new knowledge about compromise, but she is stating it as absolute truth and not considering alternatives. Also,
she does not show how compromise and drama are connected, so the reader must accept that one causes the reduction of the other.

**Implementation phase.** Debbie wrote reflection 3 at the halfway point of her project. In this reflection, I analyzed one excerpt, and I found that excerpt to fall into stage 4 because she uses her experience to draw conclusions that will affect her future.

“I’m actually kind of sad that my project is half over because I’ve been having a lot of fun. I enjoy working with the animals, and because of this project, I’m thinking about applying for a job there.” She puts together two ideas that she has gained from the project to conclude that she would like to work for her organization. First is the idea of having fun, and second is the idea of working with animals. She could, of course, come up with other ideas that are supported by those two criteria, and that is why this remains at stage 4.

In terms of reflective thinking, reflection 4 had two excerpts that demonstrated fairly high levels of reflective thinking. The first selection was placed in stage 5, while the second was in stage 7, the highest stage.

The first selection again discusses the idea of compromise, but this time Debbie takes the explanation to a higher level.

Our team compromises very well. The three of us came up with a schedule in class, and emailed it to [team member 3] while she was [out of state]. When she came back, everyone knew what dates wouldn’t work with their schedules, so we decided to go some Mondays after school to make up the hours.

This time when she talks about compromise, Debbie provides an example to demonstrate what she means. She also shows how the team included an absent member, and then was willing to make adjustments after she came back. This shows that Debbie realizes that
there can be more than one answer to a problem, and that she is willing to consider the alternatives.

The second selection takes the idea of compromise to an even greater understanding. She begins by explaining what she learned about compromise for the group, but then continues to apply her knowledge to life skills. This statement is a good example of stage 7 in the Reflective Thinking Level.

I learned that compromise is the best option when we have challenges within our group. We don’t have many, but when we do, it’s best to talk it out and decide on an option that works for the whole group. It is important to give a little, and think about the other people too, instead of just yourself.

Her ability to take the ideas of others into consideration demonstrates that she has reached stage 7 of reflective thinking.

Concluding phase. Debbie wrote two reflections during the Concluding Phase.

Two selections can be placed in the Quasi-Reflective Level of the Reflective Judgment Model:

Something else that boosted my self-esteem was taking out some of the older animals that didn’t get as many visitors. . . . The older animals tend to not be as ‘adoptable’, so we made sure to give them lots of love and affection.

This statement demonstrates stage 4 of reflective thinking because she has to consider the feelings of the older animals as she tries to determine how she feels. She sees the older animals as more needy than the younger ones, so helping them is more satisfying.

The second statement in the Quasi-Reflective Level, Debbie makes an attempt to understand her behavior in groups. This selection is an example of stage 4 because she is comparing her current experience to past experiences. “In previous experiences, I have
had a bit of a control issue. But then again, I was always put with people I wasn’t very well acquainted with.” She recognizes that she can have control issues, but that did not seem to be a problem with this group. In her first reflection, she also discussed being a “leader,” but in this reflection she describes it as a “control issue.” I see this change in terminology as an effort to understand herself better. Yet, as she continues, she seems to find a reason that brings out the control issue – being put with people she doesn’t know well. She does not see her behavior as her own choice, but as a reaction to outside influences.

Yet Debbie continued to demonstrate thinking in the Pre-Reflective Level in this phase of the project. Debbie relied on her teammates to help her understand what it meant to compromise. “[Our team] hasn’t had any problems compromising because we all understand what it’s like to have a busy schedule.” Instead of offering concrete evidence, she stated that everyone on her team knew what it was like to be busy. Since they all had something that kept them busy, she determined that compromise is easy for them.

**Interviews**

**Planning phase.** The interview with Debbie’s team is described above in Annie’s section. Debbie did not participate much in the interview, except to nod her head a few times and to reiterate a comment made by someone else.

**Implementation phase.** Debbie’s second interview took place while the teams were working in the computer lab, and I could see that Debbie was writing one of her reflections. I invited her into the hallway to have a conversation. Unlike the first interview, which was done with her team, Debbie was the only one who had to answer
questions and talk about her role on her team. I asked her about her perceptions of teamwork. Her first responses about teamwork were vague, stating only that her team worked well together because they all volunteered together at the rescue league. After explaining how her team took on different responsibilities, she described a conflict that arose while volunteering at the rescue league.

Wanting her to discuss the conflict and how she helped to solve the conflict, I asked her to elaborate on the situation.

[Team member 2] and I usually work with the cats, and once there was this cute little kitten that we both wanted to play with. Usually we spend about 20 or 30 minutes with each cat, but [team member 2] was not paying attention to any other cat. I got upset with her.

I then asked her how the problem was solved and she said, “...we talked about it and agreed that we would make sure all the cats got some attention.” She also stated that the other two members of her team were not involved in the conflict, so it did not disrupt their team goals.

From this conversation, I came to believe that Debbie was not understanding the idea of teamwork. Whether she would admit it or not, she saw herself as an individual working with other individuals. They were not a team.

Concluding phase. Debbie's attitude had changed from the beginning to the middle to the end of the project. In my last interview with Debbie, I wanted to address the changes she went through during this project. Debbie stated that she was not sure if she had changed, but she did have to take on different roles at various times throughout the project.
Well, in my first group, no one could agree on anything and I kinda took on a leadership role as I tried to get them to agree to something. In the second group, we didn't have that problem, so I let Annie be our leader and I just tried to be a good team member.

Debbie concluded that she changed a little because she took on a different role. However, looking back at her performance in the first group, her “leadership” role was really that of trying to keep the peace between the other two members.

I then asked Debbie to tell me the difference between being a leader and a good team member. “A leader has to keep control and make sure everything gets done. A team member just has to get her work done.” She continued, “Sometimes the team members can make decisions, but the leader needs to make sure that they are good decisions.”

Hearing that Debbie seemed to put a lot of responsibility on the leader, I asked her what the role of a team member was, if it was not to make final decisions. She stated that a good team member had to participate, so I asked how she participated. “I attended all our meetings and did all my hours at the rescue league.” Wanting her to think beyond the physical work of the project, I asked if she participated in any other way. She continued to describe tasks that she had done for the team, such as getting her assigned paperwork done for the portfolio.

After a few more questions, I came to realize that Debbie was not going to examine her role in the coherence of the team. Like Annie, her focus was on completion of the project, not on the lessons to be learned about teamwork and leadership and communication.
Observations

Planning phase. Debbie did not speak while she was with her team. When she, Annie, and the other girl on her first team were talking about organizations, Debbie sat back and listened without offering her opinion. As Annie and the other girl battled over who had the better idea, Debbie tried to insert her own ideas. She made an effort to resolve the differences being expressed by Annie and the other girl. First, she tried to convince them that since they needed three potential organizations, they could accept both ideas and come up with a third. Annie seemed willing to accept that, but the other girl did not want to consider Annie’s idea as a possibility, so the arguing began again. At this point, Debbie’s participation with her team changed.

Debbie’s expression changed from happy-go-lucky to extreme annoyance. Her expression started soft, with a slight smile on her face, smooth skin, and bright eyes. As the two girls argued, Debbie’s smile turned to pursed lips. Her brow furrowed and her eyes squinted slightly.

Her body language also changed dramatically. When she first sat with the other two girls, she plopped down in the desk, sitting sideways, and crossed her left leg over her right knee. She rested her right arm on top of the desk, and let the left arm rest upon her lap. She slouched in the chair a little, but kept her head at attention. Her posture indicated to me that she was ready to get started. However, as Annie and the other girl argued, Debbie’s slouch became more apparent. She uncrossed her legs and turned so that she was sitting in the desk the correct way. Instead of resting her arms comfortably,
she placed her elbows on the desk and plopped her chin onto the palms of her hands. She no longer looked at her partners with eagerness.

Implementation phase. Debbie was starting to show some passive-aggressive tendencies toward her perceived group leader, Annie. Each time I watched her with her team, she would appear to be happy and talkative until Annie entered the picture. Annie seemed to be the only one that had that effect on her.

On one work day, Annie was called to see the counselor, so the other three girls were left to work on the project without her. While Annie was with her team, Debbie seldom spoke and kept her head down, eyes to the floor, most of the time. When she did look up, it was to one of the other two members of the team. Debbie became a different person as soon as Annie left the room. Debbie livened up as soon as Annie walked out the door. She took the paper that was on Annie's desk, read it over, then started talking to her two teammates. All the girls were livelier in Annie's absence.

I walked in their direction and could hear them talking about what they had done at the rescue league. They appeared to be enjoying the stories, and Debbie stated that she was behind on her reflections. One of the other girls, team member 2, also said that she was behind. They both agreed that they should get them done.

Team member 3 asked to see the paper that Debbie held in her hand, and Debbie handed it to her. I overheard team member 3 tell the two girls that they had a lot of work to do to get the portfolio done. Debbie immediately leaned toward the middle of the circle the girls were making and announced that she was going to take her time, but she would get everything done. Before she could continue, Annie walked in the door. Team member
3 put the paper back on Annie's desk, and Annie took her seat. Once again, Debbie's glance shifted to the floor while Annie continued talking to the group.

**Concluding phase.** Debbie's team spent the last couple of weeks working hard to get all the paperwork done for their portfolio. There was little conversation when they were given work time. Each girl had a task to complete, and she went to work completing her task.

Since the girls did not spend much time as a group, my observations of how Debbie interacted with her team are limited. In the classroom, each girl would visit with Annie to see what needed to be done. Sometimes Annie would tell them what to do, and sometimes the girl would volunteer to finish one of the documents. Debbie volunteered to do several. It did not seem to matter that Annie had already created a list of tasks for each to do. The girls looked at what needed to be done, ignored the name written beside it, and chose a task to do. Instead of working together, the girls would go to an appropriate place to finish the task. Many times this was to the computer lab if the class was not scheduled to be there. Other times it was to the library.

When a task was finished, each girl would give it to Annie and take on another task. Debbie, like the other girls on her team, was task-oriented. They knew that the clock was ticking and that they had to get their work done. Whereas I had noticed Debbie ignoring Annie in the past, or not making eye contact with Annie, she did nothing of the sort during these last few weeks. Her conversations with Annie were short and to the point, but she was also polite and friendly. When she handed a paper to Annie, she used a higher pitch to say something like, “Here you go.” She did not scowl when she took on
the next task, but happily volunteered to do yet another task. Debbie seemed to still be working as an individual, but she also realized that she was a necessary part of the team. Without her, she and the entire team would suffer.

Summary

Debbie's perception of her role on the team is not supported by my observations. When she says that she was a leader in her first group, she does not back this up with any evidence. Based on my observations, the role she played in her first group was more of a peace-keeper. Because she spoke up and tried to help the other girls compromise, she may see this as a leadership role. Debbie is more of a passive member of the team. She is willing to speak up if there is a conflict, but is otherwise content just to sit back and let others take charge.

Debbie was sending mixed messages throughout the project. My observations showed me that she was not happy with her team, or more accurately, with the person who took charge of the team. Yet, during my interview with her, she seemed to believe that everything was working out well. Even in her reflective writings, she provides very general descriptions of teamwork. She explains how the team worked together to come up with a schedule, and in Reflection 7, she explains that compromise is an important part of being a team. However, in her interview, she discusses reaching a compromise with only one teammate.

Debbie's ideas of teamwork and leadership do not really change throughout her experience with the service learning project. She saw herself as a leader when she took control of the arguing between her first two teammates. Later, she contends that she is a
leader when she takes control or has control issues. From this perspective, it is easy to see why she does not defy Annie, even though her body language clearly suggests that she is not appreciative of Annie's leadership style.

**Analysis of Eric's Data**

The data collected from Eric is discussed in this section. First, I examine the reflective writings as they were completed in the Planning Phase, the Implementation Phase, and then the Concluding Phase. Next, I examine data from the interviews conducted with Eric in the three phases of the project. Then, I examine the data from the observation journals that I kept throughout the project. Finally, I provide a summary of how the data collected from Eric's reflective writings, interviews, and my observations of Eric can be interpreted to answer the three research questions concerning the impact of a service-learning project on reflective thinking skills, communication skills, and social interaction skills.

**Reflective Writings**

Almost half the selections from Eric's reflective journal entries were categorized in the Pre-Reflective Level (see Figure 5). Of the remaining selections, 30% were categorized as Reflective Thinking, while another 22% were Quasi-Reflective (see Figure 5).

**Planning Phase.** Eric's first reflection was not much different from the other first reflections that I analyzed. His ideas were expressed in rather simple terms that did not exceed the Pre-Reflective Level. The first of the two statements I analyzed was put into stage 2: "We all wanted to do a project that needed labor and involved an organization
that was based outdoors." Eric makes a statement and backs it up by including the phrase, "We all." This demonstrates that his knowledge was based on his own opinions as well as the ideas of the other members of his team. The other members of the team represent the authority that supports his own ideas.

![Pie chart showing percentage of statements in each level of reflective thinking]

**Figure 5** Eric's Percentage of Statements in Each Level of Reflective Thinking

The second selection moves into stage 3 because he is making a generalization about the team without offering support for his claim. His knowledge is based on his perceptions, yet he is making a claim that he had to develop on his own. "Our team worked out well because we are all unselfish people and get along with each other pretty well." His first belief is that the team works well together, and he backs this up by providing two personal beliefs: "unselfish" and "get along." Since he attempts to rationalize the first claim, it moves beyond stages 1 or 2, but it cannot go into the Quasi-Reflective Level because he is still using personal beliefs to support his claims.
Reflection 2 included four selections that could be placed into the Reflective Judgment Model. Still, all four selections remain in the Pre-Reflective Level, with the first two representing stage 1 and the second 2 representing stage 3.

Since the first two selections both fall into stage 1 of the Reflective Judgment Model, I will discuss those together. Both selections make an attempt to rationalize, but the evidence that is offered is a list of what he or the team had done. He does not delve deeper to find a meaning to those actions. In the first example, "We were successful because we worked together and stayed on task. We also spilt (sic) into two groups which made it more efficient," describes what the team did. He does not explain what he means by success, but tries to demonstrate success through actions. The second example, "I lead (sic) the group towards the right direction then once they understood they could accomplish their job. I was also the one who communicated the instruction with [contact person] of the [organization] and passed it on to the group," again relies on actions to support his knowledge. As a reader, I do not know what "the right direction" is, so Eric seems to believe that there is a single right direction. Part of putting his team on the right track included communicating with the contact person. This communication could be seen as relying on an authority to know what is right, but Eric does not make that connection.

The last two selections from reflection 2 can also be grouped together. In both of these statements, he is trying to create knowledge based on his experiences, but he does not provide evidence to show how he formed this knowledge. "I believe that having fun is a major part of a good hardworking group, so I tried to keep it fun and spirits high."
Here he states his personal belief and tries to explain what he did to live up to that belief. He does not provide details, so the reader is just suppose to believe that this is true. The second statement follows a similar pattern. "We learned how to work together better and learned each others (sic) strengths and weaknesses." As a reader, I am to believe that they learned to work together, but Eric does not provide with evidence to show how his teamwork improved.

Implementation phase. In his third reflection, Eric had four selections analyzed. Whereas the second reflection had four selections that remained in the Pre-Reflective Level, this reflection has one excerpt that can be placed in the Quasi-Reflective Level.

The first selection that was taken from reflection 3 slips into the Quasi-Reflective Level at stage 4. In this excerpt, Eric realizes that there are multiple solutions to a problem.

Our greatest challenge was and still is planning and organizing meeting times that work for everybody in the group. We try to find a time when ever (sic) one can go but there is (sic) six of us so that is six schedules that have to work out.

Here, Eric elaborates on his ideas by providing more explanations of how he comes to his conclusions. He realizes that there is not just one solution that will work for everyone in his group, and that realization helps this excerpt fit into stage 4.

The second excerpt falls back into stage 2. "I have an important part in this challenge because I do most of the communicating for our group.” Eric deems himself as an important part of the group because he is the one in charge of communicating with the organization. While this may be true, he does not explain what other members of his
group do, nor does he discuss how well he communicates with the organization. His reliance on his belief and his lack of external evidence puts this statement into stage 2.

The third and fourth excerpts from reflection 3 both demonstrate stage 3 thinking. “I played a major part in creating the idea that everyone won’t always be able to be there, so then we started to plan days that the majority of us could make it.” In this example, he once again puts himself in the decision-making role. As the one who makes the decisions, he has strong faith that his ideas are correct. However, when he explains that they choose days that most of the team can make it, he is showing his willingness to consider alternative solutions.

The fourth example is an even better example of stage 3 because he does not offer a different solution, but he is willing to admit that there could be something better out there. “If we find a better method of meeting we will switch to that but at this moment this is the best we can do.” He realizes that some other answer may exist, but he is not willing to search for that answer. If it happens to come to him, he will consider it.

The fifth reflection was written in the middle of the project, and I was able to pull three excerpts from it to analyze. The first excerpt once again stays in the Pre-Reflective Level. “A good team member to me is a person who gives there (sic) own special talents to the team to help the team accomplish its goal.” This statement tends to fit with stage 3 because he is offering his own definition of a team member. He goes beyond just saying that a good team member helps the team to showing how that team member adds to the team. His phrase “to me” demonstrates that this is a personal belief, but his inclusion of “special talents” indicates that a good team member does not fit into one category.
He continues to delve into a deeper level of thinking when he states:

When I see all the people volunteering in the world it gives me a bit of hope, and by doing this service project I am part of that group. When we go to the [organization] all of the employees know us and are very nice and I feel like we are giving kids a better name.

Not only is he looking at what he and his team are doing to complete the project, but he is also thinking about how they are helping young people have a better reputation in the community. He realizes that there is more to doing this project than just getting it done.

This type of thinking fits into stage 6 of the Reflective Level.

Another example from stage 6 is a little later in reflection 6 when he is thinking about others and his community more than himself. “Every time I drive around [hometown] I wish it were a cleaner nicer town. By working for the [organization] I feel like I am doing something to better our town.” Again, he sees the greater impact of his project and applies this new knowledge to the community as a whole.

Finally, he reaches stage 7 of the Reflective Level with the last statement analyzed from reflection 6. “I feel a since (sic) of pride when I am noticed for doing something good or when I see something I have done. This is why I plan to continue to volunteer so I can continue to have that feeling.” His experiences have helped him to realize that he feels pride when he does something that is good. This statement does not refer to the project at all; instead, it refers to the concept of doing something good for the community. He is able to apply what he has learned to something that can be beneficial to him and the community in the future.

As Eric tries to evaluate the project as a whole, he demonstrates thinking that covers all levels of the Reflective Judgment Model. The first selection from reflection 7
tries to explain what show a change in the team members, but he does not offer evidence to show what he means. "At the beginning of our service learning project all of our group members were not the most socially skilled people. All of us had to overcome their own individual challenges." This may be a true observation, but he does not offer anything to help the reader understand this change. He states the two concepts as facts rather than trying to really understand the concepts.

A little later in the reflection, Eric steps up to stage 4. "One of our biggest problems was communicating within our group, especially when were (sic) not at school. To solve that problem we used cell phones to contact everyone." In this excerpt, he recognizes that a problem existed and that it needed to be solved. He does not explore various ways to solve it. Instead, he focuses on one solution, which is using cell phones. The fact that he recognizes that there is a problem puts this statement into stage 4.

Another statement in reflection 7 takes his thinking into stage 6. In this excerpt, he steps out of his comfort zone to learn that he can overcome a fear. "My biggest success in the communication portion of this project was talking on the phone. I hate to call people on the phone so I had to overcome that fear and contact people for our project." He sees the conquering of his fear as a success. He does not need to define success because he proves that what he did was something that was a challenge to him. He is able to look at his fears and understand the importance of overcoming that fear in order to be successful. This seems to be a skill he will carry with him after the project.

Staying in the Reflective Level, Eric evaluates both his team and himself in terms of communication skills. "I think service learning has helped our group members with
communication skills and I felt I really improved myself as well.” In this excerpt, he is focusing on his personal development. The project was a tool to help him conquer his fears and develop skills that surpass the boundaries of the project. Therefore, this statement can be placed in stage 7.

Eric’s final reflection is an evaluation of the work he has done over the semester. Two excerpts were analyzed from this reflection, and they both reached stage 7 of the Reflective Level. “I thought service learning was both good and bad. Our project was mostly good things. Such as meeting the people at [organization] and befriending them. I also enjoyed being with friends while I am still helping the community.” He begins this statement by stating that the service project had both good and bad aspects. In this particular selection, he focuses on the good and provides evidence about what he took from the project. Making friends and helping the community extend beyond the project to something that he can hold on to for a long time.

Continuing with this evaluation, Eric is able to discuss the negative aspects of service learning. “There are a few things I didn’t like about this project. The hardest and most frustrating part was finding a time for everyone to meet and getting rides for everyone.” Although he seemed to genuinely enjoy the project, he is able to address issues that made it frustrating. Because he can see both the good and bad sides of the project, he is in the Reflective Thinking Level. This selection also fits into stage 7 because it continues his evaluation and enables him to see the project as a whole and not just as accomplishing a goal.
Interviews

Planning phase. I sat down with Eric’s group on the second work day of the first week. It was clear from my observations that this team was not making much progress, and I didn’t want them to fall behind. Since no work had actually been done on the project, I tried to get a sense of what the team wanted to accomplish. This discussion was less of an interview and more of an intervention.

The purpose of this first interview was to ascertain why the team was not as far along as the other teams, and what they needed to do to get back on track. First, I wanted to know how the team formed. According to Eric, “None of us had a team, so we decided to form one.” After most of the teams in the class had been formed, Eric and his other team members had not joined a team. Three of the team members decided to work together, and when they realized that Eric and another team member were not part of a team, they decided to ask them to join. One of the team members explained, “We thought it would be better to have a larger group.”

With a group of five, the team members found it difficult to agree on one project idea, but they all agreed that they wanted to do something that allowed them to work outside. I suggested a few organizations to contact about working outside, and the team members started to discuss the various possibilities.

Eric stated that he had lots of experience working outdoors, such as landscaping, planting trees, and building benches. Three other team members added that they had experience mowing lawns, one said that he raked leaves for his neighbor, and another admitted that he didn’t have much experience, but he loved spending time outdoors. The
fifth team member stated that he liked the outdoors, but he liked drawing better. Eric concluded, “We can all do something. It depends on what they need.”

The five team members continued to discuss which organizations might need volunteers to work outdoors. After they had determined their interests and skills, they were more enthusiastic about determining an organization to assist.

Implementation phase. Our school requires all students in grades 9 through 10 to take a reading test twice a year. This test is administered in the computer lab, and it is not timed. On the day my students were to take the test, I walked them to the computer lab, made sure they were all there, and returned to my classroom to wait for their return. Eric was one of the first ones to return, so I took it upon myself to interview him. With no other student in the classroom, I was able to question Eric about teamwork.

Eric first explained that the project was progressing nicely because everyone on the team was working the hours that they needed. I probed deeper by asking him if the team members were working together on all aspects of the project, or if they were only completing the hours.

We are working as a team with everything. Each of us has different items to do from the checklist. [Team member 4] is in charge of the portfolio, so he collects all the papers from us and puts them in order. [Team member 2] is getting the portfolio cover done. He has shown us a couple of drafts, but he is still working on it. Um, [Team member 3] is our main driver. We decided to not give him as much paperwork because he drives us to and from the place. I am kind of the leader, I guess. I mean, I am in charge of talking to [contact person] and relaying the information back to the team.

Eric seemed to be describing his teammates in terms of the jobs they had been assigned within the team. Since Eric described himself as a leader, I was curious about what he considered a leader to be. I asked Eric if his team had encountered any conflicts,
and if so, how those conflicts were resolved. After thinking about the question for a while, Eric replied:

I don't know if this is really a conflict or not, but the other day we were all supposed to meet at the parks department to paint picnic tables, and [team member 3] did not show up. We all thought he was going to be there, but he never did come. On Monday, we got together before class and asked him why he didn't show up. He said he had a family emergency, and we all said that that was a good reason.

The teams had already set up their grading criteria, and according to Eric’s team’s grading criteria, if someone missed a day of work, that person would have points deducted from his grade. However, Eric just admitted that the team had decided not to deduct points. Since this was a change in the original plan, I wanted to know what influenced the team’s decision to not deduct points. Eric explained the team member 3 had a family emergency, and that he did not think it was fair to take points away for something out of the team member’s control. “We would want to have the same consideration if we were in that situation.”

I asked Eric if he thought that being flexible was a detriment to setting team goals, or if it helped with team morale.

I think it helps. If something comes up, you don't have to worry about getting a bad grade. I mean, if he had just skipped out on us, then we would have taken points away from him. But he didn't have a choice, you know?

Eric seems to understand that a good team has to be flexible. It is important to set goals and expectations, but the members of the team also have to be human. He was showing empathy when he accepted team member 3’s excuse for not showing up to work, and he made team member 3 feel secure as a team member because he was not penalized for that
absence. Eric demonstrates that he has trust in his teammates, which is a good quality of a team leader.

**Concluding phase.** Knowing that Eric was in Boy Scouts and had done a fair amount of community service, I wanted to get his impression of this project and to find out if he perceived that he had learned from the project. Although Eric considered the actual work of volunteering for the organization easier than his other projects, he stated that working with others was challenging because “we had to figure out what we were going to do, and it had to be agreeable to everyone.”

Learning that Eric found it challenging to work with others to get the project done, I then asked if working as a team helped his communication skills. He said that one method of communication, talking on the phone, was not as difficult for him anymore, and he felt that was an improvement. “I don’t feel nervous anymore, and I think that helps with giving speeches in general. I mean, we are going to present in front of the class tomorrow, and I am not nervous at all.”

Eric could pick out his strengths and weaknesses, and he used those strengths to improve upon his weaknesses.

**Observations**

**Planning phase.** Eric was absent the day I told students that they were to form teams of at least three. When he came to class the next day, most of his friends had already committed to a team, and they were not interested in adding any more. Not knowing what to do next, Eric spent the rest of the week not looking for a team. Friday, the day I was to have both the team members and some possible organizations to help,
Eric still had not formed a team. During the time I gave each team to brainstorm about possible organizations to help, Eric looked around and saw that a couple of other boys were sitting alone. He walked over to them, and they decided to be a team.

As Eric and the two other boys (team members 2 and 3) were discussing ideas for a project, a team of three that was sitting near them turned and asked if they could merge to become one group of six. Team member 2 looked down at the pictures he was drawing, Eric glanced at his two new partners, and team member 1 spoke up and accepted the other three boys (team members 4, 5, and 6) on their team.

With the addition of the other team, The Eric’s team now had 6 members. When there were only three members on Eric’s team, Eric was very vocal and led the brainstorming session. However, once this other team joined them, Eric became very quiet as team member 4 took over the discussion. At the end of the class period, team member 2 handed me a piece of paper with the six names of the team members on it, but they did not have any potential organizations listed.

Eric’s team was already behind after the first week. While the other teams had their potential organizations listed, Eric’s team was far from determining a real organization. When the team sat together to work on their ideas, team member 2 seemed less interested in working with his team as he was in drawing cartoons in his notebook. Team member 3 tried to get the discussion going by suggesting the animal rescue league, but team member 5 shot that idea down because too many other groups were thinking about that. Eric suggested that they do something outdoors. He noted that all of them liked to spend time outdoors, and so they should take that into consideration. None of the
team members rejected that suggestions, but team member 3 stated adamantly, “I don’t want to pick up trash!” The other boys seemed to concur. Still, at the end of the day, they were no closer to determining their three organizations as they were the week before.

On the second meeting of the second week, Eric seemed to take charge. He began by reminding students that they all wanted to do something involving the outdoors, and he rattled off three potential organizations: the local parks department, the school grounds, and the bike trail. The other boys did not object to his suggestions, so he wrote them down and handed them to me. Then, he continued by leading the discussion about the Needs Assessment for each organization.

With only had one formal meeting scheduled during the third week, Eric’s team took it upon themselves to meet at other times. Eric brought a copy of the Needs Assessments with him to class, and when there was a break, he gathered the other boys and showed them his work. Later in the week, when students were given time for a formal meeting, Eric decided to assign the task of typing up the Needs Assessment to team member 3, who accepted this and began creating the document for his team. While team member 3 was typing, the rest of the boys gathered around him to decide on one organization. They agreed that they would first contact the parks department, but no one wanted to make the first phone call. Team member 2 used the Internet to find the address and phone number to the parks department, then they all decided that team member 4 should call. Team member 4 reluctantly went to the phone, but did not finish the call. Eric stepped over to the phone and made the call. He found out the person with whom he needed to speak, but that person was not in his office. He offered to call back later. With
the time remaining, the boys sat at computers and began researching information for a different assignment.

**Implementation phase.** Eric's team got off to a slow start, but once they had determined the organization with whom they would work, they became very serious about their project. Eric had definitely taken over as the leader, and the other boys seemed to respect that.

Eric's team would take advantage of each down time to work on their projects. On days when the class was not scheduled to work on the projects, Eric would try to find opportunities to do something to advance the work they were doing. The biggest request I got from Eric was if he could use the computer in the classroom to check his e-mail. Eric had become the main leader as well as the correspondent. He was the one who called and sent e-mails to their contact person, and he did this on a regular basis.

If Eric couldn't find time to work on the project during class, he used the time between classes. He would get to my room early and immediately ask to use the computer. If he was not early enough, then he would wait until the end of the class period. I did not see any of the other boys on his team working this hard to meet their goal, but Eric kept them informed. After checking his e-mail, he would report back to his teammates about the information, or lack of information, he had received via e-mail.

Eric was just as active during work days. The team often gathered around the desk of team member 2, but Eric always started their discussions. If a phone call needed to be made, he did it. Yet Eric did not dominate the discussions. He asked for everyone's opinion. When he composed an e-mail, he would show it to all or most of his teammates
to make sure it was okay. He appeared to put forth a tremendous effort to keep everyone involved.

When it came to completing the paperwork, Eric did not push the assignments onto his teammates. He sat down with them and a checklist of what needed to be done. As he read them off, he asked which teammate would want to take on that task. He didn't have to tell them to do it, he just asked. If something came up that no one volunteered to do, Eric put his name next to it. As he went through each item on the list, his teammates stepped up and took various assignments so that each person had a relatively even number of assignments to complete. Eric then passed the checklist with each person's name to his responsibility, and had the other team members write down what they had agreed to do. Eric put the checklist in his folder.

Concluding phase. Eric and his team worked hard up until the very last moments of the semester. On the day before their team was scheduled to give their presentation, Eric's team was working hard to figure out what they were going to say. Their portfolio was done, and they had completed their work at the parks department, but they were not ready to just coast along.

Eric gathered his team on the final work day to ask them what they were going to talk about at the presentation. He wanted to make sure that no one was going to repeat the same story. After a few minutes of discussion, they seemed to have it figured out, and they all sat down to write out their speeches. Unlike other teams, they did not separate and return to their assigned seats. Instead, they continued to sit in close proximity to each other. Team member 2 had a question about something that he was putting in his speech,
so he turned to Eric, who was sitting in front of him, to have Eric remind him of the event. Eric, too, asked questions to the others as he was working on his speech.

The speeches were not going to be handed in, but Eric still wanted to make sure that his was done correctly. After finishing the writing of his speech, he left his team to walk up to me and asked me to read it. I read it quickly and handed it back. He asked if it was okay, and I suggested he add a more interesting introduction, otherwise it had some good details in it.

As he walked back to his desk next to the rest of his team, I thought about how much his writing had improved over the course of the semester.

Summary

Eric surprised me from the beginning of this project. If he had been able to join another group and not just fallen into this group, I believe Eric's role would have been different. Eric is ambitious, but not pushy. As long as everyone is working up to his potential, Eric is content to just go along with the group. However, since his group was not making decisions, Eric took on a leadership role. In another group, he most likely would have taken a back seat to the others on the team. However, he joined this group by default. Knowing that each person on the team was not very ambitious, Eric felt confident to take the reigns and lead the group. He stepped outside of his normal comfort zone so that he could make sure that his team completed a project. Even though he lacked confidence, he is ambitious and wants to be successful.

Eric demonstrated great personal and academic growth throughout this project. His personal growth comes in the form of being a fair and responsible leader. He doesn't
really see himself as a leader because he keeps an open mind and lets his teammates
make decisions. Yet, that is precisely why he is a good leader. He views each member of
his team as equal and does not treat any team member differently than any other.

Eric has grown academically in his writing. Eric admitted at the beginning of the
semester that he was not a good writer. While he may not be the next great novelist, his
writing has improved. When he writes his reflections, he puts a great amount of thought
in what he is saying. He adds intricate details and explanations. His technical writing
skills need some work, but even that is coming along better. His ideas are getting easier
to follow as he organizes his reflections with a clear introduction, body, and conclusion.
This academic growth is not limited to work he does for the project. His other class
writing assignments have also improved.

Eric grew in so many ways over the course of this semester, and I feel that the
service project helped with that. At the beginning of the semester, Eric lacked confidence
in his academic skills, but he had confidence in the service work he had done with the
Boy Scouts. This confidence helped him to be a leader for his team. Because he had
worked on other service projects, he had a good understanding of what needed to be
done. He was also quite reflective in his writings and interviews. Eric was able to step
aside and evaluate his actions.

Summary of Reflective Thinking Analysis

Over the period of nine weeks, students were given the opportunity to write up to
eight reflections. The first two topics were part of the Planning Phase, the next three were
in the Implementation Phase, and the final three were in the Concluding Phase. Students
were required to complete at least five of the eight reflective journals, and some students completed all eight.

Since students could write between five and eight reflective journals, a different number of selections were pulled for analysis from each student. Annie wrote six reflective journals with fourteen selections analyzed; Bill wrote five with eleven selections; Cathy wrote six with sixteen selections; Debbie wrote five with twelve selections; and Eric wrote all eight with twenty-three selections to analyze. I used the King and Kitchener Reflective Judgment Model (Wood, 2000) as a guide for pulling selections from each reflective journal. The selections consisted of a single, simple sentence to an entire paragraph. Selections were identified by how they corresponded to the examples provided by King and Kitchener (1994; 2002), and by the descriptions of each stage (Wood, 2000). Sentences or statements that repeated but did not add to a thought were excluded from the selections to be analyzed. Sentences or statements that were not related specifically to the project, such as "I couldn't find my pencil and had to borrow one," were also excluded from the selections to be analyzed. Students who wrote longer reflective journals tended to have more selections analyzed than those who wrote short reflective journals.

Figure 6 illustrates the number of analyzed selections that fit into each level of the Reflective Judgment Model (Wood, 2000). Selections that fit into the Pre-Reflective Thinking Level were more prevalent than selections fitting into the Reflective Thinking Level. Annie seemed to have a fairly even distribution of selections that fit into each level, while Eric, who had the most selections to analyze, kept most of his selections in
the Pre-Reflective Thinking Level. Both Bill and Debbie had only a couple of selections that fit into the Reflective Thinking Level, but Debbie had a greater number in the Quasi-Reflective Level than she did in the Pre-Reflective Level.

![Figure 6: Overall Percentage of Reflective Thinking Levels for All Students](image)

Each student did manage to include selections that could be placed into all three levels of the Reflective Judgment Model (Wood, 2000), but not at equal ratios. While Eric had the most selections in the Reflective Thinking Level, he also had more in the Pre-Reflective Thinking Level.

**Summary of Communication Skills Analysis**

During the observations, I used the Competency Rubric (Appendix I) as a way to take notes and while observing. I then used the notes I had on the rubric to write the observation journals at the end of the class period or at the end of the day. The rubric served as a guide to the information placed in the observation journal.
Criterion 1: Using Appropriate Supporting Material

A rating of excellent for this criterion is explained as “The speaker uses supporting material that is exceptional in quality and variety” (Morreale & Hackman, 1994). A satisfactory rating for this criterion is described as “The speaker uses supporting material that is appropriate in quality and variety” (Morreale & Hackman, 1994), and an unsatisfactory rating is “The speaker uses supporting material that is inappropriate in quality and variety” (Morreale & Hackman, 1994). None of the five students demonstrated excellence in using appropriate supporting material.

Both Annie and Cathy demonstrated satisfactory levels of competence in this area. During the two observations, Annie used supporting material three times, while Cathy supported her ideas four times. For each girl, the support used was based on personal opinion or personal experience. The support offered did not take into consideration the needs or perceptions of anyone outside of the self. However, the supporting material was related to the topic being discussed, and the other members of their teams seemed to accept their examples as support.

Bill used supporting material to back up his thoughts on one occasion, while Debbie and Eric did not use any supporting materials while being observed. Bill's use of supporting materials, however, did not relate to the topic being discussed. He offered an extended example that confused his teammates and took them off-task. His one example of using supporting material was rated as unsatisfactory.
Criterion 2: Employing Appropriate Language

For a rating of excellence, "The speaker uses language that is exceptionally clear, vivid, and appropriate" (Morreale & Hackman, 1994). Satisfactory is "The speaker uses language that is reasonably clear, vivid, and appropriate" (Morreale & Hackman, 1994). While unsatisfactory is explained as "The speaker uses unclear or inappropriate language" (Morreale & Hackman, 1994).

Annie and Cathy demonstrated excellent ratings for this criterion. When Annie spoke, she was very precise and used vivid details with her examples. Her teammates listened intently and did not ask her to clarify her remarks. Cathy also spoke very clearly and seemed to choose her words carefully. She did not speak often, but when she did, the content of her remarks were well-thought out.

Bill and Debbie each received satisfactory marks for the appropriateness of the language used. While Bill sometimes led his group astray, a majority of his statements were easy to understand. Debbie spoke only twice during the two observations, and both remarks were in the second observation. The comments she made were appropriate to the topic at hand, but did not always use precise wording. For example, in both comments, Debbie used the term "thing" or "stuff" instead of the appropriate noun.

Eric did very little speaking during the two observations. Having missed several working days, he mostly listened to what the others had to say. When he did speak, it was to ask clarifying questions about the project being planned.
Criterion 3: Uses Vocal Variety

The excellent description for this criterion is "The speaker makes exceptional use of vocal variety in a conversational mode" (Morreale & Hackman, 1994). Satisfactory: "The speaker makes acceptable use of vocal variety in a conversational mode" (Morreale & Hackman, 1994). Unsatisfactory is described as "The speaker fails to use vocal variety and fails to speak in a conversational tone" (Morreale & Hackman, 1994).

All five students rated as satisfactory in this criterion. The variety in rate, pitch, and intensity seemed to be due to their enthusiasm, or lack of, while discussing the project rather than intentional variation. In other words, students talked faster when they were excited about something, got louder if something angered them, and increased or lowered their pitch depending on their level of enthusiasm. Students did not change their rate, pitch, or intensity because of the points they were trying to make.

In one of Bill's examples that took his team off-task, Bill was very excited about what he was saying. As he spoke, his voice shifted between high and low pitches; his rate of speaking increased as his story continued; and his volume rose the more he talked. He did not use vocal variety to emphasize a point. The other four individuals followed a similar pattern and did not consciously vary their voices.

Criterion 4: Articulating Clearly and Using Correct Grammar

According to Morreale and Hackman (1994), excellence for this criterion is "The speaker has exceptional articulation, pronunciation and grammar." A satisfactory level is "The speaker has acceptable articulation, with few pronunciation or grammatical errors."
And an unsatisfactory rating is “The speaker [has] unacceptable articulation, pronunciation, and grammar.”

Both Annie and Cathy were rated excellent for this criterion. All students spoke clearly and were easily understood. Annie and Cathy used correct grammar, making sure their subjects and verbs agreed, and they used complete sentences for each comment. This was not true of the other three.

During one observation, Bill tested his vocabulary by using words that he didn't truly understand. One word that he used incorrectly was “exacerbated.” Bill replied, “The kids were exacerbated with excitement when we walked in the room.” His teammates did not question his use of the word, and they all seemed to understand what he was saying. This is probably because the word *exacerbate* was part of that week’s vocabulary list. Not only did Bill use the term incorrectly, he also mispronounced the word as well. Although I applaud Bill for trying out his new vocabulary words, his incorrect usage and pronunciation gives him an unsatisfactory rating.

Debbie used incomplete sentences for the few answers she gave. She did not mispronounce any of her words, but she also did not use enough words to truly assess her for this criterion. Because her answers were short and incomplete, she was rated as unsatisfactory.

Eric also did not have enough comments to give a true assessment. Many of Eric's comments were, “Why?” or “What do you mean?” Because he did not provide enough data to be assessed, he received the lowest rating of unsatisfactory.
Criterion 5: Uses Physical Behaviors that Support the Verbal Message

As described by Morreale and Hackman (1994), excellence is “The speaker demonstrates exceptional posture, gestures, bodily movement, facial expressions, eye contact and use of dress.” Satisfactory is “The speaker demonstrates acceptable posture, gestures, facial expressions, eye contact and use of dress.” Unsatisfactory is “The speaker fails to use acceptable posture, gestures, facial expressions, eye contact and dress.”

Bill, Cathy, Debbie, and Eric were rated as excellent for this criterion. Bill's body language matched the enthusiasm he displayed through his voice and words. Without listening to what he was saying, one could see the enthusiasm in his facial gestures and his posture. Bill sat in his desk with his upper body leaning forward, extending over the top of his desk. His feet were under the seat of his chair, and it looked as though he was hovering over the seat rather than sitting in it. Bill's eyes were wide open, and hands were gesticulating wildly.

Cathy and Debbie were not as animated as Bill, but their body language matched the seriousness they expressed in words. Cathy sat sideways in her desk, legs crossed, with a pen in her hand as she took notes. She made eye contact with every speaker unless she had something to write down. When she spoke, she used the hand with the pen to emphasize the points she was making. For example, for one comment, Cathy was discussing some possible options for their project. With the pen in one hand, she pointed to the fingers of her other hand with each option she mentioned.

Debbie's posture was very casual. She sat in her desk facing the rest of her group, slightly slouching. When she was listening, her arms were crossed over her chest, and she
made eye contact with each speaker. Occasionally, she nodded her head in agreement. When she spoke, she uncrossed her arms and leaned forward. She would stay like that for a few minutes after finishing her comment, then go back to her slouched position and crossed arms.

Eric used his body language to show that he was perplexed. He sat with his elbows on the top of the desk, forearms stretched out in front of him, and leaning forward slightly. As the other students on his team spoke, Eric made eye contact with them, and before he asked his question, he furrowed his brow and squinted his eyes. Like Cathy, Eric took notes, and he often referred to his notes when before he asked his questions.

Summary of Social Interaction Skills

Throughout the nine weeks spent on the project, I took note of four specific social skills as identified by Bredekamp and Copple (1997): participation in problem-solving, cooperation, willingness to offer help to others, and ability to negotiate. To assist in my observation notes, I used a checklist during observations and referred to that checklist as I wrote my observation journals for the day. After spending five to ten minutes observing each participant at least twice during each phase, I was able to document 160 separate examples of Bredekamp and Copple's (1997) social skills (see Table 4).

Students demonstrated growth in the number of times they demonstrated each of the four criteria, except in the ability to negotiate. Negotiation was an important part of planning the project as they decided on what they would do and for whom. However, during the Implementation Phase, students did not use their negotiation skills as much. Instead, they relied on one or two members to make decisions. In the Concluding Phase,
negotiation became important once again as students had to negotiate their grades. It was during the Concluding Phase when I taught the unit on negotiation, so students had a better knowledge of negotiation skills than they had in the beginning of the project.

Table 4

Distribution of Social Skills

<table>
<thead>
<tr>
<th>Phase</th>
<th>Participation in problem-solving</th>
<th>Cooperation</th>
<th>Willingness to offer help</th>
<th>Ability to negotiate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>7</td>
<td>12</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Implementation</td>
<td>15</td>
<td>22</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Concluding</td>
<td>21</td>
<td>29</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>63</td>
<td>29</td>
<td>25</td>
</tr>
</tbody>
</table>

Summary

Each student in the study demonstrated growth in some way, but not every student was able to see the growth in him/herself. Eric and Bill could step outside of themselves and examine what they learned. Annie did not admit that she learned anything. Cathy and Debbie fell somewhere in the middle. Cathy became a little more knowledgeable about how much control she has over situations, and Debbie came to understand the various roles she plays in groups or team.
CHAPTER 5
DISCUSSION

The purpose of this study was to describe the impact of a service-learning project on the development of reflective thinking, communication and social interaction skills among high school sophomores. Because an important outcome of education is the preparation of students for civic participation, this study included a description of how students used reflective thinking to communicate about their social interaction skills.

This chapter will explain the methodology used to collect and analyze data that will answer the following research questions:

1. Does engagement in a service-learning project impact the individual’s development of reflective thinking? If so, what is that impact?
2. Does engagement in a service-learning project impact the individual’s development of communication skills? If so, what is that impact?
3. Does engagement in a service-learning project impact the individual's social interaction skills? If so, how?

Through the analysis of various reflective writings over a nine-week period during a single semester, and by using observations and interviews to corroborate the findings, I have found that students can improve their reflective thinking skills if they participate in a project that is meaningful to them.

Data from this study indicate that participation in a service-learning project can be beneficial to developing reflective thinking skills and a sense of civic pride. Students who participated in this study demonstrated the ability to express themselves at higher levels
of reflective thinking (see Figure 6), but that ability seemed dependent on their attitudes and feelings at the time of the writings.

Students showed a little change in their attitudes about serving the community from the beginning of the project to the end. Many of the students had already been involved in serving the community before being given this assignment. The one student who did not have experience in service did say that she understood the value of serving the community, but did not seem enthusiastic about seeking out ways to serve her community.

Service-learning by itself is not the answer to ailing public education’s woes. However, it is a useful tool if included in a curriculum that sets clear goals and expectations about student learning in a real-world context.

Discussion of Reflective Thinking Analysis

Of the five students that were analyzed for this study, each student demonstrated reflective thinking that spanned across the three levels of King and Kitchener’s Reflective Judgment Model (Wood, 2000). Yet, as I look at the progression of each of the reflective writings, I cannot discern a consisted pattern from lower to higher levels of reflective thinking. In other words, some students began with high levels of reflective thinking, but dipped to lower levels at various times throughout their reflective writings. Other students started with low levels of reflective thinking, and did not have many examples of higher level thinking in the later reflective writings.

Using the King and Kitchener Reflective Judgment Model (Wood, 2000) to analyze the reflective writings, I found that students did consistently move from a lower
level of reflective thinking to a high level as the course progressed. Examples from their reflective writings remained at the lower levels of the Reflective Judgment Model in the Planning Phase, and almost all students had examples in the Reflective level by the Concluding Phase.

Each of the five students included excerpts in their reflective writings from all three stages of the King and Kitchener Judgment Model. Two of the five students in the study, Bill and Debbie, demonstrated very little thinking at the Reflective Thinking level, while the other three had excerpts that were more evenly distributed. Eric was the most prolific writer, with 23 selections that could be placed in the Reflective Judgment Model. Although he had more excerpts in the Pre-Reflective level, he also had more in the Reflective level.

**Planning Phase**

During the Planning Phase, students were asked to write two reflective journals on a given topic. The first topic was about how they formed their service-learning teams, and the second topic was about success. I walked the students through the first reflective journal, directing them in the type of information that should be included in each of the three paragraphs. All reflective journals after that were done on their own with the expectation that they would follow the same format.

Examining the first two reflective memos from each of the five students, I was able to pick out two or more statements from each journal that fit into one of the stages in the King and Kitchener (1994) Reflective Judgment Model. Most of the examples fell
into the Pre-Reflective Level, with a few having qualities that put them in the Quasi-Reflective Level.

A few of the statements included the phrase, “I think,” which I categorized in stage 3 of the Pre-Reflective Level. Using the phrase, “I think” without providing extending details and explanations tells me that the student is relying on his personal beliefs to make sense of the world. Cathy wrote, “Our group formed before we knew what we wanted to do, and I think that might be why we are behind.” She has not fully examined the possibilities of why her group is behind. Rather, she relies on her personal opinion to justify the situation. Yet, it is an attempt to make sense of why they are behind, which is why it is at the higher stage of the Pre-Reflective Level. Debbie stated, “In my first group, I played the role of a leader. It was working fairly well, I think, but we didn't all agree.” Like Cathy, Debbie is relying on her perception of the situation and not looking at the full picture. She says that her role as leader went well, but admits that they could not agree. The two parts of the statement seem to contradict each other.

Instead of “I think,” Eric used the term “I believe” to state his knowledge claim. His statement, “I believe that having fun is a major part of a good hardworking group, so I tried to keep it fun and spirits high,” is in the same category as the “I think” statements because he is also stating a personal opinion without offering additional evidence.

Both Bill and Cathy had statements that fit into stage 1 of the Pre-Reflective Level. Cathy stated, “We just automatically went with each other because we get along and have done projects together before.” Bill used the term “obvious” when explaining why the members of his team had decided to work together. Both statements demonstrate
stage 1 of the Pre-Reflective Level because they are not making any effort to explain
their actions. The terms *automatically* and *obvious* indicate that no thought was necessary
when trying to determine with whom they would work.

Annie demonstrated reflective thinking at stage 4 of the Quasi-Reflective Level
when she wrote, “Next time I would probably find people who are in activities similar to
mine so it's easier to schedule times to work.” This statement moves into the Quasi-
Reflective Level because she is using her past experience to determine how to handle a
future situation.

Of the five students, only Annie had statements in the Quasi-Reflective Level of
the Reflective Judgment Model. All five students made statements that were from their
perception of the situation. None of them attempted to look at the situations from another
person’s perspective; they all relied on their opinions.

**Implementation Phase**

Three reflective writings were assigned during the Implementation Phase of the
project. Not all students completed the three assignments, and some assignments were
turned in late. Bill completed one reflective assignment from this phase, but it was
written during the Concluding Phase, so it will be discussed in that section.

Students seemed to put more thought into their work and their writing than they
had during the Planning Phase. While evidence of Pre-Reflective thinking continued,
more students were writing in the Quasi-Reflective Level than earlier. Statements in the
Reflective Level also began to emerge.
Annie’s thinking is on the border between the Pre-Reflective and the Quasi-Reflective Thinking Levels. In her efforts to justify her mood, she is looking to outside sources that are responsible for her short temper. By looking to outside sources, she is still in the Pre-Reflective Level. Later in the same reflection, she begins to acknowledge that the answers cannot always be found by turning to someone else. Her statement, “There really is nothing we can do to solve this problem. We just need to realize that it’s no ones (sic) fault and the dogs just want to have some fun.” Her rationalization is based on a very narrow perception of the problem. First, she states that there is nothing that she can do, so she is not looking to alternative solutions, only to what she knows. Second, she determines that there is not a fixable cause to the problem. Dogs are dogs, so one must just accept that. Her willingness to accept the unknown is an indication of Quasi-Reflective Thinking.

Cathy also extends her statements so that they fall into stage 4 of the Quasi-Reflective Level. In this excerpt she is making an effort to evaluate what did not work well in the group.

I do feel that we spent a little too much time trying to fight for ideas that we just weren’t allowed to do. We let that slow us down, and we used it as an excuse for being behind. . . . We also should have been more open to the other ideas that way it would have been easier to fall back onto a back up plan.

In her efforts to evaluate the progress of her team, she tries to reason through possible options they could have chosen. She does not explore those alternative options to determine multiple outcomes. Instead, she believes that the options would result in a better outcome.
Debbie, who maintained Pre-Reflective thinking throughout the Planning Phase, jumps to stage 5 in the Quasi-Reflective Level. In this selection, Debbie discusses the idea of compromise:

Our team compromises very well. The three of us came up with a schedule in class, and emailed it to [teammate] while she was [out of state]. When she came back, everyone knew what dates wouldn’t work with their schedules, so we decided to go some Mondays after school to make up the hours.

Debbie provides an example to demonstrate what she means by compromise. She also shows how the team included an absent member, and then was willing to make adjustments after she came back. This shows that Debbie realizes that there can be more than one answer to a problem, and that she is willing to consider the alternatives.

Eric again had the most excerpts to analyze, but his writing did not show that his reflective thinking was moving to higher levels. Eric continued to write at the Pre-Reflective and Quasi-Reflective Levels during the Implementation Phase. Eric does not advance beyond stage 4, but he does add more details to his statements.

Our greatest challenge was and still is planning and organizing meeting times that work for everybody in the group. We try to find a time when ever (sic) one can go but there is (sic) six of us so that is six schedules that have to work out.

Here Eric elaborates on his ideas by providing more explanations of how he comes to his conclusions. He realizes that there is not just one solution that will work for everyone in his group, and that realization helps this excerpt fit into stage 4.

Evidence of thinking at the Reflective Level emerges at this phase. The three girls each have excerpts that show that they are turning their experiences into new knowledge.
In the beginning of the project, Annie described success as the ability to accomplish a goal. She sees success as an act that can be recognized easily. In her fourth reflection, Annie describes success as a feeling. “We enjoy going to the [organization] together and I think that is essential to having a successful team.” In this example, she is not looking at her team’s goal of completing a number of volunteer hours; instead, she realizes that success comes from enjoying what you do. She creates new beliefs based upon her experiences. The ability to create new knowledge, or at least to recognize that knowledge is not set in stone, is a clear indication of Reflective Thinking.

Cathy goes beyond repetition and description and has one long excerpt that covers all three levels of reflective thinking.

Cooperation is key in a group. You all have to work together to figure out a schedule for getting your project done on time. You also ahve (sic) o (sic) be able to work together to deal with problems that may arise. Trust is important in the fact that you know if you tell a team member to finish something (sic) it will get done and you can worry about what you need to do.

At the highest level on the Reflective Judgment Model, some of her comments appear to fit into stage 6. She seems to be applying what she has learned from her experiences to something more general. For example, “Cooperation is key in a group” and “Trust is important…” are two pieces of information that are not project specific. Therefore, this excerpt does show that she is able to think at higher levels of reflective thinking.

Both Annie and Debbie demonstrate growth in their thinking by writing extensive examinations of their beliefs. Annie supports her perceptions with several pieces of evidence and considers how others perceive her actions. Even though she does not rely on the other person’s opinions, she at least acknowledges that hers is not the only
perspective. Also, the long narrative of this example shows that she is willing to spend
time examining her beliefs and actions as she draws her conclusions.

I have learned that I like to have some control in a team but I don’t want all the
decisions to be left up to me. For example, on Wednesday the weather wasn’t
looking so great and I didn’t want to risk heading out there and getting into an
accident. I tried to find everyone in my team and let them know that we wouldn’t
be going. I found 2 out of my 3 group members and they agreed that we shouldn’t
go out there. I called the [organization] during [homeroom] time to let them know
that we weren’t coming and they completely understood. When we got to class I
let the third member know that we weren’t going and she was not happy about it.
I just said there was nothing I could do about it and walked away. I realize that I
do possibly have more control because I am the only one that can drive but I
would never use that control in a negative way.

Annie details her actions and rationalizes her knowledge about her desire to have control.
She uses concrete examples to show how she has control, and she provides two examples
to support her (the two members agreeing with her and the organization understanding).
She also realizes, although it is not explicitly stated, that she does not like to hear
opposing viewpoints. The fact that she is able to examine her thoughts about control in
such a manner puts this into the Reflective Thinking Level.

Debbie also takes her experience and constructs knowledge about life as she sees
it. She starts off by explaining what she learned about compromise for the group, but then
continues to apply her knowledge to life skills. This statement is a good example of stage
7 in the Reflective Thinking Level.

I learned that compromise is the best option when we have challenges within our
group. We don’t have many, but when we do, it’s best to talk it out and decide on
an option that works for the whole group. It is important to give a little, and think
about the other people too, instead of just yourself.
Her ability to take the ideas of others into consideration demonstrates that she has reached stage 7 of reflective thinking.

While the students continued to write in the Pre-Reflective Level, they also demonstrated higher levels of reflective thinking with several excerpts in the Reflective Level.

Concluding Phase

As the project neared completion, students continued to include writing from all three levels of the Reflective Judgment Model. Bill, who did not write any reflections during the Implementation Phase, completed his last four reflective writing assignments within just two days. Although his writing was not well-developed, I was able to find examples of reflective writing.

Toward the end of the project, students start examining their own beliefs based upon their experiences. After purchasing supplies for the animal shelter, Annie describes spending her own money: “I felt that it was a bigger sacrifice than just our time and that’s why it felt more special to me.” She goes on to explain “This experiences shows that you don’t need to have material things to be happy because giving back and being a good person makes you truly happy.” Even though she sees the purchase of supplies as the greatest sacrifice for her project, she at least has developed new knowledge about what happiness means to her. She realizes that happiness does not come from possessing something, but from giving something you do possess to someone who truly needs it. This realization fits into the Reflective Level.
Despite the tardiness of his reflective writings, Bill manages to have one example in the Reflective Level.

Communication with younger youth is completely different than talking with adults. Voice inflections must change and an enthused tone must be used. I also had to communicate with individuals that held much authority, like the principal of [organization] and the executive director at the [school].

In this excerpt, he is thinking beyond the project to understand the differences of communicating with two types of audiences. In his evaluation of those differences, he uses information from his personal experiences as well as what he has learned in class.

Cathy uses several different pieces of evidence to justify her beliefs about the success and the learning experiences of the project. She does not make a simple statement and let it stand alone. Instead, she realizes that one must try many avenues before finding the right one.

...[W] learned about the problems of communication and when people don’t respond to you, and we worked on meetings with adults and discussing our ideas. We learned to face rejection, but still able to come out with a fun project. Through the project itself, I have learned that you can perform any tasks that you put your mind too (sic) and it always helps to have great friends around you to make it easier.

Debbie does not have any statements in the Reflective Level during this phase of the project. Her writings tend to stay at the Quasi-Reflective Level. Eric, on the other hand, includes several examples from the Reflective Level. He has several excerpts from both stage 6 and stage 7. One example of his stage 7 is “I feel a since (sic) of pride when I am noticed for doing something good or when I see something I have done. This is why I plan to continue to volunteer so I can continue to have that feeling.” His experiences have helped him to realize that he feels pride when he does something that is good. This
statement does not refer to the project at all; instead it refers to the concept of doing something good for the community. He is able to apply what he has learned to something that can be beneficial to him and the community in the future.

Summary of Reflective Thinking Analysis

When students are passionate about what they are doing, their level of reflective thinking moves to the higher stages of the King and Kitchener Judgment Model. When they see what they are doing as mundane, their level of reflective thinking stays in the lower stages. Throughout the service-learning project, students had the opportunity to make many decisions that would affect the outcome of their project. For some, choosing a team of dedicated members was crucial, so they wrote reflections that included more examples of higher levels of reflective thinking. Others were not passionate about forming a team because they just wanted to complete the assignment. For those students, their reflective writings about forming a team included lower levels of reflective thinking.

Engagement in a service-learning project can have a positive effect on reflective thinking, but only if the student is truly engaged and excited about what he/she is doing.

Discussion of Communication Skills Analysis

Students were asked to write up to eight weekly reflections, but they were also asked to communicate in groups. Communication has been recognized as an important factor in academic and professional success (Curtis et al., 1989; Morreale & Hackman, 1994; Rubin et al., 1990; Rubin & Morreale, 1996). Communication involves not only the words being used, but also the nonverbal forms as well (Dunbar et al., 2006).
Students needed to learn about themselves as communicators so that they could communicate with their teammates and the community in a more effective manner.

Planning Phase

Students were observed working with their teams on several occasions during the Planning Phase, with emphasis placed on observing for communication skills during two of the observations. Using the Competency Rubric (Appendix I), I made note of behaviors that students demonstrated within an eight to ten minute observation.

In the two observations, students showed satisfactory or unsatisfactory results to the five criteria established for this study. The students demonstrated satisfactory results in employing vocal variety in rate, pitch, and intensity, and demonstrating nonverbal behavior that supports the verbal message. However they received unsatisfactory results for the other three criteria: using appropriate supporting material to fulfill the purpose of the oral discourse, employing language appropriate to the designated audience, and articulating clearly, and using conventional grammar and pronunciation.

Implementation Phase

During the Implementation Phase, I observed each student during team work days on two occasions. The first observation took place in the classroom, and the second was in the computer lab. In the classroom, students sat with their teammates, desks close together so that all members of the team were facing each other. In the computer lab, teams sat at computers that were next to each other, so they were not facing each other and had to turn their heads to speak directly to one of their teammates. Debbie and Annie
sat next to each other in the computer lab, while the rest of their team sat at computers on the other side of the room.

The classroom was the best setting for observing communication skills because the teams actually worked together and in close proximity. In the computer lab, students did not have team discussions. When they spoke, they talked about issues outside the scope of their project with just the teammates sitting next to them. While these conversations were not about the project, they still yielded some data about communication skills.

Concluding Phase

Avoiding the computer lab as an observation site, the last two observations took place in the classroom. During this phase of the project, students improved their ratings in Criterion 1 by using extended examples to support any claims they made. Criterion 2 showed no improvement. In fact, Criterion 2 actually moved down to unsatisfactory as an overall assessment. Criteria 3 and 5 remained in the satisfactory and excellent ratings, while Criterion 4 improved a little.

The team aspect of this project was very informing. Four of the five students in the study emerged as leaders of the teams, but then had to realize just exactly what leading a team was all about. One person, Eric, became a leader because of his own need to accomplish the task. He knew that if he did not do it, no one else on the team would step up and take the leadership position. Cathy, on the other hand, was used to being a leader. She was looked up to by her teammates, and they respected her skills and abilities. As one who cared about getting all the details just right, her teammates looked to her to
make sure everything was done well. Bill's leadership style was more about getting the work done quickly. Debbie, on the other hand, was not a leader. She was very passive and wanted to keep peace. As long as she did not have to be responsible for making major decisions, she was content to do whatever was needed to get the job done.

**Summary of Communication Skills Analysis**

For Annie, Bill, Cathy, and Eric, their participation with a team did contribute to their engagement in their own learning. Each of the participants learned about themselves as communicators, and Eric learned that sometimes he has to step out of his comfort zone to accomplish a task. Cathy also learned that one cannot always plan every detail in advance. Though she remains a perfectionist, she sees that some things are out of her control and that she has to learn to make adjustments.

At the end of the project, each student indicated that he or she had learned a lot more about communication by doing this project than from the classroom lessons and projects. The fact that they had to make their own decisions and repair their own mistakes helped them to see who they were as an individual and as a member of a team.

**Discussion of Social Interaction Analysis**

As the students interacted with their peers on the service-learning projects, they found that they had to step back and look at the world through different lenses. Through my observation journals and the interviews, I was able to notice how the students changed socially from the beginning of the project to the end.
Planning Phase

During one of the first observations, students were asked to brainstorm organizations that they could assist. In these discussions, I was able to observe the four criteria identified by Bredekamp and Copple (1997): participation in problem-solving, cooperation, willingness to offer help to others, and ability to negotiate.

With the exception of Eric, who was absent from his team, all students participated in the team discussion. Annie, Bill, and Cathy participated the most, and Debbie had minimum participation. Annie was instrumental in determining the organizations her second team could help. She introduced ideas and her teammates agreed with her. One problem arose during this discussion, and that was one student's comment about being allergic to dogs. Annie suggested that that team member work with the cats if they were able to volunteer at the animal shelter. Aside from that one objection, the team members cooperated with each other and supported Annie's ideas. There was no need for negotiation.

Bill's team extensively discussed each option that was brought up. Bill offered some suggestions, but he also objected to some. When the team had to decide on three, there was a fair amount of negotiation. Bill participated in the negotiation by offering his opinion about each suggestion. When the team could not agree on the third organization, Bill participated in solving the problem by asking his teammates to give the pros and cons of helping each organization. Bill cooperated with his team, and he was a willing participant.
Cathy initiated the decision-making process, then sat back and allowed the others to come up with ideas. All five girls cooperated with each other and Cathy did not write down any organizations until all the girls agreed that it should be considered.

Debbie participated by nodding her head when she agreed with something someone else said. She did not argue with anyone, nor did she step in to help solve disagreements. While with her first team, Debbie was the problem-solver in that she attempted to find ways for her other two teammates to negotiate. However, in her second team, Debbie had no problems to resolve, so she sat quietly.

Implementation Phase

During the Implementation Phase, students were more vocal and showed more signs of cooperation. At this point in the project, teams had already invested a fair amount of time in their project. Their discussions were more focused, and observations of the social skills was easier.

Annie demonstrated a willingness to cooperate, but only when others agreed to her ideas. If someone disagreed, she walked away from that person. She did help others by taking on responsibilities that they were not able to do, and she also helped to solve problems that arose with schedules. Annie did not demonstrate an ability to negotiate since she ignored any objections.

Bill began this phase by being a willing participant in all team activities. He cooperated with his teammates, helped them complete their responsibilities, and helped with solving any problems. However, early in this phase his personal life took over and his willingness to participate lessened. Bill sat away from his team and worked on the
responsibilities assigned to him. If he saw that something was not getting done, he took on that responsibility instead of talking to his teammates about it.

Cathy was involved in everything her team did. She participated in problem-solving, cooperated with her teammates and the organization, took on responsibilities that her teammates were not able to do, and used negotiation techniques to make decisions.

Debbie participated more than she had in the Planning Phase. She and Annie worked together most of the time, so her cooperation with the entire team was lacking. She did not participate in problem-solving, other than to agree with whatever decision Annie made. Debbie did agree to help one of her teammates write the introduction to the portfolio, though.

Eric was instrumental in solving problems that arose with his team. Eric's team often had scheduling conflicts, and Eric suggested that if a team member could not make it to the organization on the agreed upon date, that he go at another time to make up the hours. Eric was willing to go with the person who had to make up hours so that the person did not have to work alone. The others agreed that they would have two dates each week, one as the regularly scheduled work day, and the other as a back up day. Through this situation, Eric demonstrated that he was able to solve problems, cooperate with his teammates, provide help when needed, and use negotiation techniques.

Concluding Phase

One observation for social interaction took place during this phase of the project. Students were asked to negotiate their team and individual grades, so the main focus of the observation was the ability to negotiate.
All students used some negotiation techniques, but some showed more skill.

Annie was prepared to negotiate by having the grading criteria with her when she began. She used the grading criteria as her guideline for why each student and the team deserved a particular grade. She used examples of the work each student on her team performed as evidence to support her opinions of what grade each person should receive. As others disagreed with her, she listened and adjusted her grade. Eventually, all team members agreed upon grades for each individual and for the team. Annie showed skill in solving problems by negotiating. She also was willing to listen to other people's opinions, which was an improvement over how she cooperated in the previous phases.

Bill took an active role in the negotiation process. Whereas he had been withdrawn and uncooperative during the Implementation Phase, Bill actively participated in negotiations. When disagreements arose, Bill interjected possible solutions. He showed that he was willing to put the needs of others ahead of his by listening to their opinions and putting aside his personal biases.

Cathy, like Bill, also took an active role in the negotiation process. She initiated the conversation, suggested grades for everyone, then listened to what others had to say. She adjusted her grading of an individual if a teammate offered evidence that Cathy had not considered.

Debbie participated in the negotiation process at a minimum level. Debbie did not attempt to resolve any conflicts that arose. Instead, she listened to what Annie said about the conflict, then agreed with Annie's opinion. When it came time to offer her opinion of the grade each person should receive, Debbie again went along with comments made by
Annie. In terms of cooperation, Debbie cooperated with Annie, but not necessarily with the other members of the team.

Eric demonstrated excellent social interaction skills. His problem-solving skills improved as he worked to resolve disagreements during the negotiation of grades. He cooperated with his teammates, but also with the organization, and he offered assistance to teammates who were struggling. During the negotiation process, Eric used evidence to support his ideas, listened to others, and made adjustments based upon what he heard. He was willing to consider other people's perceptions when it came to making decisions.

Summary of Social Interaction Analysis

Three of the five participants had rather extensive experience serving the community, while the other two done a couple of things with their families or through their churches. Eric had the most experience with serving the community. He was involved with church and family activities, as well as doing projects on his own. His attitude about civic responsibility improved from the beginning of the project to the end.

Annie had little experience serving the community. On her pre-service survey, she indicated that she had helped her church serve food to the homeless, but hadn't really done anything else. Through all her frustration with the team, she came to realize that serving the community is not about satisfying one's self. She found gratification from the project after she took the time to look back over what she had done and realized how much it helped her organization. The planning and the paperwork involved with this project were annoying to her because they got in the way of her enjoyment. However, she
believed that the overall project was beneficial and helped her to understand that everyone needs to take a role in serving his/her community.

**Implications**

This study was done with a small sample of individuals who worked with one teacher over the course of one semester. The knowledge gained from this study adds to the field by demonstrating that long-term projects, such as service-learning projects, can help students become more engaged in their own learning. The five students in this study took charge of their education by making decisions and following through. They made mistakes and had to determine a course of action to remedy those mistakes. Each of the five students improved his/her communication skills in some way. Because all students have different strengths and weaknesses, this project allowed each person to work on those skills that he/she needed to work on individually. Students were not forced to sit in a classroom working on skills that they already possessed just so another student could improve in that area. Students also were able to use their strengths to help each other.

With the push for national standards and high-stakes testing, educational reformers should consider how service-learning can foster academic achievement. Programs such as No Child Left Behind (NCLB) have important goals for our educational system, yet the methods used to assess the academic achievement of students are corrupted by the simplistic ideas of those wanting to quantify educational standards. Those looking to improve the educational system of the United States must first consider what is meant by an educated society. If the goal of our educational system is to produce a greater number of individuals who can pass standardized tests, then expecting all
students to know the same information at the same stage of development is a worthwhile goal. However, if the goal of education is to help individuals develop into productive citizens of the United States who can critically and creatively evaluate the needs of our country and find ways to solve problems that do not even exist yet, then standardized testing will not achieve that goal.

The effects of service-learning on individual development have been well researched and promote the many benefits of tying service-learning to personal development (Avenatti et al., 2007; Conrad, Hedin, & National Center on Effective Secondary Schools, 1989; Crosman, 1989; Youniss & Yates, 1997). Some research has been done in the area of service-learning and citizenship (Johnson et al., 2007; Russell & Hutzel 2007; Rutter & Newmann, 1989). And other research has supported the use of service-learning in improving academic achievement and cognitive thinking (Braun & Watkins, 2005; Feller et al., 2007; Hart & King, 2007). The question seems not to be is service-learning an effective education tool, but can service-learning promote the educational ideas of the educational system of the United States? The results from this research demonstrates that service-learning, when planned around a specific educational objective, such as the improvement of communication skills, can benefit students and the community in many ways.

The participants in this study learned to solve problems that arose within their own teams, but they also learned about important social needs that existed in their communities and how they could address those needs. As for the objectives of the communication class, participants practiced various methods of communicating with
different audiences. They also learned to examine their own personal biases as they realized that their desires did not always match the needs of the community. Participants had to step back from their personal agendas and put the needs of others before them.

Alternative methods of assessment are needed to determine the educational advancements of students in the United States. Standardized tests can provide limited information about the state of the schools in the United States, but they do not capture the entire picture. Incorporating alternative forms of assessment that include open-ended questions and allow students the ability to reflect upon and articulate how they solve problems will provide a more complete picture of how our students are being educated. If education reformers insist upon holding each student to the same standard, schools run the risk of young people turning away from the needs of society and caring only about getting the right answer. No individual in society can predict the technological, political, or societal changes that will occur in the future. If these changes cannot be predicted, then teachers cannot ask students to all have the same answers to problems that do not even exist yet. Service-learning programs, when carefully designed to meet the needs of the community and the educational system, can instill higher-order thinking skills that our students will need to solve problems in the future.

Suggestions for Future Research

In today's society, information changes every few seconds. Students need to be able to adapt to those changes if they are going to be successful. The emphasis on tests not only inhibits students' learning, but fails to prepare them for life after school. Schools can no longer rely on lectures and worksheets to prepare students for their careers.
Instead, schools need to find ways to promote critical thinking and real-life experiences. Service-learning is a tool to provide that type of education.

Much of the research on service-learning has focused on evaluating the success of service-learning programs (Avenatti et al., 2007; Calabrese & Schumer, 1986; Feller et al., 2007; Hart & King, 2007; Hoffman et al., 2007; O'Connell, 1983; Switzer et al., 1995; Turnley, 2007; Youniss & Yates, 1997). More research on the effects of service-learning in specific content areas should be done to determine if service-learning fits better into some fields than others. While this study examined the benefits of service-learning in a communications class, research into how service-learning can be incorporated into other disciplines is necessary.

The practice of requiring service-learning for graduation is controversial (Institute for Justice, 1994; Noll, 2001; Perrone, 1993). Research should be done on the different types of service-learning requirements that exist and how those different methods benefit students and society. This study examined a service-learning program that was required in one class at a high school. Students at the high school had the option of taking that communication class or another communication class that did not require service-learning. The service-learning program in this study was designed around specific academic goals. If schools require service-learning, but that service is not monitored and designed around specific goals, are students benefiting from the service? Is the community? More research on the best types of service-learning should be done to aid schools and teachers in determining if service-learning will work with their students. If one of the goals of education is to promote democratic ideas and active participation in
our communities, then what are the effects of requiring students to perform service activities before they are allowed to graduate from high school?

There is much more to be learned about service-learning and education, and this study only touches the surface. More studies need to be done to adequately measure any academic progress made by service-learning. The more schools are moving toward individualized instruction, the more likely they will want to utilize projects that can meet the needs of the individual. Today's classrooms are set up to instruct students as a group, not to address individual learning needs. Projects that require students to work together as a team, make their own decisions, and discover their own strengths and weaknesses may be the path of future educational reform.
REFERENCES


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APPENDIX A

COMMUNITY SERVICE PROJECT

One of the 40 assets that help to build a successful community is that young people will volunteer at least one hour per week to an organization. With this in mind, students will investigate, design, and implement a plan to help a local organization.

This project will begin in the first semester of the block class and conclude in the last semester. Therefore, each team will have approximately three months to complete the project.

Several communication skills will be introduced and developed during this project, with the primary emphasis on:

1. Students will become self-directed learners
   a. Students will develop a community service project
   b. Students will determine grading criteria
   c. Students will complete the project outside of school hours

2. Students will communicate effectively and clearly as writers
   a. Students will produce technical writing
   b. Students will write reflective journal entries
   c. Students will organize a project portfolio

3. Students will interact with others as speakers and listeners
   a. Students will practice negotiating skills
   b. Students will engage in parliamentary procedure
   c. Students will interview and gather information from a specified individual with the targeted organization

Students enrolled in this class are encouraged to discuss their team plans with their parents and receive parental permission.

The following pages are put together to provide instructions for how to complete the project, the assignments that need to be completed and placed in your team’s portfolio, and forms that need to be completed. We will discuss many of these items in class, but since teams will work at different paces and have different time lines, the information in this packet is provided for your reference. Please note that this assignment is worth 300 total points, of which the team determines 150 of those points. The remaining 150 points are assigned to the presentation and the portfolio.
Sequence of Activities

To successfully complete this project, you should follow the suggested sequence of activities. Collect evidence (underlined items must be in your portfolio) and arrange in a project portfolio as you progress through this assignment. A rubric for this portfolio is available when you are ready.

1. Form a team of individuals who are willing to work together honestly and sincerely. Make sure that your team is large enough to accomplish a worthwhile goal, yet small enough that each member may play a vital role. Determine a team name.

2. Brainstorm a list of local organizations that would benefit from this type of project. Write a memo to Miss Hawk and cc it to the principal discussing your project and your team members.

3. Choose one organization that all members of the team are willing to assist and brainstorm for potential needs and how to meet those needs. Create a Needs Assessment to graphically explain your ideas.

4. Contact the organization and make an appointment to meet with the director, supervisor, or person in charge. Make sure that this person is your contact person for all aspects of the project.

5. Present the Needs Assessment and potential plans to the contact person. Determine the needs that are most important and the plan that will work best for the organization and your team. If necessary, revise the Needs Assessment to include specific needs brought up by your contact person and the proposed plan to meet the needs.

6. Return to the contact person with the final Needs Assessment and have the Needs Assessment signed.

7. With the team, discuss all aspects of the plan to meet the need and determine what materials will be necessary to meet the need, what additional information must be learned, if other people need to be contacted to complete the project, etc. Create a Plan of Action for completing your project. You may want to use a blank calendar to help with the planning.

8. Determine a team goal. What will the team, as a whole accomplish for the selected organization. How will the goal be accomplished and when? Much of this information will be included in your proposal, which is discussed later.

9. Once a team goal has been determined, decide on individual responsibilities. Design a Responsibility Chart that outlines what each person will do as part of the team to help in accomplishing the team goal. The individual responsibilities should include
activities that directly relate to accomplishing the team goal, but also what each member will do to complete the project as a whole. This includes assigning members to complete various items for the portfolio.

10. As a team, determine the Grading Criteria for the team. Each team can earn up to 100 points for successfully completing its project. Refer to the grading scale that is posted in the classroom.

11. Refer to the responsibility chart and develop the Grading Criteria for each member of the group. Each member may earn up to 50 points for his/her role on the team. Grading criteria for each member should include how many points will be deducted if an assigned responsibility is not met.

12. Write a detailed Proposal of your plan in the format that will be discussed in class. If you reach this part before we discuss it in class, refer to the sample in this document. This proposal will be discussed and debated in class using Parliamentary Procedure.

13. Write an Introduction to your project explaining why you chose this particular organization and project. Describe what you will be doing and why. Your introduction will serve as a rationale, so use the information you collected in your research to support your project goals. This introduction will serve as the authorship speech during Parliamentary Procedure.

14. Once the class has approved the proposal during Parliamentary Procedure, revise the proposal and have the final copy signed by the contact person. Make sure the contact person understands exactly what your group will be doing for the organization, when you will begin, and how long it will last.

15. Once the final Proposal has been signed, you may begin working toward your team goal.

16. Each week, once you have decided upon a project, write a reflective memo to Miss Hawk. Your memo should have at least 3 sections: description of an event or situation, explanation of what you learned, and suggestion for future improvements. Some or all of these memos should be in your portfolio.

17. At some point during your project, probably when you have made some progress but haven’t finished, write a Friendly Letter to a family member or friend outside of this class. Explain what you are doing and how it is having a personal or emotional effect on you. You should deliver the letter, but also keep a copy in your portfolio.

18. In addition to the Friendly Letter, write a Business Letter to an important adult in your life (grandparent, boss, teacher, neighbor, etc.) explaining what you have accomplished and why you are doing this. Discuss what you have learned, on an
intellectual level. This letter will also be delivered, and you should place a copy in your portfolio.

19. During the planning and/or implementation stages of the community service project, each team member should write at least 3 Reflections. Each reflection should describe the activity being discussed and reflect upon the member’s thoughts and feelings regarding that activity. The focus of the reflection is to express what you, as an individual, have learned from the experience and what you might do differently. How did you respond to problems that arose? What was good about the activity? These reflections may be written as your weekly memo to Miss Hawk (see #16).

20. Continue to meet as a team to discuss the progress and any problems that the team may be facing. At some point during the process, put together your team’s project Portfolio. Design a Cover for the portfolio that includes your team’s name, the members of your team, and a mission statement for your team. You may also include pictures or other graphics to enhance your cover.

21. At the conclusion of your project (when you have met your team goal), write a Thank-You Letter to the contact person. This letter should be written following the guidelines for writing a formal business letter.

22. Negotiate both the team grade and the individual grades. The team must decide on the appropriate number of points the team receives based on the grading criteria and goal stated at the beginning of the project. The team must also negotiate the appropriate number of points each team member will receive based upon his/her assigned responsibilities and the grading criteria. Complete the Project Grades sheet included in this document and place in your portfolio.

23. Ask the contact person to complete the Team Evaluation Form that is also in this document.

24. Write a Team Reflection. This reflection should be written as a team. Discuss how well the team worked together, how problems were solved, what changes had to be made in order to meet the team goal, and what the team learned about teamwork. Consider the comments on the evaluation form and discuss any issues you believe to be important.

At the end of the semester, your team will present your project to the class. Each member of the team should play a role in the presentation and the portfolio will serve as a visual aid. Your team may include other visual aids for the presentation. The presentation will be graded using the rubric that is included with this document.
APPENDIX B

SERVICE PROJECT INTERVIEW

1. What are your current feelings about serving the community?

2. Explain your thoughts about how teenagers are perceived in the community. What might make adults have negative perceptions of teenagers?

3. Define community service from your own perspective.
   a. What influences helped you come up with your definition?
   b. Do you believe that you are obligated to serve your community? Explain.

4. Are you, or members of your family, currently involved in activities that benefit the community? Explain.
   a. What organizations have you served?
   b. How long have you been involved in this/these activity(ies)?
   c. How do you feel after your involvement in your service activity(ies)?

5. What are some of your concerns about the future? Think in terms of what may affect you personally, what may affect your family, or what may affect society or the world.

6. What issues in your community are you passionate about? Why?

7. Do you believe that one person, or a small group of dedicated people, can make a difference in society? Explain your response.

8. What are the advantages and disadvantages of performing community service as part of your communication class?
   a. for you?
   b. for the community?
   c. for the future?

9. What other thoughts do you have about community service.
APPENDIX C

INTERVIEW PROTOCOL

Students will be asked questions concerning different areas of their learning. The questions will be guided by the 7 stages of King and Kitchener’s Judgment Reflection Model.

Stage 1

1. Describe what you did for your project.
2. Describe how you and/or your teammates acted while doing the project.
3. Describe the communication skills you used during your project.

Stage 2

4. How did you know that what you were doing was the best way to do it?
5. Did you do any research before you made your decisions? If yes, what type of research did you do, and how did it help you make your decision?
6. Explain how your knowledge about Glasser’s Basic Needs or Maslow’s Hierarchy of Needs (or anything else discussed in class) influenced the way you approached your project.

Stage 3

7. Could you have approached the problem/situation in a different way? If yes, explain how.
8. Did you and your teammates argue about how to approach a problem or situation? If yes, explain why you disagreed.
9. Explain how the different perceptions of individuals helped or hindered the service project.

Stage 4

10. Explain how you could approach a problem/situation from another perspective.
11. What questions do you have about how to solve the problem, or how to work through a specific situation? How might you go about trying to answer those questions?
12. Identify different factors that should be considered before you make a decision or determine a final solution.
Stage 5

13. Did you think of other ways to solve the problem or to approach a situation? If yes, how did you choose which approach would be the best?
14. If you had to explain your decision to someone else, such as the principal, what would you say?
15. What would you say to people who believe that a different approach to solving the problem would be better?

Stage 6

16. Explain any limitations or restrictions to the solutions or approaches that you did use.
17. What type of new information might make you consider a different approach to the problem or situation? Why would that new information make a difference?
18. Looking back at a decision that you made, can you explain any evidence that you have that shows that your decision was correct? What method(s) do you use to determine if your decisions are the best ones?

Stage 7

19. Discuss what you learned about yourself as a communicator by doing this project.
20. Explain how you would address similar problems that might arise in the future.
21. If you could give someone advice on how to deal with one problem that you encountered, what would you say and why?
APPENDIX D

GUIDELINES FOR WRITING A REFLECTION

Each week, you are expected to write a critical reflection of your experiences with the service-learning project (SLP). This reflection is to be sent to me via e-mail in the form of a memo.

A reflection is an evaluation of your behavior, attitude, learning, etc. Successful reflection enables self-awareness and personal growth to help you improve your learning experiences. Each week you should work with your group on completing your SLP. This work may be a meeting, volunteering hours, working on documents for your portfolio, etc. Whatever the case, you are to take a step back and look at what YOU learned from the event. To reflect means to ask questions and come up with answers to those questions that are going to help you in the future. Examine what went well and why it went well. Examine what you could do better and how you can do it better.

The reflective memo is worth 15 points each week and should be written in at least three (3) sections. The content of the memo, as outlined below, is worth 10 points.

1. Describe an event or experience using facts and feelings. Provide relevant details.
2. Explain what you learned from the experience. Think about what you learned about yourself in terms of communication, teamwork, leadership skills, service, the community, etc. Discuss what you found rewarding or disappointing about the event or experience in terms of your own learning and goals.
3. Discuss areas for future development and improvement.

The other 5 points are based on 1) that you properly formatted the memo (3 points), and 2) that you sent the memo as an attachment in an e-mail message (2 points).

The due date for each memo is Sunday, so any memo received after Sunday will be considered late and will be deducted the appropriate number of late points (10% per day).

If you are having trouble with e-mail, then you must hand me a paper copy of the memo by Friday of the week it is due to receive full credit. We are in the computer twice each week, so you ought to be able to get a reflective memo sent to me on one of those days if you do not have e-mail access at home.
APPENDIX E

SCHOOL AND DISTRICT CONSENT LETTER

1 July 2008

Mrs. Lowry and Dr. Cass:

As a teacher, I continually strive to improve my teaching practice to meet the needs of my students, the school district, and the community. One way that I am trying to improve my practice is by continuing my own education. I am currently in the final stages of the doctoral program in Curriculum & Instruction at the University of Northern Iowa. Having successfully completed all the necessary course work, I am inching closer to becoming Dr. Hawk. My final hurdle is completing my dissertation.

To complete my dissertation, I am interested in studying the benefits of having the service-learning component in my Advanced Oral and Written Communications class at the high school. Once my proposal has been defended and approved, I would like to conduct my study. My hope is that the study will be done during the 2008 – 2009 school year.

The anonymity of students is a top concern for me. Service-learning is a regular part of my curriculum, so all students will go through the same process. I will use data from only 5 students for my dissertation study, and those students will be chosen at the conclusion of the semester in which data were collected. Students will not be identified by name. Instead, I will use a code to differentiate the students in the study. All students and parents will be asked to sign permission forms for the study. These permission forms will be sealed until the end of the study to prevent me from being biased as I determine the 5 students in the study.

Included in this letter is a form asking permission to conduct this study at Marshalltown High School. If you give your permission for me to conduct this study, please sign the form and return a copy to me. If you have questions, or if you are interested in reading my proposal or final dissertation, please let me know and I will get a copy to you.

Thank you,

Janelle L. Hawk
English Teacher
Marshalltown High School
Permission to Conduct Study at Marshalltown High School

Title of the Study: Service Learning: Using Reflective Thinking Skills to Engage Students and to Help Them Become Better Communicators

Principle Investigator: Miss Hawk

I approve this study to be conducted at Marshalltown High School, and I support the efforts this study will have in improving academic performance at the high school. I am aware that students at the school will be participants in the study, and that their identities will be protected. I am also aware that both students and their parents will complete permission forms before any data are collected. Any student or parent that does not want to be part of this study will not be punished in any way.

_________________________________________ Date __________________________

(Signature of principal)

_________________________________________

(Printed name of principal)

_________________________________________ Date __________________________

(Signature of superintendent)

_________________________________________

(Printed name of superintendent)
Dear Parents/Guardians:

Your child has been invited to participate in a research project conducted through the University of Northern Iowa. The University requires that you give your signed agreement to allow your child to participate in this project. The following information is provided to help you make an informed decision whether or not to participate.

The study will be conducted in Miss Hawk’s Advanced Oral and Written Communication class. Each semester, students are asked to conduct a service-learning project to develop communication and leadership skills. The purpose of this study is to determine how well a hands-on community activity, such as service-learning, promotes reflective thinking and teamwork, and how such a project can improve communication skills.

As a regular part of the course, all students will be participating in a service-learning project. Only those with signed consent forms will be part of the study, and those students will be determined after the conclusion of the semester in which the data were collected. Students will be interviewed on various occasions to determine their current views on community service and leadership, and how those views change throughout the course. Those interviews will be tape-recorded to ensure the accuracy of the information provided by the students. Students will also be observed working together in the classroom, and the observations will be recorded in a daily journal kept by the teacher. Throughout the course, students will also be asked to complete a variety of reflective writing activities, including writing a reflective memo to the teacher every week during the project. Students are not being asked to do anything out of the ordinary for this study. Whether students are part of the study or not, they will still be involved in a service-learning project as part of the requirements for the Advanced Oral and Written Communication class.

This study should not incur anything but minimal discomfort or risks for the child. Since the project involves working with an organization in the community, some students will need to make time in their schedule to meet with the community member and to work at the community site. For some students, this time can only be found during the school day. For that reason, I will give permission for students to use one class period of Advanced Oral and Written Communications per week to work outside of the classroom. This date needs to be secured ahead of time so that the information can be passed along to the attendance. This is a school activity, so absence from one class period per week will be excused. However, every student that will need to use class time for the project will be asked to have his/her parent complete a Travel Permission Form. Parents/guardians must
understand that some students will need to drive or secure rides to the community site. Any student who chooses not to participate in the study will continue to work on the service-learning project, but his/her participation will not be included in the study. Students not willing to participate in a service-learning project should enroll in Creative Oral and Written Communication or the Oral and Written Communication class. Grades are not affected by participation in the study since all students will be working on the project, and final project grades are negotiated by the students. Also, the students whose work will be analyzed will be determined after semester grades have been completed.

All students should receive the same benefits of service-learning, whether participating in the study or not. By performing a service-learning project, students will practice the following course objectives:

1. Students will become self-directed learners.
2. Students will communicate effectively and clearly as writers.
3. Students will interact with others as speakers and listeners.
4. Students will develop team and leadership skills.

Information obtained during this study that could identify your child will be kept strictly confidential. The summarized findings with no identifying information may be published in an academic journal or presented at a scholarly conference. Each student being studied will be given a code known only to the researcher. The purpose of this study is to evaluate the program and not the students, so student identity is not important. In the final write-up of this study, direct quotations and observations will be included in a way that will not identify the individual.

Your child's participation in the study is completely voluntary. He or she is free to withdraw from participation at any time or to choose not to participate at all. By doing so, your child will not be penalized or lose credit to which he or she is otherwise entitled. Participation in the study is optional; participation in the service-learning project is not.

If you have questions about the study, or if you desire information in the future, you may contact Miss Hawk at (641) 754-1130 X 1016. You may also contact the office of the Human Participants Coordinator, University of Northern Iowa, at (319) 273-6148, for answers to questions about rights of research participants and the participant review process.

I have included two copies of this letter. Please complete the Agreement form and return to Mrs. Kris Davison at Marshalltown High School.

Thank you,

Janelle Hawk
English Department
Agreement:

I am fully aware of the nature and extent of my child’s participation in this project as stated above and the possible risks arising from it.

Please place a check mark next to the appropriate statement.

_____ I give my permission for my child to participate in the dissertation study done by Miss Hawk in her Advanced Oral and Written Communication class.

_____ I prefer that my child NOT participate in the dissertation study done by Miss Hawk in her Advanced Oral and Written Communication class. Please do not include my child in the study.

__________________________________________  Date ______________________
(Signature of parent/legal guardian)

__________________________________________
(Printed name of parent/legal guardian)

__________________________________________
(Printed name of child participant)

__________________________________________  Date ______________________
(Signature of investigator)

__________________________________________  Date ______________________
(Signature of dissertation committee chair)

Please mail this form, or have it delivered in a sealed envelope, to:

Kris Davison
Marshalltown High School
1602 South 2nd Avenue

Marshalltown, Iowa 50158
APPENDIX G

STUDENT ASSENT FORM

Project Title: Service Learning: Using Reflective Thinking Skills to Engage Students and to Help Them Become Better Communicators
Name of Principle Investigator: Miss Hawk

I have been told that my mom, dad, or the person who takes care of me has said it is okay for me to take part in a study about service-learning. I understand that as part of the service-learning project, my writings and discussions about the activity will be copied or recorded by the teacher to be analyzed as part of her dissertation study. Specific information that will reveal my identity will be eliminated from the final write up of this study. I also understand that the teacher will be writing down her observations of students involved in the service-learning project. At any time, I may ask to see what has been written about me, and I can discuss these observations with the teacher if I see something I believe to be inaccurate.

I am doing this because I want to. I have been told that I can stop my part in the study at any time.

Student's printed name ____________________________

Student’s signature ____________________________

Date ____________________________ Date withdrawn from the study ____________________________
# APPENDIX H

## REFLECTIVE THINKING RUBRIC

<table>
<thead>
<tr>
<th>Pre-Reflective Thinking</th>
<th>Concept of Justification</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage 1:</strong></td>
<td>Beliefs need no justification since there is assumed to be an absolute correspondence between what is believed and what is true. Alternatives to one's view are not perceived.</td>
<td>“I know what I have seen.”</td>
</tr>
<tr>
<td>A person knows what he or she has observed. Facts and judgments are not differentiated.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Stage 2:</strong></td>
<td>Beliefs are unexamined and unjustified, or justified by their correspondence with the beliefs of an authority figure. Most issues are assumed to have a right answer, so there is little or no conflict in making decisions about disputed issues.</td>
<td>“If it is on the news, it has to be true.”</td>
</tr>
<tr>
<td>Authorities and facts are related. Authority figures are sources of fact and, therefore, of truth.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Stage 3:</strong></td>
<td>In areas in which certain answers exist, beliefs are justified by reference to authorities’ views. In areas in which answers do not exist, beliefs are defended as personal opinion since the link between evidence and beliefs is unclear.</td>
<td>“When there is evidence that people can give to convince everybody one way or another, then it will be knowledge; until then, it’s just a guess.”</td>
</tr>
<tr>
<td>Absolute answers are assumed to exist, but to be temporarily inaccessible. In the absence of absolute truth, facts and personal beliefs are seen as equally valid.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quasi-Reflective Thinking</th>
<th>Concept of Justification</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage 4:</strong> Evidence is now seen as important to the construction of knowledge claims, along with the acknowledgment that belief cannot be known with absolute certainty for pragmatic reasons; thus, knowledge claims are idiosyncratic to the individual.</td>
<td>Since there is no source of certainty for one’s beliefs, beliefs are justified by giving reasons that are often idiosyncratic, such as choosing evidence that fits an established belief.</td>
<td>“I’d be more inclined to believe evolution if they had proof. It’s just like the pyramids: I don’t think we will ever know. Who are you going to ask? No one was there.”</td>
</tr>
<tr>
<td><strong>Stage 5:</strong> Types of evidence are differentiated within perspectives (e.g., historical or scientific evidence). Further, different rules of inquiry across perspectives or disciplines are recognized. Quality of evidence is also evaluated as strong/weak, relevant/irrelevant, etc. Evidence is not an end in itself, but is used to construct interpretations.</td>
<td>Beliefs are justified within a particular context using the rules of inquiry for that context, with the understanding that justification is context-specific, or that beliefs are balanced against each other. Each approach has the effect of complicating and delaying judgment.</td>
<td>“People think differently, and so they attack the problem differently. Other theories could be as true as my own, but based on different evidence.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reflective Thinking</th>
<th>Explanation</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage 6:</strong> Generalized rules of inquiry may be applied across perspectives. Interpretations are subject to critique and dogmatic for coherency, consistency with the evidence, explanatory power, etc.</td>
<td>Beliefs are justified by comparing evidence and opinion from different perspectives on an issue or across contexts, and by constructing solutions that are evaluated by criteria, such as the weight of the evidence, the utility of the solution, or the pragmatic need for action.</td>
<td>“It's very difficult in this life to be sure. There are degrees of sureness. You come to a point at which you are sure enough for a personal stance on an issue.”</td>
</tr>
<tr>
<td><strong>Stage 7:</strong> Judgments are seen as the outcome of a process of rational inquiry; they are based on a variety of interpretive considerations and the interrelationships of these factors.</td>
<td>Beliefs are justified probabilistically based on a variety of interpretive considerations, such as the weight of the evidence, the explanatory value of the interpretations, the risk of erroneous conclusions, consequences of alternative judgments, and the interrelationships of these factors. Conclusions are defended as representing the most complete, plausible, or compelling understanding of an issue, based on the available evidence.</td>
<td>“One can judge arguments by how well thought out the positions are, what kinds of reasoning and evidence are used to support it, and how consistent the way one argues on this topic is as compared with other topics.”</td>
</tr>
</tbody>
</table>

## APPENDIX I

### COMMUNICATION COMPETENCY RUBRIC

<table>
<thead>
<tr>
<th>Competency 1</th>
<th>Choose and Narrows Topic Appropriately for Audience and Occasion</th>
<th>Excellent</th>
<th>Topic and focus are exceptionally appropriate for purpose, time constraints and audience</th>
<th>Satisfactory</th>
<th>Topic and focus are appropriate for purpose, time constraints and audience</th>
<th>Unsatisfactory</th>
<th>Topic and focus are not appropriate for either purpose, time constraints or audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competency 2</td>
<td>Communicates Thesis/Specific Purpose Appropriately for Audience and Occasion</td>
<td>Excellent</td>
<td>Thesis/Specific Purpose is exceptionally clear and identifiable</td>
<td>Satisfactory</td>
<td>Thesis/Specific Purpose is adequately clear and identifiable</td>
<td>Unsatisfactory</td>
<td>Does not communicate a clear and identifiable Thesis/Specific Purpose</td>
</tr>
<tr>
<td>Competency 3</td>
<td>Supporting Material is Appropriate based on Audience and Occasion</td>
<td>Excellent</td>
<td>Supporting material is exceptional in quality and variety</td>
<td>Satisfactory</td>
<td>Supporting material is appropriate in quality and variety</td>
<td>Unsatisfactory</td>
<td>Supporting material is inappropriate in quality and variety</td>
</tr>
<tr>
<td>Competency 4</td>
<td>Organizational Pattern is Appropriate to Topic, Audience, Occasion and Purpose</td>
<td>Excellent</td>
<td>Exceptional introduction and conclusion; exceptionally clear and logical progression within and between ideas</td>
<td>Satisfactory</td>
<td>Appropriate introduction and conclusion; reasonably clear and logical progression within and between ideas</td>
<td>Unsatisfactory</td>
<td>No introduction or conclusion; no clear, logical progression within and between ideas</td>
</tr>
<tr>
<td>Competency 5</td>
<td>Language is Appropriate to Topic, Audience, Occasion and Purpose</td>
<td>Excellent</td>
<td>Language is exceptionally clear, vivid, and appropriate</td>
<td>Satisfactory</td>
<td>Language is reasonably clear, vivid, and appropriate</td>
<td>Unsatisfactory</td>
<td>Language is unclear or inappropriate</td>
</tr>
<tr>
<td>Competency 6</td>
<td>Vocal Variety in Rate, Pitch and Intensity Heighten and Maintain Interest</td>
<td>Excellent</td>
<td>Exceptional use of vocal variety in a conversational mode</td>
<td>Satisfactory</td>
<td>Acceptable use of vocal variety in a conversational mode</td>
<td>Unsatisfactory</td>
<td>Failure to use vocal variety or a conversational mode</td>
</tr>
<tr>
<td>Competency 7</td>
<td>Pronunciation, Grammar and Articulation are Appropriate to the Designated Audience</td>
<td>Excellent</td>
<td>Exceptional articulation, pronunciation and grammar</td>
<td>Satisfactory</td>
<td>Acceptable articulation; few pronunciation or grammatical errors</td>
<td>Unsatisfactory</td>
<td>Unacceptable articulation, pronunciation or grammar</td>
</tr>
<tr>
<td>Competency 8</td>
<td>Physical Behaviors Support the Verbal Message</td>
<td>Excellent</td>
<td>Exceptional posture, gestures, bodily movement, facial expressions, eye contact and appearance</td>
<td>Satisfactory</td>
<td>Acceptable posture, gestures, facial expressions, eye contact and appearance</td>
<td>Unsatisfactory</td>
<td>Unacceptable posture, gestures, facial expressions, eye contact or appearance</td>
</tr>
</tbody>
</table>