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The impact of service-learning on academics related to neurogenic communication disorders

Ricki A. Konnerup
Eastern Washington University

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THE IMPACT OF SERVICE-LEARNING ON ACADEMICS RELATED TO NEUROGENIC COMMUNICATION DISORDERS

A Thesis
Presented To
Eastern Washington University
Spokane, Washington

In Partial Fulfillment of the Requirements
for the Degree
Master of Science

By
Ricki A. Konnerup
Spring 2013
MASTER’S THESIS

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Abstract


Service-Learning (SL) is a pedagogical approach used to assist students in higher education in learning academic material by providing them an experience with a community partner. SL involves academic course objectives that are linked to a community need and includes student reflection on the experience (Goldberg, McCormick Richburg, & Wood, 2006). SL research is limited, but has been an increasing interest for medical, sociology, education, and communication disorders fields. This study describes the effect that SL has on academic learning related to neurogenic communication disorders, attitudes towards SL, and community benefits. One section of a senior level undergraduate course in neurogenics was offered during the Spring 2012 semester. Students were offered an opportunity to self-select into a SL seminar course. Students who opted to partake in SL were assigned to one or multiple communication partners, depending on the needs of the site, at a selected skilled nursing facility for two hours per week over ten weeks for a total of 20 hours of service. The mean assignment grades, exam grades, and total course grades were compared between the SL and non-SL groups to evaluate whether SL had a positive impact on academics. Pre- and post-participation surveys were administered to the SL group to determine attitudes and perceptions of the SL experience. A post-participation survey was provided to the activity directors from each participating facility to determine the perceived benefit that SL had on their community. No significant differences were found between SL and non-SL
student grades. Based on the results of the SL participation surveys, both students and activity directors reported an overall perceived positive benefit of the experience. Measuring differences between grades may not be the most sensitive measure to determine the impact of SL on academics. Other measures, such as a follow-up survey from previous participating students may be more beneficial in determining SL’s impact on academics, clinical preparedness, and other related skills (e.g., communication).
Acknowledgments

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Chapter I: Introduction

Service-Learning

Service-Learning (SL) is a pedagogical approach used to promote student learning, primarily at the higher education level. Goldberg, McCormick Richburg, and Wood (2006) define SL as an “…experiential (real-life) and reflective problem-based learning in which students enrolled in an academic course provide a needed service to a community partner” (p. 131). According to Goldberg et al. (2006), SL includes reflection, citizenship, and a means to link service to an academic course. Likewise, Kent-Walsh (2012) describes SL as a means to develop learning of course objectives, address community needs, and reflect on the experience to understand the relationship between academics and the community. A community benefit and student learning benefit are required for a successful SL experience. According to Giles and Eyler (1994), SL was developed from the theories of experiential learning described by John Dewey. In the 1930’s, John Dewey created a philosophy of education consisting of ideas that experience influenced learning. Although John Dewey’s philosophy did not specifically suggest SL, his ideas influenced its development.

Elements of Service-Learning

Taking ideas from John Dewey, experience and reflection became key elements of SL (Giles & Eyler, 1994). Kent-Walsh (2012) expanded the definition of SL to include academic content connections, active reflection, authentic community needs, development, diversity, meaningful service, reciprocity, and student voice. Elements of SL are further described in Table 1.
Table 1

Elements of Service-Learning

<table>
<thead>
<tr>
<th>Elements of SL</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Content Connections</td>
<td>Service activities are related to course objectives</td>
</tr>
<tr>
<td>Active Reflection</td>
<td>Used to connect SL experiences to course content</td>
</tr>
<tr>
<td>Authentic Community Needs</td>
<td>Identifying the needs of the community and providing services to meet them</td>
</tr>
<tr>
<td>Development</td>
<td>Students may be involved in activities that educate, service, or empower through observation, participation, or leadership</td>
</tr>
<tr>
<td>Diversity</td>
<td>Service is provided in varied settings and with diverse populations</td>
</tr>
<tr>
<td>Meaningful Service</td>
<td>Service allows for development of critical thinking skills and civic responsibility while improving the community</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>Shared student and community benefit from service</td>
</tr>
<tr>
<td>Student Voice</td>
<td>Students direct their own learning</td>
</tr>
</tbody>
</table>


Overall, the most critical elements of SL include academic connections, meaningful service that meets the community needs, and reflection. In addition, Kent-Walsh (2012) indicated that students, community partners, and course instructors must work together in order to make the SL experience successful and mutually beneficial.

**Differentiating Service-Learning**

There is a continuum of service and experience that many undergraduate and graduate students are involved in. Goldberg et al. (2006) includes service-volunteerism, SL, cooperative teaching, internship, and practicum into a continuum of experiential learning. Although service-volunteerism benefits community organizations, it is completed outside of the university classroom. Therefore, there is no direct connection to
course content. Similar to SL, internship and practicum experiences occur at businesses, public and nonprofit organizations, and schools, but generally do not include a reflection component. Overall, the main difference between the types of service is that SL includes reflection, which provides students an opportunity to connect what they learn in the classroom to their experiences (Goldberg et al., 2006). Typically, undergraduate communication disorders students do not complete practicum or internships. Therefore, SL could be exercised as a step before practicum and internships where undergraduate students could gain non-clinical experiences with potential client populations they may work with in the future.

In order to determine if there are benefits to providing service, researchers have compared students who have participated in service to those who have not. Astin, Vogelgesang, Ikeda, and Yee (2000) compared three groups of undergraduate students with different participation levels: SL, volunteerism, and no participation. The researchers assessed the impact of the students’ experiences on three academic measures: 1) grade point average (GPA); 2) writing skills; and 3) critical thinking skills. It was reported that both SL and volunteerism had positive outcomes for all academic measures. However, participation in SL had a stronger effect on GPA and writing skills as attributed to the reflection activities. Although differences in outcomes between SL and volunteerism were modest, the study suggests that SL does have a place in higher education.

Advantages and Disadvantages of Service-Learning

Many might question why all undergraduate courses do not include a SL component. Strage (2004) suggests three reasons why faculty members are hesitant to
incorporate SL: 1) difficult to establish community partners; 2) SL requirements may take time away from covering necessary course material; 3) uncertainty that SL will have academic advantages. Despite these misgivings, many researchers would suggest that the advantages and benefits a SL course provides outweigh the disadvantages of including it into the curriculum. According to Peters (2011), incorporating SL into the undergraduate curriculum provides an enriching academic experience and improves critical thinking skills. Similarly, Kaf, Barboa, Fisher, and Snavely (2011) reported that SL experiences in skilled nursing facilities resulted in more positive attitudes towards older adults. SL allows undergraduate students to get real-life experiences with the populations they will serve in graduate training and professional work. In addition, SL provides undergraduates with underlying knowledge related to their field before they are expected to put it into practice during therapy.

**Database Search**

Initially, resources related to SL were provided from the research advisor. This allowed for an introduction to SL prior to beginning a database search. Following, a meeting with a university reference librarian assisted in the orientation of appropriate databases to search in. To begin, the librarian used the title of a provided research article in a Google Scholar search. Then, by accessing the “cited by X” and the “related articles” link, many related journal articles were found. In addition, using the university library website access to field related databases, such as CINAHL, ERIC, MEDLINE, and PsycINFO, allowed for further research articles to be found. Search terms included “service learning,” “undergraduates,” and “patholog*.” The * enabled the criteria to be widened to include pathology or pathologists. Furthermore, access to other research
journals and resources were uncovered through the American Speech-Language-Hearing Association (ASHA) website. Following is a literature review related to the search on SL.
Chapter II: Literature Review

Service-Learning Outcomes

Studies of SL have become an increasing interest in medical, sociology, political science, education, and communication disorders fields. For the field of communication disorders, Shaugnessy (2009) described SL as the ability to observe communication disorders in context, analyze the problem, apply knowledge to the situation, and reflect on learning. Different measures of the effects of SL on personal, social, learning, and career development outcomes have been investigated. Learning outcomes consist of whether SL had an impact on academic learning, application to the real world, GPA, and cognitive development (Eyler, Giles, Stenson, & Gray, 2001). One learning outcome discussed in the literature included student and faculty reports of how SL had a positive impact on academic learning (Astin & Sax, 1998; Balazadeh, 1996; Markus, Howard, & King, 1993). Another learning outcome discussed included student and faculty reports of how SL improved students’ ability to apply their new knowledge to practice (Balazadeh, 1996; Markus et al., 1993). Some studies exhibited a positive impact of SL on academics as measured by GPA (Astin & Sax, 1998; Markus et al., 1993); however the findings were mixed.

Course Requirement Measures

As previously mentioned, SL has been adopted as a part of many higher education courses in different fields. In order to evaluate the effects of SL, different measures have been used, including quantitative measures. Quantitative measures generally include GPA, mean course grades, and mean assignment or exam grades. Quantitative data are generally displayed using measurements of quantity or numbers. This type of data are
considered objective because they measure quantities or judgments that are not influenced by feelings or opinions.

Fields related to communication disorders have used the aforementioned quantitative measures to determine the impact of SL. Astin and Sax (1998) examined undergraduate service participants and a non-participant group, as a control, to evaluate their development of civic responsibility, academics, and life skills. Results of the survey indicated that participation in service had positive effects on a students’ sense of civic responsibility in that they are reportedly more committed to helping others and have a desire to serve their communities. Likewise, students who participated in service reportedly had improved leadership abilities and self-confidence. Furthermore, it was shown that these students had improved self-perceptions of their critical thinking skills, ability to resolve conflict, and understanding of community problems. For academics, the researchers hypothesized that SL students would not perform better academically when compared to their non-SL peers because they have to devote more time to the course. However, education related service or SL had positive effects on academic development outcomes, such as GPA and an increase in field knowledge. The results revealed a statistically significant benefit to GPA, albeit small. In another study, Markus et al. (1993) integrated service into two of eight offered political science classes. Using a Likert scale questionnaire at the start and end of the course, the researchers evaluated students' perceived benefit of the experience, personal opinions regarding service and the community, and social and political beliefs. The pre- and post-course scores of the questionnaire revealed that only three of the 15 items significantly changed for non-SL students compared with eight of the 15 items significantly changing for SL students.
More frequently, the SL sections reported that they applied knowledge from the course into new situations. For GPA measures, the SL sections had a mean course grade statistically higher than the non-SL sections. Likewise, Balazadeh (1996) offered a SL and non-SL course in sociology. The results indicated that SL students were able to apply knowledge they learned to the real world and while they performed better than their peers, the differences were not significant. Similarly, Strage (2004) analyzed exam scores for SL and non-SL students in a child development course. When comparing SL students to non-SL students, the resulting grades from the three course exams were almost identical. While final course grades for SL students were 4.8% higher than non-SL peers, the differences were not statistically significant. In a previous study by Strage (2001), SL students outperformed non-SL students on the second and third exams. The greatest differences were seen on essay style questions and exams that were given later in the semester, which may be attributed to the experience SL students had with writing in a reflection journal and being exposed to connecting their SL experience to course content.

Just as related fields apply SL to higher education courses, there are also a few studies in the field of communication disorders that show the effects that SL has on academic performance. Anderson (2008) evaluated the mean cumulative GPA of two sections (i.e., one SL class, one non-SL class) of an undergraduate neurogenics course at the beginning and at the end of the semester. To begin, the sections were deemed comparable as indicated by similar past academic performance. At the end of the course, the non-SL class produced a mean grade on the third exam that was statistically higher than the SL class. Although this suggests that the SL class did not improve their academic performance, they qualitatively affirmed through journal reflections that SL helped them
learn course material in some way (e.g., clinical skills, comfort level with specific populations).

Goldberg et al. (2006) described a SL experience in four graduate level dysphagia courses. All students participated in SL and served as conversation and reading partners to a community partner in need and also performed oral hygiene protocols for a minimum of 15 hours during a semester. In addition to weekly reflections, the students completed two essays, took ten objective quizzes, and responded to a seven question pre- and post-course survey to determine their competencies related to ASHA standards for knowledge in dysphagia. The student self-reported competency ratings from pre-course to the post-course were statistically significant, indicating that the students perceived that they had increased knowledge regarding course material by the end of the semester. Stevens (2009) also used student perceptions of their knowledge related to a graduate augmentative and alternative communication (AAC) course to measure learning outcomes. The students rated their knowledge on each course objective and indicated which vehicle for learning (i.e., class discussion, assignments, reading, service) was most helpful in learning the material. The students reported that their knowledge of course objectives increased from the beginning to the end of the semester. Reportedly, each tool contributed about equally for each learning objective. However, it was clear which tool each student perceived was the most helpful for learning specific objectives when individual student preferences were analyzed. This study demonstrates that learning styles are different for everyone suggesting that students learn course material by incorporating many tools, including SL.
Reflection Measures

Qualitative measures (e.g., reflection) have also been used to evaluate the effects of SL. These types of data are considered subjective measures because they are influenced by personal feelings and opinions. Some have indicated to use caution when using only surveys to represent how much a student has learned. According to Peters (2011), course surveys usually measure satisfaction, not learning. Therefore, the use of reflection in addition to surveys or questionnaires is a useful tool to understand how students have connected their SL experience to course content. Eyler, Giles, and Schmiede (1996) have defined reflection using “The Four C’s”: continuous, connected, challenging, and contextualized. Using this definition, reflection is continuous, connects to academics, increases new thinking, and relates to the course. Furthermore, reflection must be intentional, systematic, and active in order to connect experiences to learning (Kent-Walsh, 2012). Reflection activities include discussion, interviews, journaling, papers, projects, presentations, and answering questions related to reading passages.

Courses related to communication disorders have used a variety of journal reflections and student perceptions of their own learning to determine the effects of SL. As is consistent with many SL courses, Balazadeh (1996) incorporated a journal reflection paper in a sociology course evaluating the students’ perception of their learning. Many students expressed an expansion in their sociological imagination, an increased understanding regarding aging in America, and an instructional gap between teachers and students in public schools. Likewise, Strage (2004) used reflection activities for a child development course. The non-SL students took part in a structured observation and completed a write-up assignment. The SL students were required to complete a
minimum of 20 hours of service in a classroom or school program and write in a reflection journal in place of the write-up assignment. However, no analysis regarding how reflection impacted learning was provided.

Similar to studies within related fields, courses within the communication disorders field have used different qualitative measures varying from journal reflections to student perceptions of their own learning. Peters (2011) taught a children with hearing loss SL course. Students in the course went to a participating school for 10 hours during the quarter to interact with students in an assigned class as a part of their SL requirement. The undergraduate students completed three to four in-class reflections and personal reflections after each school visit. At the onset of the course, the students were asked to define SL, describe how SL was related to the major, and list what they hoped to learn from the experience. At the end of the course, the students were asked to list pros and cons of their SL experience. Based on the reflections, students documented their experience, made observations, and connected the experience to course and major related content (e.g., used knowledge of story grammar structure from a language development class while working with students). Reflection and discussion was used to primarily analyze the SL experience and evaluate the academic benefits of the experiences. In this case, the students made connections between the experience and other courses within the communication disorders major, not necessarily just the course requiring SL.

Similarly, Goldberg et al. (2006) found a positive link between SL and academic learning based on student reports. In a graduate level dysphagia course, students were paired with a communication partner (e.g., conversation and reading partner) and were involved in dysphagia management (e.g., preparing food trays, assisting at meal times)
for 15 hours. These students completed weekly reflective journals describing their SL experiences, wrote about their reactions, and integrated their observations with course learning. They also made comments regarding advantages and disadvantages of their experience. Overall, it was reported that SL gave real-life context to what they learned in class and provided more exposure to dysphagia. Concerns mostly included scheduling and organization issues, not learning of course material. Stevens (2002) used SL as a part of an AAC course. Students were required to complete 20 hours of service by creating AAC materials for specific individuals in need. Through service, the students were given an opportunity to master the course objectives within real life context. At the end of the course, student comments were collected. The comments indicated that SL had a positive impact and allowed the students to apply course knowledge into relevant community activities.

Previous research has demonstrated that SL positively impacts course learning; however, students have also reported other benefits of the experience. In a study by Anderson (2008), 23 undergraduate students in a neurogenics communication disorders class were paired with a communication partner at one of four different skilled nursing facilities. Final journal reflection entries from 21 students were collected and analyzed for common themes regarding how SL impacted learning of course material. Based on student responses, 90% perceived that SL positively impacted learning course content in some way. Of the twelve students who reported that SL helped them learn course material, five of them further described that SL only helped them learn material directly related to the neurogenic communication disorder that their communication partner exhibited. Three more students reported that they learned about other course material as
classmates discussed their experiences. Additionally, over half the students reported a sense of personal growth and an increased sense of career and clinical skills.

In contrast, Kaf et al. (2011) studied attitude changes rather than learning of course content. Graduate speech-language pathology (SLP) and audiology students were paired with communication partners with dementia at nursing homes. Through discussion and journal entries, content analysis was used to assess the students’ changes in attitudes from pre- to post-contact with older adults. Initially, students were concerned they would feel sad about the declining health of residents and the challenge of working with the older population. After SL, students expressed affection toward their communication partner. Pre-SL, 53% of students indicated they thought older adults would be difficult to test and only 16% expressed an interest in working with older clients. Post-SL, 21% of students reported that they thought older adults were difficult to test and an increased number of 21% had a desire to work with older clients, which was interpreted as a positive change in attitudes.

Using a different tactic, Astin et al. (2000) collected data regarding SL experiences through a series of interviews of students and faculty members who participated in SL courses within various disciplines (i.e., business, economics, public policy, education, English, health science, Spanish, speech communication, psychology, and sociology). Information gathered from faculty member interviews included course design, classroom practices, and student learning. Information gathered from student interviews included their perceptions of the service experience. Based on the interviews, both faculty and students appeared to agree on the same ideas. They reported that there was an apparent connection between academic content and service. In addition, they both
indicated that relationships with classmates, faculty, and service recipients (e.g., community) impact learning. Also, they both maintained that SL effects classroom participation. Furthermore, they both agreed that oral and written reflection is important to learning.

Based on student reflections and other qualitative measures, few limitations to SL were presented (e.g., scheduling conflicts). In general, SL has had a perceived positive impact on learning course content. Not only has SL helped connect experience to academics, but it has also impacted personal development, career development skills, communication skills, and attitude changes. Although reflections should not be the only method used in determining the impact of SL on academics, they are a critical piece to understanding the impact, benefits, and limitations of SL as related to each individual course.

**Community Benefit**

The community members that allow students to participate in SL at their sites are considered a major element to the success of SL. However, not many studies elaborate on how the community benefits from SL. Markus et al. (1993) indicated that community need was found through the University of Michigan’s Office of Community Service Learning where they placed students at local agencies. Graduate student teaching assistants contacted the agencies a few times during the semester to ensure that the students were completing their time commitments and that the service they were providing was consistent with course objectives. No further information about the community benefit was provided. Similarly, Goldberg et al. (2006) documented that the Missouri State University’s Citizenship and Service Learning (CASL) office identified
community partners and student placements. The CASL office maintained contact with community agencies, documented their needs, and worked with faculty to place students at an appropriate site. Graduate students in dysphagia were placed at hospitals and nursing homes to provide various services specific to the needs of the site, such as clerical duties, preparation of food trays, assistance at meal times, or being conversation partners to residents. At the end of the term, the community supervisors completed a questionnaire regarding their opinions of the students’ clinical competencies, which were compared to the student’s ratings. No further analyses of community ratings were provided. Likewise, Peters (2011) used Western Washington University’s Center for Service Learning to learn about incorporating SL into a course, identify community partners, and develop methods to measure outcomes of SL. During the first year the course was offered, students and the instructor found an appropriate community partner together. In the following years, one school district was identified as the community partner. The instructor met with the supervisors before the beginning of the term to discuss guidelines and needs. In addition, the instructor maintained contact via e-mail, by telephone, or face-to-face to discuss student progress and to clarify student responsibilities. One prevalent issue was scheduling. However, no supervisors expressed concerns regarding specific students or structure of the SL experience.

Stevens (2002) contacted potential agencies and professionals before the course began, identified a list of sites, and provided a list of projects for the students to choose from. At the end of the course, site supervisors were contacted to determine if the SL experience met their needs. Reportedly, supervisors were pleased with the students and the projects, thought the clients benefited, and indicated that they wanted students to
assist in the future. Generally, SL appears to benefit the community because sites are identified as having needs and they continue to accept assistance from SL students. However, more information regarding a community benefit should be included in the research.

**Purpose and Research Questions**

There is limited research on the effect of Service-Learning on academics related to communication disorders. More research needs to be done to assess whether Service-Learning will benefit the student’s learning of course material. There also needs to be a measure of the community benefit. The purpose of this study is to understand the objective knowledge (i.e., exam grades, assignment grades, and mean course grades) and perceived knowledge of undergraduate students related to neurogenic communication disorders as influenced by a Service-Learning experience. The following questions are addressed:

1. Does Service-Learning positively impact learning of academic content related to neurogenic communication disorders?
2. What are students’ attitudes and perceptions of Service-Learning?
3. Does the community benefit from Service-Learning?
Chapter III: Methodology

Participants and Program Description

Senior undergraduates were required to register for COMD/SHS 451: Neurogenic Communication Disorders for the Communication Disorders (COMD)/Speech and Hearing Sciences (SHS) major as a part of the cooperative program between Eastern Washington University (EWU) and Washington State University (WSU) called the University Programs in Communication Disorders (UPCD). One required section of COMD/SHS 451 was offered during the Spring 2012 semester. The students registered for the only offered section of the course with no prior knowledge that a SL seminar would be an option. Gallini and Moely (2003) described how requiring students to complete service as a part of course requirements can generate negative outcomes. Therefore, at the onset of the course, students were provided the option to self-select into a one-credit SL seminar class entitled COMD498/SHS 490: Service-Learning in Communication Disorders. This additional course allowed for reflection of the SL experience and accounted for the required 20 hours of service. By providing the optional SL seminar course, students who did not want to or could not participate in SL were able to continue with the regular required course without additional requirements. The availability of the seminar class also allowed the lecture portion of the course to be the same for all students. There was a cap of 25 students that could register for the seminar course: COMD498/SHS 490. Of the 55 undergraduate students (53 females, 2 males) who were required to register for COMD/SHS 451, 23 students (23 females, 0 males) self-selected to participate in the SL seminar course. Therefore, all students who wanted to participate in SL were provided the opportunity.
The focus of the neurogenic communication disorders course was to provide a foundational knowledge base of the definitions, etiologies, characteristics, assessment, and treatment of neurological communicative impairments. These communication impairments associated with disturbed neuroanatomy that are encountered in speech-language pathology or audiology fields include: aphasia, traumatic brain injury, dementia, right hemisphere damage, dysarthria, apraxia of speech, and dysphagia. The course objectives stated that, at the conclusion of the course, the student will be able to correlate disturbed neuroanatomy with the probable communicative disorder, describe communication impairments associated with the neuropathology, plan a basic speech-language assessment, and develop treatment approaches for clients evidencing speech, language, or cognitive-communicative impairments. The focus of the SL seminar was to engage the students in meaningful service that benefited the community, provide them with the opportunity to discuss and reflect on their experiences, and assist them in making connections to course content.

As is consistent with the elements of SL, community members participated in the SL experience. Specifically, activity directors from community sites who had previously participated in SL were contacted prior to the beginning of service. Five activity directors at five skilled nursing facilities, located in an urban area in the inland Pacific Northwest, agreed to take a part in SL by allowing up to six students an opportunity to participate at their sites.

Materials

The students were provided with a list of specific academic materials. The course required a textbook entitled *Applied Anatomy & Physiology for Speech-Language*
Pathology & Audiology (Fuller, Pimentel, & Peregoy, 2012). The students were directed to supplemental readings assigned from texts or journals throughout the semester that were available on Blackboard Academic Suite™ or available through the university library. In addition, the students were provided with class lectures and available office hours with two teaching assistants and the instructor. To objectively measure and compare academic outcomes throughout the semester, all students were required to complete four exams, write a six to eight page clinical/research essay about an assigned neuropathology and an associated neurogenic communication disorder, and give individual presentations describing one research article referenced in their papers with a related YouTube© video.

SL students had additional requirements. They were required to provide their own method for documenting their SL reflections (e.g., notebooks, word processors). Reflective journal entries were guided by instructor-led questions (see Appendix A) focusing on the relationship between course material and their service experiences and personal observations. The reflective journals were turned in approximately each week to ensure completion and provide feedback from the instructor. A Service-Learning Agreement (see Appendix B) with a time sheet was also provided to SL students to document their time spent at their selected facilities and to make expectations clear for both the students and community supervisors. In addition, the students were provided with a Special Topics Agreement (see Appendix C) that described the expectations for the seminar course.

In addition to course materials, all students were administered questionnaires. All students (i.e., SL and non-SL students) completed a pre- and post-course Likert scale
questionnaire to rate their perceived knowledge and skills related to neurogenic communication disorders. Both surveys consisted of six questions to which the students indicated their level of knowledge on a scale from 1 to 5 (i.e., 1= not at all knowledgeable, 5= expert clinician). The questions were adapted from the course objectives related to the ASHA Knowledge and Skills Outcomes (see Appendix D). The post-course survey also included a section for students to indicate what tool (i.e., class discussion, assignments/exams, reading, SL) was perceived as the most effective in learning content related to each course objective (see Appendix E).

SL students and participating community members were administered other surveys. In addition to completing pre- and post-course surveys, SL students also completed an American Association of Community Colleges (2004b; 2004c) pre- and post-participation questionnaire regarding general attitudes, beliefs, and perceptions of SL. The pre-service survey included six questions on a 1 to 4 Likert scale (i.e., 1= strongly disagree, 4= strongly agree; see Appendix F). The post-service survey included 22 questions, 17 of which used the same Likert scale as the pre-service survey (see Appendix G). The first six questions on the post-participation survey were the same as the pre-participation survey allowing for a comparison. The last five questions on the post-service survey were related to SL, but did not require a scaled answer and were considered closed-ended questions (e.g., number of hours completed, assigned site). In order to assess whether the community benefited, the site contacts (i.e., activity directors) completed a single American Association of Community Colleges (2004a) post-participation questionnaire to rate their perceived benefit of SL on their community (see Appendix H).
Procedure

One section of the neurogenic communication disorders course was offered at the time of registration for the Spring 2012 semester. The students were then provided an opportunity to self-select into the SL seminar with a cap of 25 students. All students who wanted to participate in SL were allowed in the seminar course as 23 students chose to register for the course. The lecture course was the same for all students as there was only one option. All the course requirements were controlled for similarity except for the SL component. The students who selected to participate in SL were informed of the required one-credit discussion seminar at the onset of the course and were asked to read and sign a Service-Learning Agreement (see Appendix B) before participating at a selected skilled nursing facility. They were also asked to read and sign a Special Topics Agreement that described the expectations of the SL seminar (see Appendix C). The SL seminar course met once a week for 50 minutes to discuss topics related to neurogenic communication disorders, adult populations, and their experiences.

In order for the SL experience to commence, community members needed to be identified. Activity directors from previously participating SL sites were contacted prior to service. An initial meeting with each activity director, the principal investigator, and the research advisor took place to discuss responsibilities and opportunities of the site and students. Site assignments were determined by providing a form for the SL students to indicate their top three site choices. All except three students were assigned their first choice. Each of the five participating sites were assigned between three and six students. Table 2 lists the number of students assigned to each participating site.
Table 2

Service-Learning Site Assignments

<table>
<thead>
<tr>
<th>Site</th>
<th>Number of Students Assigned to Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>5</td>
</tr>
<tr>
<td>B</td>
<td>5</td>
</tr>
<tr>
<td>C</td>
<td>3</td>
</tr>
<tr>
<td>D</td>
<td>6</td>
</tr>
<tr>
<td>E</td>
<td>4</td>
</tr>
</tbody>
</table>

Note. Sites were considered long-term care or skilled nursing facilities.

SL students were assigned to one or multiple communication partners with a neurogenic communication disorder from one of five selected skilled nursing facilities. The students went to their selected facility for approximately two hours per week over a span of 10 weeks for a minimum of 20 hours of service during their final semester as an undergraduate. During their visits, students had varied experiences while acting as conversation partners or assisting during scheduled activities. Weekly reflective journal entries were guided by instructor questions (see Appendix A). Activity directors were contacted a minimum of two times during the semester via email or telephone to check for student progress and if they had any comments or concerns regarding the experience.

At different times, all students and community partners were asked to complete a questionnaire. Students did not give their names or identifying information on any of the administered questionnaires and participation in the research was voluntary. All students completed a pre-participation questionnaire regarding their perceived knowledge related to neurogenic communication disorders during class time (see Appendix D). The SL students also completed a pre-service questionnaire regarding their attitudes and perceptions of SL (see Appendix F). At the end of the course, all students were asked to complete a post-course questionnaire regarding their perceived knowledge related to
neurogenic communication disorders and the most effective tool (i.e., class discussions, assignments/exams, reading, SL) used to learn the material for each objective (see Appendix E). The pre- and post-course questionnaires were used to compare and evaluate whether students’ knowledge increased for each course objective. The section in the post-participation survey that allowed students to indicate the tool that facilitated learning for each objective was used as a reference to determine when a specific tool would be more beneficial to use during future classes. SL students were also given a post-participation questionnaire (see Appendix G). A within-subjects research design was used to evaluate whether the students’ attitudes and perceptions regarding SL had changed. Following the end of SL students’ service, reflection journals were collected. Anonymous pages with responses to journal reflection questions 9b and 10 (see Appendix A) were photocopied and evaluated for pros and cons of the SL experience. The activity directors for each participating facility were given a post-participation questionnaire in person to determine the community benefit (see Appendix H). Each activity director was provided with an envelope with a return address to mail the completed questionnaire to the principal investigator.

In addition to completing surveys, all students were required to complete exams, write an essay, and give a presentation throughout the semester. A between-subjects research design was used to compare the academic performances between the SL and non-SL groups. An independent t-test using Statistical Package for the Social Sciences (Version 19) was conducted to determine differences in mean assignment grades, exam grades, and total course grades. The mean scores of each assignment and exam for each group were compiled and compared to determine whether the SL component had an
impact on academic learning. It should be noted that although all students were considered competent individuals, they were still given protections of privacy by keeping their participation in surveys anonymous, by reviewing their reflection journal entries anonymously, and by using mean scores rather than individual grades when assignment and exam scores were compared.
Chapter IV: Results

Collected data were analyzed to address whether SL impacted academic performance in a neurogenics communication course. In addition, data provided information regarding the students’ attitudes and perceptions of SL and whether the community benefited from SL.

Does Service-Learning Positively Impact Learning of Academic Content Related to Neurogenic Communication Disorders?

Academic performances of SL and non-SL students were compared. Group statistics representing the SL and non-SL group’s academic performance, including the mean grade and standard deviation, are displayed in Table 3. Independent t-tests were conducted for each course requirement to examine differences between groups. However, no significant differences were found. The results suggest that SL may not influence academic performance.

Table 3
Descriptive Statistics for Each COMD/SHS 451 Course Requirement

<table>
<thead>
<tr>
<th>Course Requirement</th>
<th>SL Students</th>
<th>Non-SL Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>M (SD)</td>
</tr>
<tr>
<td>Exam I</td>
<td>23</td>
<td>18.16 (2.42)</td>
</tr>
<tr>
<td>Exam II</td>
<td>23</td>
<td>41.76 (4.77)</td>
</tr>
<tr>
<td>Exam III</td>
<td>23</td>
<td>45.76 (2.74)</td>
</tr>
<tr>
<td>Exam IV</td>
<td>23</td>
<td>44.31 (3.81)</td>
</tr>
<tr>
<td>Paper</td>
<td>23</td>
<td>44.63 (3.21)</td>
</tr>
<tr>
<td>Presentation</td>
<td>21</td>
<td>24.95 (.21)</td>
</tr>
<tr>
<td>Final Course Grade</td>
<td>23</td>
<td>217.41 (13.41)</td>
</tr>
</tbody>
</table>

Note. n=number of students, M=mean grade, SD=standard deviation.
**What are Students’ Attitudes and Perceptions of Service-Learning?**

SL students were given a pre- and post-participation survey regarding their attitudes and perceptions of SL. The surveys were not paired individually. There were 22 out of 23 student responses for the six question pre-participation survey. There were 19 out of 23 student responses for the 22 question post-participation survey. The first six questions from the pre- and post-participation survey were compared using the number of responses for each Likert scale item (given in percentage) as depicted in Table 4. The data in the table represents summed percentage of SL students “Strongly Agreeing” or “Agreeing” to the statement.

Table 4
Questions 1-6 of the Student Service-Learning Survey

<table>
<thead>
<tr>
<th>Question</th>
<th>Pre-Service</th>
<th># of Student Responses</th>
<th>Post-Service</th>
<th># of Student Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have a good understanding of the needs and problems facing the community in which I live.</td>
<td>81.8%</td>
<td>18</td>
<td>89.5%</td>
<td>17</td>
</tr>
<tr>
<td>2. If everyone works together, many of society’s problems can be solved.</td>
<td>95.5%</td>
<td>21</td>
<td>100%</td>
<td>19</td>
</tr>
<tr>
<td>3. I have a responsibility to serve my community.</td>
<td>100%</td>
<td>22</td>
<td>100%</td>
<td>19</td>
</tr>
<tr>
<td>4. I learn course content best when connections to real-life situations are made.</td>
<td>100%</td>
<td>22</td>
<td>100%</td>
<td>19</td>
</tr>
<tr>
<td>5. The idea of combining course work with service to the community should be practiced in more courses at this college.</td>
<td>100%</td>
<td>22</td>
<td>100%</td>
<td>19</td>
</tr>
<tr>
<td>6. I probably won’t volunteer or participate in the community after this course ends.</td>
<td>4.5%</td>
<td>1</td>
<td>10.5%</td>
<td>2</td>
</tr>
</tbody>
</table>
The results from questions 1-6 on the pre- and post-participation questionnaire were comparable. Visual inspection of data demonstrated an increase in positive student attitudes and perceptions of service on the first two questions after participating in SL. This suggests that more students have a better understanding of needs and problems that face the community and more students believe that community problems can be solved if people work together. There was no change on the next three questions as each maintained 100% agreement with the statements. This implies that all students who completed the survey still maintain that they have a responsibility to serve the community, learn course content best when connections can be made to real-life situations, and that combining course work with service should occur in more college courses. As the sixth question is a negative statement, there was a decrease in positive attitudes and perceptions of service, demonstrating that more SL students will not participate in community service in the future. Overall, the results from both pre- and post-participation surveys show that students had more positive attitudes and perceptions towards SL than negative attitudes and perceptions. In addition, the results indicate that the questions on the survey are not sensitive to changes in perceptions.

Results from questions 7-17 provided information regarding student attitudes and perceptions after their service experience ended. Questions 7-17 from the post-participation survey are also represented using the number of responses for each Likert scale item (given in percentage) as depicted in Table 5. The data in the table represents the percentage of SL students “Strongly Agreeing” or “Agreeing” to the statement. It should be noted that there was an incomplete data set for questions 14 and 15, as only 18
out of the 19 students who responded answered these questions. Therefore, the total possible percentage for questions 14 and 15 is out of 94.7%, not 100%.

Table 5

Questions 7-17 of the Student Service-Learning Survey

<table>
<thead>
<tr>
<th>Questions</th>
<th>Percent of Strongly Agree/Agree Responses</th>
<th># of Student Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. The service aspect of this course helped me to understand better the required lectures and readings.</td>
<td>89.5%</td>
<td>17</td>
</tr>
<tr>
<td>8. The service aspect of this course helped me to see how the subject matter I learned can be used in everyday life.</td>
<td>94.7%</td>
<td>18</td>
</tr>
<tr>
<td>9. The service aspect of this course made me aware of some of my own biases or prejudices.</td>
<td>84.2%</td>
<td>16</td>
</tr>
<tr>
<td>10. The service aspect of this course showed me how I can become more involved in my community.</td>
<td>94.7%</td>
<td>18</td>
</tr>
<tr>
<td>11. As a result of my service learning experience, I have a better understanding of my role as a citizen.</td>
<td>84.2%</td>
<td>16</td>
</tr>
<tr>
<td>12. The service I did through this course was not at all beneficial to the community.</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>13. I would have learned more from this course if the time spent doing service in the community had been spent in the classroom.</td>
<td>10.5%</td>
<td>2</td>
</tr>
<tr>
<td><strong>14. I plan to enroll in more courses that offer service learning.</strong></td>
<td>84.2%</td>
<td>16</td>
</tr>
<tr>
<td><strong>15. As a result of my service learning experience, I would encourage other students to take courses that offer service learning.</strong></td>
<td>94.7%</td>
<td>18</td>
</tr>
<tr>
<td>16. The agency/site provided challenging, meaningful, and educational tasks for me to accomplish.</td>
<td>42.1%</td>
<td>8</td>
</tr>
<tr>
<td>17. I received enough help in identifying and selecting service sites and opportunities.</td>
<td>100%</td>
<td>19</td>
</tr>
</tbody>
</table>

Note. **=incomplete data set. Only 18 out of the 19 respondents answered the question. The total possible percentage for questions 14 and 15 is out of 94.7%, not 100%.
Similar to results of the first six questions of the pre- and post-participation survey, visual inspection of data revealed that there was a higher percentage of students that had positive attitudes and perceptions of SL on all questions except one. Many students indicated that the service part of the course allowed them to better understand material being presented in class and make connections between course material and everyday life. The data also exhibit that students became more aware of their own biases and prejudices, that the service portion showed them how to be more involved in the community, and that they had a better understanding of their roles as citizens. The results from question 12 indicate that all the students perceive that the community benefited from their service. More students believed that they learned more from the course by participating in service than spending the time in a classroom. Many students reported that they would enroll in more SL courses in the future. All students that responded to question 15 (18/19 respondents) agreed that they would encourage others to take courses with a SL component. All students indicated that they received enough help in identifying and selecting service sites. Responses for question 16 demonstrated that students had negative attitudes and perceptions regarding their SL experience. Less than half of the students (42.1%) reported that their assigned site provided meaningful, challenging, and educational tasks. However, overall results demonstrate that students had more positive attitudes and perceptions towards SL (post-participation) than negative attitudes and perceptions.

The last five questions on the post-participation survey were close-ended questions that provided information regarding service participation without calculating the number of the same responses. Question 18 asked the students if this was their first
SL experience. The results indicated that seven students had previously participated in a SL course, while 12 students had not participated in SL before. Question 19 asked how many hours of service the student completed. All students met the minimum of 20 hours of service for the course requirement with three students completing between 21 and 23 hours of service. The next question allowed the students to identify the site they were assigned to. Since only 19 out of the 23 SL students completed the post-service survey, not all sites were represented by the total number of students assigned to that site. All (five) students from site A, all (five) students from site B, two students from site C, five students from site D, and two students from site E completed the survey. For question 21, all 19 students indicated that the agency they were assigned to was considered an “Elder care/senior center.” For the last question, the students were directed to circle the appropriate response regarding whether they had completed the pre-service survey. All 19 students indicated that they had completed the pre-service survey.

To offset the inherent bias of survey research, SL students’ journal reflection responses were collected. It should be noted that a comprehensive qualitative analysis was not completed. Responses to SL reflections questions 9b and 10 were photocopied anonymously and reviewed to determine the student perceived pros and cons of the SL experience. Select representative comments regarding student reported pros and cons of the SL experience are provided in Table 6. Based on student comments, the most common perceived limitations of the SL experience included the time requirement and the lack of opportunity to observe a SLP working at the site. Nonetheless, students’ reported advantages of the SL experience greatly outnumbered the disadvantages. Reportedly, SL generally had a perceived positive impact on learning course content,
connecting “real-life” experience to academics, and developing personal, career, and communication skills.

Table 6
Pros and Cons of Service-Learning Experience

| Pros of SL experience                                                                                                                                                                                                 | Cons of SL experience                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| “[Service learning] has actually assisted me by providing me with real life experiences to help view how these neuro diseases can impact an individual’s life.”                                                                                                             | “I do wish I had had the opportunity to observe the SLP. I don’t think speaking to residents is enough to really understand what we have learned. I also need to see it applied.”                                                                 |
| “It was also beneficial when some students would share their reflections in class to allow us insight into their experiences.”                                                                                               | “The only change I can suggest is giving more advice on how to interact with residents.”                                                                                                                                                                                             |
| “It helped so much in my learning process to see first hand the characteristics of these disorders and the variability.”                                                                                                  | “When I first started I was asked to find my own resident to visit with. I found this to be very difficult.”                                                                                                                                                                             |
| “I felt like I was able to connect and build relationships with several individuals, which is very rewarding!”                                                                                                       | “Even though it was only two hours a week it was sometimes still difficult on top of other schoolwork and work to fit it in my schedule.”                                                                                                                                       |
| “I really gained a comfort level working with older people.”                                                                                                                                                             | “It was difficult to visit my resident two hours a week. She fatigued easily.”                                                                                                                                                                                                     |
| “The service learning has allowed me to pull from [class] knowledge and be more understanding, patient, and compassionate with people, not just facing comm. impairments but overall.”                                                      |                                                                                                                                                                                                                                                                                   |
| “It has been a really good experience to answer these [reflection] questions alongside our service-learning so that I can think about and specifically look for behaviors and symptoms of disorders we have discussed in the neurogenics class and other classes.” |                                                                                                                                                                                                                                                                                   |
| “While I was ‘assigned’ one specific resident I was also encouraged to talk to anybody who was willing to chat. I feel like this allowed me to expand my knowledge in regards to neurogenic communication disorders.”                                           |                                                                                                                                                                                                                                                                                   |

Note. Select representative comments were collected from the Service-Learning students’ responses to journal reflection questions 9b and 10. Comments were considered representative when two or more students reflected on the same topic.
Does the Community Benefit from Service-Learning?

Each agency contact/activity director for participating facilities was given a post-participation questionnaire to determine the community benefit (see Appendix H). All activity directors completed the questionnaire and returned it to the principal investigator through mail. There were 13 questions on the survey. The last question allowed the activity directors to indicate the type of site they are considered. The first twelve questions were represented using Likert scale items. All sites either indicated that they “Strongly Agree” or “Agree” to every statement. Thus, each community partner indicated that the students were an asset to their organization, were reliable in performing duties, were sensitive to the clients, understood the organization’s mission, and demonstrated attitudes of an effective citizen. The activity directors also reported that their organization understood the difference between volunteerism and SL and that they provided challenging, meaningful, and educational tasks for the students. They also indicated that the amount of time to supervise the students was reasonable and that there was sufficient communication between the college SL team (principal investigator and course instructor) and their organization. The activity directors indicated that the students had a positive impact on their community needs and that the students’ work benefited the clients, as well as the students. Finally, each activity director expressed that they want to continue to have SL students work with their site. Each community partner wrote comments regarding the experience. Select comments are displayed in Table 7. Overall, the SL experience benefited the community by helping meet a community need.
Table 7

Community Partner Comments Regarding Service-Learning Experience

<table>
<thead>
<tr>
<th>Select Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>“We enjoyed working with the students. The residents enjoyed the one to one.”</td>
</tr>
<tr>
<td>“I hope the students enjoyed their service-learning hours. I understand that two hours a week is a lot to fill by visiting alone and am glad many wished to help with our group activities.”</td>
</tr>
<tr>
<td>“The students were a tremendous help to our organization who showed compassion toward our residents and were very professional in their action and leadership abilities. It was a pleasure to have the students here and our contact Ricki K. was very helpful as well. We look forward to having students here again in the future.”</td>
</tr>
</tbody>
</table>
**Chapter V: Discussion**

The purpose of this study was to determine the impact of learning academic content related to neurogenic communication disorders based on objective measures (i.e., exam grades, assignment grades, and mean course grades) and perceptions of performance. In addition, this study intended to identify the attitudes and perceptions of the students regarding their SL experience. Furthermore, this study was used to determine if the community benefited from the service.

**Impact of Service-Learning on Academic Performance**

As a part of this study, SL and non-SL students were compared based on mean exam, assignment, and total course grades. The results from exams, assignments, and total course grades appeared not to be sensitive as none of the seven measures were significantly different between groups. However, based on mean percentage grades SL students performed better on five out of the seven measures (i.e., Exam I, Exam II, Exam III, Paper, Final Course Grade). Balazdeh (1996), Strage (2004), and Strage (2001) reported similar findings to this study in that SL students performed better academically, but not significantly. SL students may have performed better based on mean percentage grade because they were able to make connections between their service and course content. However, it may not have been significant because all students strive to perform well, not just students who participate in SL. In addition, undergraduate students in the communication disorders field may have an inherent expectation that they need to perform well on course assignments and exams, particularly if they intend on applying to graduate school. Thus, using objective measures such as grades may not be the most
sensitive approach to determining the academic impact of SL. Therefore, it is advantageous to include a self-perception rating as to how much the student perceives they have learned. In addition, perhaps the goal of SL is to focus on increased course knowledge and connection to the real-world instead of differences in grades. If so, researchers may want to evaluate how students are empowered from the experience (e.g., not nervous when first begin clinic work during graduate school).

Following are other considerations that may impact the expectations of academic performance. From one point of view, the additional time spent completing the required service may decrease the amount of time students study for academic assignments or exams, suggesting that SL students may not perform better than non-SL students. However, previous non-communication disorders studies reported that SL students either had significantly higher mean course grades or at least performed better than non-SL peers (Markus et al., 1993; Balazedeh, 1996; Strage, 2004). The students in these studies took introductory courses. Therefore, it is possible that these students had a greater interest in connecting service to course content because they began participating in SL at the beginning of their courses rather than at the end of their undergraduate career as was done in the current study. Thus, participating in SL earlier in undergraduate careers and the amount of time spent completing service may have an impact on academic performance. However, it is likely that there will not be many significant grade differences demonstrated by students in the communication disorders major.

**Attitudes and Perceptions of Service-Learning**

The pre- and post-participation surveys distributed to SL students provided insight into the students’ attitudes and perceptions of SL. The responses to the first six questions...
on the surveys were comparable as they were the same questions (See Table 4 for results). The first five questions either had an increase in positive attitudes regarding SL from pre- to post-participation or stayed the same at 100% agreement with the statement. As the sixth question is stated with a negative, the desired outcome would have been a decrease in agreement with the statement. However, the sixth question demonstrated a slight increase in the statement indicating that more SL students would not participate in community service in the future. This may have been due to a dislike for this experience, however, based on the survey responses there were overall more positive attitudes and perceptions regarding SL. Although, more than half the SL students indicated that the site did not provide challenging, meaningful, and education tasks for them (Question 16). Thus, it is possible that some students decided that they would not participate in service at this type of site (i.e., skilled nursing facility) in the future. In addition, this may have been reported because the students were in their last term as undergraduates and did not anticipate completing more community service with a SL component. However, for question 14, almost all the SL students indicated that they would enroll in SL courses in the future. It may be possible that some students misread the statement as only two were phrased using a negative.

Although there was no comparison for questions 7-17 from the post-participation survey, the results provided information regarding the students’ attitudes and perceptions after the SL experience (See Table 5 for results). The responses from question 13 indicated that two students (10.5% of survey participants) would have learned more if they had spent more time in the classroom rather than doing service. As Stevens (2009) suggested, this may have been due to the varied learning styles that students have in that
students learn the course material by incorporating many tools. In the case of those students who indicated that they would have learned more in the classroom, SL may not have been their best tool in learning course content. Results to question 16 were considered to consist of mostly negative attitudes and perceptions towards SL. As was stated earlier, more than half the SL students indicated that the site they were assigned to did not provide tasks that were challenging and educational. This is interesting because all students indicated that the community benefited from their service, but less than half agreed that their tasks were meaningful. Perhaps the students should have taken more responsibility in asking the activity directors what else they could do at the site. In the weekly seminar, the students were encouraged to create their own activity to implement at the site, assist at activities, meet with multiple communication partners (depending on the needs at the site), and talk to the activity directors to see how they could make their experience better. The students were also given the opportunity to discuss problems during the SL seminar and were able to contact the researcher with any questions, comments, concerns, etc.

In addition to completing the pre- and post-participation surveys, the SL students also completed weekly journal reflections. Some questions were reviewed to gain more information regarding the students’ perceptions of SL. Overall, the students wrote more positive statements about SL than negative statements. As has been found in previous research, students stated that they connected course content to the real-life experience, learned from others, built relationships, and felt more comfortable interacting with the geriatric population. Students also had positive experiences responding to the journal reflection questions.
Based on the reflections, two limitations to the experience seemed to have an impact on several students. First, some students reported that they would have liked to observe the SLP at the site. One drawback to this is that when the students are observing a SLP they are not participating in service. Therefore, observing the SLP would not be considered SL. In the future, it could be suggested to the students that if they want to observe the SLP they can contact the SLP at the site to set-up an observation time, but in addition to their service. Another suggestion could be that the students ask the SLP if there is any “homework” or practice they could do with the resident outside of treatment. Collaboration with the SLP would assist students in developing meaningful activities and providing meaningful service. The other limitation to SL appeared to be the time commitment. Although the students were aware of the time requirement of 20 hours before registering for the SL seminar course, for some it seemed too extensive. At least one student reported difficulty interacting with her communication partner for two hours per visit due to the resident’s fatigue. It was suggested that students break-up the two-hour service required per week into 2-one hour sessions, meet with multiple communication partners, or assist in activities. Another reason given was that the time requirement was too much on top of other commitments. It was suggested that students incorporate the service time into their weekly schedule so they completed it at the same time each week as if it was considered a class. Overall, the time requirement seemed reasonable, as previous researchers have used between 8 hours (Anderson, 2008), 10 hours (Peters, 2011), 15 hours (Goldberg et al., 2006; Kaf et al., 2011), and 20 hours (Markus et al., 1993; Stevens, 2002; Strage, 2004).
Community Benefit from Service-Learning

All five activity directors who participated in SL reported positive experiences. Based on the results of the post-participation survey, the participating community partners would like to continue working with the university in the future. Therefore, it is assumed that the community partners benefited from SL and that a community need was met during the time SL took place.

Implementation of Service-Learning

In order to determine how well SL was implemented into the neurogenics communication disorders class, the eight elements of SL described by Kent-Walsh (2012) will be reviewed. The first element of SL as described by Kent-Walsh (2012) is academic content connections. The current study was able to control for no differences in lecture content that both groups of students received since all students were in the same lecture class. However, for those in SL it is unknown how well the SL seminar topics matched up to the neurogenics course lecture. It is likely that some of the topics did not align. Therefore, it is unknown how this impacted the students’ ability to make connections from SL to the course. Service activities the students participated in varied based on the site. However, they were related to course objectives in that they were paired with one or multiple communication partners with neurogenic communication disorders.

The second element of SL is active reflection (Kent-Walsh, 2012). The SL students were required to write in a weekly reflection journal answering two structured questions regarding academics and personal experiences (Appendix A). The reflection questions enabled the students to connect academic content to their SL experiences. For this study, the benefits of having structured reflection questions compared to just
allowing the students to reflect on anything they wanted to, saw, or experienced are unknown. In one way, it may be perceived as giving the SL students an advantage; however, the purpose of SL is to be able to connect service to academics. The questions gave them direction regarding what to observe which assisted in learning, but the students were also encouraged to discuss other subjects that they considered to be valuable.

Authentic community needs represents the third element (Kent-Walsh, 2012). It has been suggested that SL should use non-profit organizations where community needs are better defined (M. Ayers, personal communication, February 1, 2013). Although the SL settings were for profit, previous community partners were identified, contacted, and agreed to participate in SL. The community partners were deemed to have a community need, which included assistance in activities and spending quality time with residents. Students assisted in meeting those needs for two hours per week for ten weeks.

The fourth element of SL is student development (Kent-Walsh, 2012). Students were involved in activities that allowed them to observe and become educated about various communication disorders. They also provided a service that allowed them to participate in activities that could potentially build observation and leadership skills. In the post-participation survey, a few SL students suggested that they should observe the SLP working with their assigned resident. This would be beneficial for the students to understand what an SLP does in that setting; however, it is not suggested as an activity to complete during SL hours, as it would take away from their participation.

The fifth element of SL is defined as diversity of settings and population (Kent-Walsh, 2012). Service was provided to diverse populations ranging from TBI patients, stroke patients, as well as patients with vision deficits. Although service was provided at
multiple locations, they were all considered skilled nursing facilities. Thus, diverse settings were not offered.

Meaningful service accounts for the sixth element of SL (Kent-Walsh, 2012). Service allowed for development of critical thinking skills because the students were responsible for participating in conversations or varied group activities (e.g., church service, knitting, ice cream socials). The reflection questions also provided students with opportunities to develop critical thinking skills by thinking about and participating in a new environment. Based on 100% agreement with every statement and comments from the community partner post-participation surveys, it was clear that the community was improved or benefited from student service. Refer to Table 7 for community partner comments.

Reciprocity is the seventh element of SL (Kent-Walsh, 2012). Based on the responses from the post-participation survey for students and the post-participation survey for the community, there was a shared community benefit. Students and community partners reported that they made a difference and the service that was provided was beneficial.

The final element of SL is student voice (Kent-Walsh, 2012). Students were able to direct their own learning. Students were encouraged to develop their own activities for the whole site to participate in, but no students took the initiative to do this. For the most part, students were able to decide if they wanted to help with activities or have multiple communication partners. Some sites preferred having one-to-one assignments. As this was their community need, some students remained assigned to one partner. Students
were also encouraged to use multiple modes for learning (e.g., textbook, online videos, other reading materials).

Overall, these elements of SL were satisfied during the semester. One element of SL that could have been strengthened was diversity. In the future, using the university’s SL office could support this element by enabling more settings other than skilled nursing facilities to be used. On the whole, there was successful implementation of SL in this undergraduate neurogenic communication disorders course.

**Clinical Implications**

Mean grades of assignments, exams, and the overall course may not be the best measure to use to determine the significance of SL. In this study, the SL and non-SL groups had similar grades. Thus, SL may not have an impact on academic performance, but may have an impact in the future. The benefits of SL for the community partners and residents were immediate, as indicated by post-participation surveys. Students may see benefits of completing a SL experience as they enter graduate school or enter related work. Also, students may see benefits in different ways. Some may be more prepared to work with the geriatric population. Others may have developed communication skills necessary to work with varied populations. In order to determine the actual impact and implications of SL for each individual student, follow-up surveys would need to be distributed.

**Limitations and Future Research**

Initially, it would have been useful to understand who the groups (SL or non-SL) were. For future research, a survey to describe the groups in more detail would be simple to add to the pre-course survey. As suggested by Gallini and Moely (2003), within the
same questionnaire administered to the students, students could be asked to indicate their
gender, age, race, year in school, GPA, and previous community service or SL
experiences. The survey could have asked the students why they did or why they did not
choose to participate in SL. This would have helped identify other students that were
interested in participating in SL, but were unable to due to other engagements. Whether
or not students currently participate in service and the type of service the students have
been involved in would also be a useful question to ask. Another interesting question
could have been what their academic performance has been up to this point (e.g.,
estimated overall GPA, COMD GPA). This question may have indicated what kind of
student opts to participate in SL and how comparable the groups’ grades are at the
beginning of the semester. This portion of the survey would provide information to better
understand the groups before the course and service began.

An important element to improve is the diversity of SL experiences. At the
beginning of the Spring 2012 semester, five community partners who had previously
participated in SL were contacted and agreed to participate in SL. In the future, it may be
advantageous to determine if other local skilled nursing facilities or rehabilitation
agencies want to participate in SL. Thus, it may be beneficial to use the university’s
office of SL as was used in previous studies (Markus et al., 1993; Goldberg et al., 2006;
Peters, 2011). This would allow for more sites to be approached, more sites to be
identified as a community partner in need of service, more opportunities for students to
participate, more choices of locations and times for students, and more efficient
paperwork distribution. This suggestion did occur during the Spring 2013 semester. In
addition to the five skilled nursing facilities that participated in SL last year, three more
sites were added, including an adults with disabilities site, a rehabilitation site, and a Veteran’s home.

In addition to evaluating the differences in mean course grades between groups, this study included a survey to determine the student perceived knowledge from pre- to post-course and which tool (i.e., class discussion, assignments/exams, reading, or service-learning) was most helpful in learning each course objective. The hypothesis was that SL students would perceive that they had gained more academic knowledge than the non-SL students. Although all students were given a pre- and post-course questionnaire, data were not analyzed due to unsuccessful directions and implementation of the survey. The pre- and post-course surveys were distributed to all students without identifying between the SL and non-SL groups. Overall, the results demonstrated that SL and non-SL students as a whole perceived they had increased knowledge in all course objectives from the beginning to the end of the course. However, there was no group comparison. This is a significant limitation in that this study only compared mean grades and was unable to include any possible differences in perceptions of academic performance. If these surveys had been distributed appropriately by identifying between groups (e.g., yellow surveys to SL students, white surveys to non-SL students) then there would have been comparison data to determine which group perceived that they had improved more than the other and on what objectives/course content (e.g., dysarthria, dysphagia). Since objective assignment and exam grade data was insignificant, perceived academic performance would be valuable to understand which group perceived that they had learned more. See Appendix E and Appendix F for an example questionnaire to use in the future, which can then be tailored to fit the course objectives. For the second part of the post-course survey,
students were asked to identify the best tool for learning the course objective. Some students choose multiple tools for one objective while others choose only one tool per objective. Stevens (2009) allowed her graduate AAC students to identify “…any and all vehicles for learning” (p. 20). However, this may dilute the meaningfulness of this measure. When using a survey to identify the tool that is most helpful for learning each objective, it is recommended that only one tool be identified per objective or allow the students to rate the tools from 1-4 (e.g., 1=most helpful, 4=least helpful). This would provide information regarding the most useful tool for each course objective. In addition, this would allow for a comparison of what tools were more useful for SL students compared to non-SL students. See Appendix F for an example questionnaire that can be used to measure the most helpful tool. Whichever direction the researcher decides to take, the expectations of the students must be clear before distributing the survey. Data on the most helpful tool in learning course objectives would be useful for future instructors to determine how course content is best learned.

For the pre- and post-participation surveys that the SL students took, results would have been stronger if all SL students were present during the distribution of the surveys. Although there was a low number of participants (23 students) in SL, the researcher was unable to obtain 100% participation. For the pre-participation survey, 22 out of 23 students (95.6%) responded and for the post-participation survey, 19 out of 23 students (82.6%) responded. This may have impacted the results.

Other limitations of SL may have included the self-selection into the course and not having two instructors. Students were able to self-select into the SL seminar course. This may have created a biased group in that it is unknown the type of student that opted
to participate. In addition, the course instructor and SL seminar instructor were the same. On one hand, this could be seen as a positive benefit in that the style of teaching was the same. On the other hand, the instructor had to be aware of not assisting the SL students in a way that would “teach to the test.” If a different instructor facilitated the SL seminar course, the course instructor could more readily include questions on exams that she chose not to because she knew that the SL class had discussed it. In addition, the course instructor could then include questions on exams that could assist in evaluating SL versus non-SL students’ critical thinking and problem solving skills. A rubric would have to be created to decrease subjectivity of grading.

Finally, it is recommended to complete a follow-up survey with the SL students if possible. The researcher would have to obtain Institutional Review Board (IRB) approval and assemble a list of contact information in order to complete a follow-up survey. For example, the SL students who completed the seminar and are currently in graduate school could be tracked academically. These students could be evaluated for performance in neurogenic and adult population classes to see if there was an academic benefit. In addition, it is suggested that the survey be completed at least one to two years after the students completed the SL experience. The main objective of this survey would be to ascertain how SL has impacted the student since taking the course. Questions could range from the perceived benefits of SL, how SL has helped with graduate level coursework, how SL has helped with clinic work, how SL has altered their civic engagement, and how the experience contributed to the students’ abilities (e.g., life skills, communication skills, academics, clinic experience). The primary question would be
whether or not the student perceived that SL impacted them in some way. This would add to the research regarding students’ attitudes and perceptions of SL.

Future research suggestions were developed based on limitations of this study. First, it would be beneficial to include a section on an administered survey to understand the groups. Students must be provided with the directions necessary to complete any distributed survey. It is recommended to give follow-up surveys to determine the impact of SL since taking the course. Finally, in order to implement SL successfully, all elements of SL should be met.
References


University.


Appendix A

Journal Reflection Questions

1. Regarding your Service-Learning placement:
   a. What are you most excited about?
   b. What are your concerns?

2. a. Observe a resident’s limbs and posture. Do they have fine motor skills (e.g., writing, manipulating small objects)? Do you observe any changes in muscle tone? Are they ambulatory?

   b. What did you do on your most recent visit? Did you feel your time at the facility was “well spent”? Why or why not? What would you do differently?

3. a. Observe a resident’s hearing abilities during your interaction with him/her. What behaviors signal if they can/cannot hear? Do they have/wear hearing aids? What role does their environment play in regard to their hearing (a facilitator or a barrier)?

   b. What would you change about the long-term care facility if you were in charge and not limited by financial concerns?

4. a. Choose one resident that you are “assigned” or have interacted with: What is their medical diagnosis(es)? How may that medical problem result in a communication impairment?

   b. What feelings/thoughts seemed most strong to you on your most recent visit to the long-term care facility?

5. a. Observe a resident’s vision. Specifically, how do their eyes look (e.g., clear? Cloudy? Tilting of eyes, droopy eyelid?); eye gaze, eye contact while you are talking to them? Do they have glasses and do they wear them? Are they able to read and visually “get around” the facility? What does it make you think of regarding the visual system?

   b. Have your communication skills/interaction style changed since you first “visited” with your resident(s)?
6. a. Observe your resident’s language. Comment specifically on the four language modalities (verbal expression, graphic expression, auditory comprehension, reading comprehension). In addition, comment on their use of grammar and vocabulary (content).

b. How would you feel should your resident die?

7. a. Based on your interactions as well as general observation of residents at your service-learning setting, comment on “right-hemisphere skills” (e.g., emotional expression via facial affect and speech prosody, visual spatial skills, abstract thought and inference, pragmatic abilities).

b. Think of the relationship you are developing with your resident(s). What is something personal* you know about your resident? What is something personal that you have shared about yourself with your resident?

*interests, likes, desires from past, present or future

8. a. Choose one of the following cognitive processes: Attention or Memory. Now choose one of the levels of attention or types of memory. Define that and observe for that behavior in your resident(s).

b. Would you be “o.k.” with one of your Grandparents being a long-term resident of the facility you visit? Why or why not?

9. a. Observe your residents speech abilities. Specifically, listen for breath support and note the length of their utterances and the loudness of their speech. Listen also to their voice quality- Is it breathy, harsh, or tense? Is their resonance normal? If not, how does it sound? Is their articulation precise or is their speech characterized by imprecise consonant production? Lastly, how is their speech prosody- Naturalness?

b. How has your Service-Learning experience related to the COMD major/Neurogenics (COMD 451/SHS 451) course?

10. What were the pros/cons of your Service-Learning experience? What do you wish was different? What would you keep the same?
Appendix B

Service-Learning Agreement

Service-Learning Agreement

<table>
<thead>
<tr>
<th>Student Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Address:</td>
</tr>
<tr>
<td>Local Phone:</td>
</tr>
<tr>
<td>Course:</td>
</tr>
<tr>
<td>Instructor:</td>
</tr>
<tr>
<td>Site (agency or organization):</td>
</tr>
<tr>
<td>Supervisor:</td>
</tr>
<tr>
<td>Days and times student will be at agency:</td>
</tr>
</tbody>
</table>

What is Service-Learning?

Service-Learning is a teaching approach integrating academic instruction with community service that engages students in civic responsibility, critical and creative thinking, and structured reflection.

This Service-Learning Project LEARNING AGREEMENT is designed to:

- Assist the student and agency in understanding the learning objectives for the course.
- Clarify the activities in which the student will be involved at the agency in relation to the learning objectives.
- Insure that both the student and the agency are aware of their responsibilities as partners in this service-learning project.

Course Learning Objectives (see syllabus)

1. 
2. 
3. 
4. 

Agency Objectives and/or Activities (Agency and student should collaborate here to meet course objectives)

1. 
2. 
3. 
Service-Learning Agreement

Integration Plan (How will you, the student, connect your activities at the agency to your course content and vice versa? *Check out the assignments related to this project in your course syllabus.)

1. 
2. 
3. 

What do you as a student hope to learn during this experience?

1. 
2. 
3. 

FINAL AGREEMENTS:
I agree to honor the minimum commitment required for the service-learning option in my class, as well as any of the additional training and/or time requirements of my service-learning site detailed by the course syllabus and the agency/school representative. I also agree to contact my professor or the Students Offering Service office should I have any concerns during this project.

Student Signature: ___________________________ Date: ______________

I agree to provide direction and guidance for the Eastern service-learning student. I also agree to contact the Students Offering Service office should I have any concerns during this project.

Agency Signature: ___________________________ Date: ______________

Approved by (Faculty signature): ___________________________ Date: ______________

Time Sheet (Please track your hours and submit this form to your instructor at the end of the term)

<table>
<thead>
<tr>
<th>Date</th>
<th>Hours</th>
<th>Supervisor’s Initials</th>
<th>Date</th>
<th>Hours</th>
<th>Supervisor’s Initials</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

To my knowledge, the above numbers are a true reflection of the hours worked by the student.

Supervisor ___________________________ Student ___________________________
Appendix C

Special Topics Agreement

STUDENT PROPOSAL FOR A SPEECH AND HEARING SCIENCES 490/
COMMUNICATION DISORDERS 490(41)
(SPECIAL TOPICS: LETTER GRADING)

Student’s Name ____________________________ Semester Spring 2012

Campus Address  Spokane RPT campus, HSB  Phone ____________

Faculty Supervisor  Jane Pimentel, PhD  Credit 1

Project Title  Service Learning in Communication Disorders

Description. Include average number of hours per week devoted to project, plan for supervision, goals and benefits, plan for completion, and resources required.

This is a discussion-based seminar revolving around student’s service in the community. The student will complete a minimum of 2 hrs/week of service for a minimum of 10 weeks at a local long term care center under the direction of the Activities staff. Students will be given the opportunity to interact with residents who have communication disorders caused by neurologic impairments (e.g., stroke, Parkinson’s disease, multiple sclerosis, dementia). The one time/week seminar will require active participation bringing to discussion experiences from their service and using those experiences to develop questions and clinical insights regarding the communication disorders (e.g., aphasia, dysarthria, cognitive-communicative impairment). In addition, the students will discuss, based on readings, the strategies and respect required when communicating with elders that have impairments.

Use of reflection activities, assignments, and discussion will assist in connecting service to learning objectives of a companion course all students are enrolled in (SHS/COMD 451: Neurogenic Communication Disorders).

GOAL

Through active learning (service) the students will achieve academic benefit in COMD 451 as reflected in course grades and learning perceptions.

Assignments

A reflection journal will be kept throughout the semester responding to questions assigned regarding academic knowledge and feelings associated with the service. Students will be required to read and role-play strategies from Talking with Your Older Patient (National Institutes of Health). Lastly, each student will locate one clinical tutorial article inspired by their service and present the information in the seminar.

Method of Termination. Include the performance criteria upon which the grade will be based.

The following methods will be used to evaluate the student’s work: Active participation during seminar, meeting minimum number of service hours (20), presentation (1), completing reflections (20).

Submitted by: ____________________________ Date: ______________

Approved by: ____________________________ Date: ______________

Department Chair: ________________________ Date: ______________
Appendix D

Pre-Course Survey to Determine Student Perceived Knowledge on Course Objectives

Likert Scale Used for Student Knowledge Pre- and Post-Test on Course Objectives

<table>
<thead>
<tr>
<th>Not At All Knowledgeable</th>
<th>Somewhat Knowledgeable</th>
<th>Knowledgeable</th>
<th>Very Knowledgeable</th>
<th>Expert Clinician</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Outcomes based on: ASHA Knowledge and Skills Outcomes (Course Objectives)</th>
<th>Indicate how knowledgeable you are for each objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>How well can you relate lesion site(s) with the probable communication disorder(s)?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>How well can you describe the medical etiologies associated with neurogenic communication disorders?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>How well can you define aphasia and differentiate the types of aphasia?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>How well are you able to compare and contrast cognitive-communicative impairments associated with traumatic brain injury, right hemisphere damage, and dementia?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>How well can you define the motor speech disorders (dysarthria and apraxia of speech) and differentiate the types of dysarthria?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>How well can you define dysphagia?</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

Please provide additional comments on how service learning impacted your learning of the course material?
Appendix E

Post-Course Survey to Determine Student Perceived Knowledge on Course Objectives/ Most Helpful Tool Used for Learning Course Objective

Likert Scale Used for Student Knowledge Pre- and Post-Test on Course Objectives

<table>
<thead>
<tr>
<th>Not At All Knowledgeable</th>
<th>Somewhat Knowledgeable</th>
<th>Knowledgeable</th>
<th>Very Knowledgeable</th>
<th>Expert Clinician</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**Learning Outcomes** based on: ASHA Knowledge and Skills Outcomes (Course Objectives)

| How well can you relate lesion site(s) with the probable communication disorder(s)? | 1 | 2 | 3 | 4 | 5 | CD | A/E | R | SL |
| How well can you describe the medical etiologies associated with neurogenic communication disorders? | 1 | 2 | 3 | 4 | 5 | CD | A/E | R | SL |
| How well can you define aphasia and differentiate the types of aphasia? | 1 | 2 | 3 | 4 | 5 | CD | A/E | R | SL |
| How well are you able to compare and contrast cognitive-communicative impairments associated with traumatic brain injury, right hemisphere damage, and dementia? | 1 | 2 | 3 | 4 | 5 | CD | A/E | R | SL |
| How well can you define the motor speech disorders (dysarthria and apraxia of speech) and differentiate the types of dysarthria? | 1 | 2 | 3 | 4 | 5 | CD | A/E | R | SL |
| How well can you define dysphagia? | 1 | 2 | 3 | 4 | 5 | CD | A/E | R | SL |

**Indicate how knowledgeable you are for each objective**

**How objective was learned**
- Class Discussion= CD
- Assignments/Exams= A/E
- Reading= R
- Service-Learning= SL

**Please provide additional comments on how service learning impacted your learning of the course material?**
Appendix F

Student Service Learning Survey: Pre-Service

COLLEGE
STUDENT SERVICE LEARNING SURVEY
Pre-Service

This survey is designed to measure general attitudes and perceptions of service learning students. This information will be used to improve and enhance the college’s service learning program.

Course Number: __________________________  Today's Date: _________________________

Major: ________________________________

Please respond as honestly as possible, relying on your current beliefs or attitudes toward the particular issues raised. Indicate your level of agreement with each statement by circling the appropriate choice.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have a good understanding of the needs and problems facing the community in which I live.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. If everyone works together, many of society’s problems can be solved.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. I have a responsibility to serve my community.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. I learn course content best when connections to real-life situations are made.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. The idea of combining course work with service to the community should be practiced in more courses at this college.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6. I probably won’t volunteer or participate in the community after this course ends.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Comments:________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________

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http://www.aacc.nche.edu/Resources/aaccprograms/horizons/Pages/curriculumtools.aspx
Appendix G

Student Service Learning Survey: Post-Service

This survey is designed to measure general attitudes and perceptions of service learning students. This information will be used to improve and enhance the college's service learning program.

Course Number: ___________________________ Today’s Date: ___________________________
Major: ___________________________

Please respond as honestly as possible, relying on your current beliefs or attitudes toward the particular issues raised. Indicate your level of agreement with each statement by circling the appropriate choice.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have a good understanding of the needs and problems facing the community in which I live.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. If everyone works together, many of society's problems can be solved.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. I have a responsibility to serve my community.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. I learn course content best when connections to real-life situations are made.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. The idea of combining course work with service to the community should be practiced in more courses at this college.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6. I probably won’t volunteer or participate in the community after this course ends.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>7. The service aspect of this course helped me to understand better the required lectures and readings.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>8. The service aspect of this course helped me to see how the subject matter I learned can be used in everyday life.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>9. The service aspect of this course made me aware of some of my own biases or prejudices.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>10. The service aspect of this course showed me how I can become more involved in my community.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>11. As a result of my service learning experience, I have a better understanding of my role as a citizen.</td>
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<td>3</td>
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<tr>
<td>12. The service I did through this course was not at all beneficial to the community.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>13. I would have learned more from this course if the time spent doing service in the community had been spent in the classroom.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>14. I plan to enroll in more courses that offer service learning.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>15. As a result of my service learning experience, I would encourage other students to take courses that offer service learning.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>16. The agency/site provided challenging, meaningful, and educational tasks for me to accomplish.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>17. I received enough help in identifying and selecting service sites and opportunities.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

18. This was my first service learning experience. (Please circle the appropriate response)
   a. Yes   b. No

19. How many service hours did you complete through this course assignment? _________

20. Where did you do your service learning assignment? _______________________

21. With what type of community agency or organization did you do your service learning assignment? (Circle all that apply)
   a. K-12 school
   b. Child/youth organization
   c. Social service agency/organization
   d. Elder care/senior center
   e. Faith-based organization
   f. Health agency/organization
   g. Environmental agency/organization
   h. Arts/cultural organization
   i. Animal shelter
   j. Local government
   k. Other (please specify)________

22. Did you complete the service learning pre-service survey? (Please circle the appropriate response)  a. Yes   b. No   c. Not Sure

Comments:________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________
________________________________________________________

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Appendix H

Community Partner Service Learning Survey

This survey is designed to measure general attitudes and perceptions of service learning community partner organizations, agencies, and/or schools. This information will be used to improve and enhance the college’s service learning program.

Organization Name: ___________________  Today’s Date: ___________________

Please respond as honestly as possible, relying on your current beliefs or attitudes toward the particular issues raised. Indicate your level of agreement with each statement by circling the appropriate choice.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The college’s service learning students (&quot;service learners&quot;) were an asset to our organization.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. Our organization provided challenging, meaningful, and educational tasks for service learners to accomplish.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. The college’s service learners were reliable in performing their assigned duties.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. The service learners were sensitive to the diversity of our clients/students.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. The service learners understood our organization’s mission as part of the greater community.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6. The service learners had a positive impact on our organization’s efforts to meet community needs.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>7. The service learners’ work benefited our organization’s clients/students and/or mission.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>8. The service learners exhibited attitudes of an effective citizen.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>9. The amount of time needed to supervise the service learners was reasonable.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>10. There has been sufficient communication between the college’s service learning staff and our organization.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>11. We want to continue to have the college’s service learners work with our organization.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>12. Our organization’s staff understands the difference between volunteerism and service learning.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
13. Please circle the appropriate category that most accurately reflects your community agency/organization.
   a. K-12 school
   b. Child/youth organization
   c. Social service agency/organization
   d. Elder care/senior center
   e. Faith-based organization
   f. Health agency/organization
   g. Environmental agency/organization
   h. Arts/cultural organization
   i. Animal shelter
   j. Local government
   k. Other (please specify)

Comments:
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

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VITA

Author: Ricki A. Konnerup

Place of Birth: Camano Island, Washington

Undergraduate Schools Attended: Western Washington University
Washington State University

Degrees Awarded: Bachelor of Arts in Communication Sciences and Disorders, 2011, Western Washington University


Clinical Practicum, University Hearing and Speech Clinic, Spokane, Washington, 2011-2012