SOCIAL VALIDATION SURVEY ON SPEECH-LANGUAGE PATHOLOGISTS IN THE SCHOOLS

By

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SOCIAL VALIDATION SURVEY ON SPEECH-LANGUAGE PATHOLOGISTS IN THE SCHOOLS

Abstract

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The purpose of this study was to socially validate the roles and performance of speech-language pathologists (SLPs) in the schools through the examination of educational professionals’ opinions. Eighty-nine classroom and special education teachers, principals, psychologists and para-educators completed an online questionnaire indicating their degree of agreement to questions on topics such as awareness of SLP’s roles, use of collaboration, and effectiveness of services. An analysis of variance (ANOVA) was used to determine any significant differences between professional groups and responses to specific questionnaire items.

Overall, results illustrated that educational professionals have positive opinions about SLPs. However, neutral responses were indicated with regards to whether SLPs provide intervention for students with a persistent hoarse voice, with English as a second language, and who have a hard time making friends. Uncertainties were also found in responses to SLPs having adequate training in behavior management. Earlier research on professional educator’s opinions of SLPs in the schools was compared to the current study with identified differences. From the results collected, SLPs’ efforts in the schools can be considered socially validated by their interdisciplinary school-based colleagues.
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CHAPTER ONE
INTRODUCTION

Fourteen years ago, educational professionals in the school setting were asked their opinions about the academic preparation, collaborative efforts, and service provision of school-based speech-language pathologists (SLPs) (Sanger, Hux & Griess, 1995). The 78-item questionnaire included multiple choice responses and a Likert-type scale format and was distributed to a total of 1,000 classroom teachers, elementary school principals, school psychologists, and special education teachers in four states in the United States. From the questionnaires distributed, 628 were returned and used in conducting a statistical analysis of variance (ANOVA) of the differences between professional groups and responses to questionnaire items.

Results of this study showed an overall positive attitude in support of SLPs in the school setting by educational professionals (Sanger et al., 1995). However, areas of concern were discovered when discrepancies in responses between professional groups were identified. These domains included to whom the SLP should provide services, specific areas of academic preparation, and service provision.

Since Sanger et al.’s (1995) study, there have been numerous changes to the speech-language pathology profession. The development of the Individuals with Disabilities Educational Act (IDEA) in 1997 with revisions in 2004, the No Child Left Behind Act (NCLB) in 2001 as well as the Response to Intervention (RTI) model all have restructured the roles and responsibilities of SLPs. Additionally, advances in medical technology and care has led to more diverse SLP school caseloads with greater needs. These changes warrant a new survey to address
the modifications found in the school setting and the increase in services provided by SLPs. With these modifications come potential changes to the opinions presented by the team members who work alongside SLPs in the schools.

It is essential that all professionals within a school setting have a mutual understanding and appreciation of each others’ professional roles and skill levels, and participate in professional communication in order to collectively facilitate growth in a student. Rule F. of Principle III of the ASHA’s Code of Ethics (2010) states that SLPs must provide “accurate information about the nature and management of communication disorders, about the professions, about professional services, and about research and scholarly activities” (pg. 3). Without proper advocacy of the speech-language pathology profession and what it entails, other professionals will not seek consultation or education from the leaders of the field of communication disorders.

Obtaining educational professionals’ opinions is one means by which SLPs can receive evaluation for their work within the schools. A method of determining if school-based SLPs are performing to these standards is through social validation of their performance by their colleagues. Social validation is defined as how society appraises the significance of the goals, the appropriateness of the procedures and the importance of the end results of a specific program or objective (Wolf, 1978). In the case of this current study, the performance and skills of the school-based SLP were appraised by educational professionals.

The goal of this study is to examine the current opinions of educational professionals on the role and performance of SLPs in the schools and the services they provide for students with communication disorders. This survey addresses issues presented in the Sanger et al.’s 1995 study as well as new areas of service and concern. It also included another group of team
members absent from the earlier study – para-educators. From the impressions collected by these educational professionals, it is determined whether or not school-based SLPs’ efforts are socially validated.
CHAPTER TWO

REVIEW OF THE LITERATURE

In the sections below, the Sanger study results will be discussed first, followed by a discussion of the roles of educational professionals. Each of the specific specialty areas of SLPs to be studied will also be addressed. Areas of SLP specialty that were re-examined from the Sanger et al. study (1995) include English Language Learners, literacy, attention deficit hyperactive disorder, behavior intervention, and voice disorders. Additional specialty areas examined in the current study are autism-spectrum disorder, cochlear implants, central auditory processing disorder, and dysphagia. Service delivery models and the use of para-educators as respondents will also be examined.

Sanger et al., 1995 Study

The Sanger et al. study (1995) investigated the perceptions elementary school professionals (classroom teachers, principals, psychologists and special education teachers) have on the role and performance of school-based SLPs as well as their service provision to students with communication impairments. A total of 628 participants from four states (Alabama, Maryland, Nebraska, and Utah) responded to a 78-item questionnaire. Results showed general satisfaction with SLPs’ performance in the schools, but several issues about the roles of SLPs in the schools were revealed.

Areas of concern were shown when neutral responses were indicated by educational professionals on whether or not they agree that SLPs should be providing services for students who have voice disorders or students who are learning English as a second language (referred to
hereafter as English language learners, or ELLs). Uncertainty was also found for whether or not SLPs have adequate academic training and preparation in multicultural issues, teaching ELL, literacy skills, and behavior management. Another concern was in the realm of service provision. Professional groups differed in their views of SLPs providing services to individuals compared to small groups and there were also neutral responses among the groups about the appropriateness and academic impact in using the pullout method as opposed to within-class services.

Although uncertainties and differences in educational professionals’ opinions were found, the overall findings from the study showed that educators’ opinions about the role and performance of SLPs in the schools are positive. Whether or not opinions have changed or remained the same since the Sanger et al. (1995) study are explored in this current study.

**Educational Professionals**

A school consists of various team members collectively focused on the goal of providing an academically and socially enriching environment for all students. Students with communication disorders require additional attention from these members as well as the skill and attention of others such as special education teachers and SLPs. The involvement of each professional with these students varies as does the amount of professional interaction that occurs with the SLP. Teachers - both classroom and special education - and para-educators are likely to have more professional interactions with SLPs than principals and psychologists due to their roles within the classroom setting in actively educating and providing assistance to the students. Additionally, involvement with SLPs may vary from services provided such as assessment consultation with a psychologist to intervention suggestions with a para-educator.
Educational professionals are direct and indirect consumers of the services SLPs provide within the school system: they receive direct interaction through collaboration and they are indirectly involved in the SLP’s interactions with student with communication impairments. Examining the quantity and quality of professional interaction time with SLPs will be important for determining if collaboration and educational roles are being met within the school setting.

**English Language Learners**

Reflective of the observations of SLP’s colleagues in Sanger et al.’s (1995) study, the recent American Speech-Language-Hearing Association (ASHA) schools survey (2008) found that SLPs report one of their greatest concerns in the school setting involves lack of training for working with ELLs. A study conducted by Roseberry-McKibbin, Brice, and O’Hanlon (2005) gathered school SLPs’ impressions on serving ELLs. The primary perceived problem identified by SLPs in their study was being unable to speak the language of the student (60% strongly agreed), and lack of appropriate and less biased assessment tools (36% strongly agreed), whereas lack of knowledge of the culture of the student (21% strongly agreed) and knowledge about the nature of second language acquisition (9% strongly agreed) were seen as less of a problem (Roseberry-McKibbin et al., 2005). Conversely, it was reported that 73% of respondents had received some form of coursework to help prepare them for providing services to ELLs (Roseberry-McKibbin et al., 2005).

ASHA’s “Guidelines for the Roles and Responsibilities of the School-based SLP” (2000) highlight the importance of continuing education for SLPs in culturally and linguistically diverse populations so that the best service can be provided for ELLs. Although improvements have been made with providing additional education and resources for SLPs in this area (Hammer,
Detwiler, Detwiler, Blood & Qualls, 2004; Roseberry-McKibbin et al., 2005), there is still a continual need for more advocacy of the importance of multicultural training, especially during college and university preparation. These findings on SLPs’ impressions of the service they provide to ELLs may indirectly impact the opinions of other professionals. Educational professionals’ evaluations will indicate whether or not the challenges faced by SLPs servicing ELLs are evident to their interdisciplinary team members.

**Literacy**

Reading skills or literacy was regarded by educational professionals in the Sanger et al. (1995) survey as being an area of service SLPs could improve upon with relation to their preparedness and performance. Since the inception of this aforementioned study, literacy services have become more central in the elementary school setting with 36% of SLPs providing therapy in this domain (ASHA, 2008). It is now clearly stated in ASHA’s guidelines that SLPs’ goals are to facilitate skills in all language modalities, including reading, writing, listening and speaking (ASHA, 2000). The implementation of RTI, an evidence-based program for students with learning disabilities in the schools, has crafted a new role for SLPs, both in traditional therapy and in the general education environment through collaboration with school professionals (Justice, 2006; Troia, 2005). Because these changes are recent, it is important to explore educators’ opinions on SLPs’ involvement in literacy development and efficacy of treatment.
Central Auditory Processing Disorder

No reference to central auditory processing disorder (CAPD) was made in the Sanger et al. (1995) study. According to the ASHA 2008 schools survey, 56% of elementary school-based SLPs regularly provide services to students with CAPD, with a mean number of 7 on their caseload. Audiologists and SLPs, along with teachers, parents, and other professionals work together to improve the classroom environment and the individual skills of a student with CAPD (ASHA, 2000). SLPs provide therapy for students with CAPD that targets language processing and areas of cognition such as memory, attention and problem solving. Due to the co-morbidity of CAPD with other disorders such as attention-deficit hyperactivity disorder and language based-disorders, SLPs are considered even more central in the therapeutic process. Also, it is incumbent that it is addressed in the study so that it can be determined whether or not educational professionals are aware of school-based SLPs’ involvement in the servicing of this population.

Attention Deficit Hyperactivity Disorder

In the Sanger et al. study (1995), educational professionals were undecided on the involvement of SLPs on multidisciplinary teams for students with attention deficit hyperactivity disorder (ADHD). Providing services for students with ADHD is within the scope of practice of SLPs due to the co-occurrence of other disorders such as language learning disorders and Central Auditory Processing Disorder (CAPD) (ASHA, 2000). SLPs assist in identifying students who may have ADHD and work with other team members to plan and implement intervention services. In the ASHA 2008 schools survey, it was reported that 63% of elementary school-based SLPs have students with ADHD on their caseload with a mean of 7 students. These numbers
may not be completely representative of this population as many cases of ADHD go undetected or due to the co-morbidity, students may be on the caseload with a primary diagnosis of CAPD or a language disorder and also have ADHD. This study will examine whether or not educational professionals’ opinions have changed with regards to SLPs’ involvement with students diagnosed with ADHD.

**Behavior Intervention**

Another area examined in the Sanger et al. (1995) study was SLPs’ skill in behavior intervention. Professional educators provided neutral responses representing uncertainty of these skills. Behavior intervention is within the scope of practice of SLPs in the schools, specifically addressed by ASHA (2000) as socio-emotional communication skills. Children with speech and language impairments tend to have difficulties expressing feelings and negotiating misunderstandings compared to typically developing children (ASHA, 2000). These communication difficulties have the potential to manifest into behavior problems. SLPs can collaborate with others in the school setting to help these students become effective, emotionally stable communicators through staff education and training as well as by providing lessons and modeling techniques to students (ASHA, 2000). Questions addressing whether or not SLPs maintain this supportive role in socio-emotional communication are be included in the study.

**Voice Disorders**

In the Sanger et al. study (1995), neutral scores representing uncertain opinions were found when educational professionals were questioned about the role of SLPs in the treatment of voice disorders. These results were suggested as being due to educational professionals having
minimal awareness of the role and expertise of SLPs in voice disorders. The prevention and treatment of voice disorders in schools is not as common as other areas of intervention such as ASD or language impairment, but it is still an area of traditional intervention performed by SLPs that is essential for ensuring that students are communicating effectively and competently in the school system (ASHA, 2000; Ruddy & Sapienza, 2004). Approximately 26% of SLPs provide intervention for students with voice or resonance disorders which can range in severity and type such as vocal fold abuse to related symptoms of cerebral palsy or muscular dystrophy (ASHA 2008; Ruddy & Sapienza, 2004).

SLPs’ role in voice disorders is twofold: educate to prevent and implement treatment. Students, their parents and the school staff should benefit from instruction on good vocal habits (ASHA, 2000; Hooper, 2004; Ruddy & Sapienza, 2004). School staff such as teachers, should ensure vocal habits are maintained throughout the student’s academic day (Ruddy & Sapienza, 2004). Additionally, teachers are responsible for identifying students who may have a voice disorder and then making the appropriate referrals to the school-based SLP (Hooper, 2004; Ruddy & Sapienza, 2004). Collaboration between teachers and SLPs may also involve the development of vocal health programs for the entire class, such as how to maintain vocal hygiene as well as health or science projects that focus on voice and resonance (Hooper, 2004; Ruddy & Sapienza, 2004). The current study investigates whether or not educational professionals are aware of SLPs’ efforts in educating, collaborating and treating voice disorders.
Cochlear Implants

Although audiologists are the specialists in hearing and hearing disorders, SLPs also possess responsibilities and skills in this area. According to the 2008 ASHA school survey, 43% of SLPs have students with hearing impairments on their caseloads, with the mean number of two students receiving services in each elementary school. Not only do SLPs provide direct speech-language therapy and auditory training to students who are hearing impaired, they also collaborate with audiologists to educate school professionals on strategies to use in the classroom to improve communication (ASHA, 2000; Teagle & Moore, 2002). Preferential seating and classroom modification to increase the signal-to-noise ratio are examples of strategies that can be suggested and implemented in order to create a suitable acoustic environment for students with significant hearing loss (Teagle & Moore, 2002).

SLPs are also required to provide aural rehabilitation services for students with cochlear implants. The number of students with cochlear implants on SLPs’ caseloads has increased in recent years, which underscores a need for SLPs to be skilled in providing services and education for this population (Teagle & Moore, 2002). A recent study conducted by Cosby (2008), reported that out of 221 SLPs in the North Carolina area, 80.6% received graduate training related to the evaluation or treatment of children with hearing loss, but only 19.5% received graduate training for cochlear implants. Specific knowledge about cochlear implants was also examined with 60-85% of respondents indicating having limited or no knowledge related to cochlear implant candidacy, surgery, device components, and troubleshooting, and 50-75% of respondents indicating little or no knowledge related to techniques used to improve speech, language, speech reading and auditory skills (Cosby, 2008).
When an audiologist is not available, a school-based SLP should be contacted by educational professionals with questions and concerns regarding cochlear implants. Educational professionals’ awareness of this additional service by SLPs is examined as well as whether or not proper solutions are being provided.

Dysphagia

Service provision for individuals with dysphagia is within the scope of practice of SLPs. This service is typically provided in the medical setting, but there is a growing trend for individuals in need of swallowing services in a school setting as well (Bailey, Stoner, Angell, & Fetzer, 2008; O’Donoghue & Dean-Claytor, 2008). In the 2008 ASHA school survey, it was reported that 7% of SLPs in elementary schools treated students with dysphagia with the mean number of 2 students on their caseload. Even though intervention for students with dysphagia is not common, it is still within the school-based SLP’s scope of practice to provide these services. When performing these services, SLPs have expressed low self-confidence levels with regards to dysphagia treatment as well as a need for greater support for the dysphagia services they provide (Bailey, et al., 2008; O’Donoghue & Dean-Claytor, 2008).

A focus group study conducted by Bailey et al. (2008) revealed an overall impression that SLPs question the need of providing dysphagia services in schools. Some saw the medical setting as the only location for dysphagia management and others expressed their strong opposition to providing pediatric dysphagia in educational settings. Training concerns were also an issue as most SLPs interviewed felt that they were proficient in swallowing management for adults, but not pediatrics (Bailey et al., 2008). In a randomized sampling of 20 graduate programs in the United States and Canada conducted by author, 19 schools had a dysphagia or
swallowing disorders graduate course, but none offered a course specifically on pediatric dysphagia or listed pediatrics as an area of focus in the dysphagia course description.

Similar views were also collected in a survey study conducted by O’Donoghue and Dean-Claytor (2008), where SLPs were questioned about their training and confidence levels in dysphagia treatment. It was found that self-confidence ratings for treating children with swallowing disorders was significantly low for 76% of the SLPs sampled (O’Donoghue & Dean-Claytor, 2008). Even more disconcerting was the inverse relationship found between continuing education in dysphagia and reported self-confidence. SLPs with continuing education were less confident in treating students with dysphagia than those with no continuing education (O’Donoghue & Dean-Claytor, 2008).

Both studies (Bailey et al., 2008; O’Donoghue & Dean-Claytor, 2008) illustrate the difficulties faced by SLPs in their roles as swallowing specialists in the schools as well as their academic preparation in the specialty. Is this low confidence in providing services for dysphagia evident to other professionals? If so, then what are their impressions on SLPs, the deemed professionals in swallowing and swallowing disorders in the schools, and their performance in servicing this population? The impressions of educational professionals are needed in order to determine the impact of this issue on the image of the speech-language pathology profession and whether or not it is noticed and judged by other multi-disciplinary team members.

**Autism-Spectrum Disorder**

The incidence of autism-spectrum disorder (ASD) in the schools has also seen a steady increase since 1995 due to the rising prevalence of ASD in not only the United States, but in the
world (Schwartz & Drager, 2008). The ASHA 2008 schools survey reports that 84% of SLPs serve elementary school students with autism/pervasive developmental disorder (autism-spectrum disorder) with a mean of 6 students on each caseload. Specialized knowledge and skill is essential in providing service to children with ASD due to the complex characteristics and challenges presented in the areas of social communication, language, behavior, and emotional regulation (ASHA, 2006a; Callahan, Henson, & Cowan, 2007; Schwartz & Drager, 2008). In a study conducted by Schwartz and Drager (2008), it was found that 73% of the SLPs questioned felt that the training they received to become a professional in the field was adequate in preparing them to work with students with ASD. However, 91% of respondents stated that additional coursework and training that focused on ASD would have been beneficial (Schwartz & Drager, 2008).

Levels of competence were also examined which showed over 25% of SLPs indicating that they did not feel competent in their ability to develop goals for students with ASD (Schwartz & Drager, 2008). From the SLPs questioned in the study, 56.7% indicated having one or two graduate level courses that addressed ASD and 44.8% provided speech and language services to individuals with ASD during their clinical training (Schwartz & Drager, 2008).

SLPs need to be aware of the varying degrees of impairment and the different disorders that fall along the spectrum such as Asperger’s syndrome and Pervasive Developmental Disorder (PDD) and also keep up with the latest in research literature about intervention strategies and best practice. They must also ensure that the services provided are socially validated by their fellow team members. Callahan, Henson, & Cowan (2007) found that teachers, administrators and parents gave high ratings of social validation for specific autism intervention components identified on their survey, one specifically being active collaboration. Whether or not similar
results will be obtained in the current study as well as the impressions of educational professionals on the aptitude and skill of school-based SLPs on ASD will be examined.

Methods of Service

The frequency of use of particular methods of service and educational professionals’ opinions on them were investigated in the Sanger et al. (1995) study. Ninety percent of the respondents indicated that SLPs used the pull-out method. With regards to their opinions on the methods of service, a general consensus of positive responses were reported for providing treatment outside (pull-out method) and within the classroom. However, classroom teachers considered within-class service as less desirable although it was also regarded as a less detrimental choice academically compared to other educational professionals.

Specialized SLP services need to be provided in the least restrictive environment for students on a SLP’s caseload which, depending on the individual strengths and needs of the student, can occur within or outside of the classroom setting (ASHA, 2000). It is the responsibility of the SLP to ensure that the most suitable service delivery model is used to address to intervention goals of each student. Although inclusion models are being used more, the pull-out method is still the primary method of intervention service used by SLPs. Currently, the mean number of hours a week SLPs provide treatment using the pullout method is 21.9 while other methods such as those within the classroom or resource room total 12.1 (ASHA, 2008). Updated educational professionals’ evaluations of the method of service provision are addressed in this study to determine if one method is preferred to the other in effectiveness for therapy intervention.
Para-Educators

A key respondent missing from the previous surveys conducted in the education system are classroom aides or para-educators. Para-educators should be regarded as being of great importance since they provide individualized attention and care for students with disabilities such as communication disorders (Bureau of Labor Statistics, U.S. Department of Labor, 2007). While a classroom or special education teacher is focused on instructing the class as a whole, the para-educator works one-on-one with students with disabilities (Tews & Lupart, 2008). They have the focused opportunity to monitor and support the student both in the classroom, and outside the classroom, such as during recess and on field trips. Para-educators are also involved with assisting the teacher in classroom management and they also facilitate social interactions between students (Tew & Lupart, 2008).

SLPs typically communicate with para-educators on intervention strategies for students in order for these students to receive the maximum benefit. Para-educators can monitor and encourage a student’s use of developing skills, and later, the generalization of the same skills in various settings. They can also contribute information on individual strengths or difficulties a student may have in areas not often noted by a school teacher or psychologist, such as what transpires in the cafeteria or at recess.

The inclusion of this educational group in the study introduces a new and valuable perspective of the role and performance of SLPs in the schools. Para-educators’ impressions on the roles and responsibilities of the school-based SLP as well as their opinions on the validation they receive from interacting with them are examined in this study.
Summary

The purpose of this study was to provide an updated comprehensive evaluation of the role and performance of school-based SLPs through the examination of educational professionals’ perspectives. From their valued impressions, a general body of support was collected in order to demonstrate whether or not school-based SLPs’ efforts are socially validated. Research questions to be answered include:

1) Are educational professionals aware of the various roles and responsibilities of SLPs?

2) Do educational professionals believe that SLPs have adequate training in their areas of speciality?

3) Do educational professionals believe that SLPs are collaborating and consulting about students on the SLP’s caseload?

4) Are para-educators receiving the same opportunities to collaborate with SLPs as other educational professionals?

When working as a member of a multidisciplinary team, it is important to receive regular feedback from fellow teammates. With the growing demands and expectations placed on a SLP in the school system, it is imperative that an evaluation occurs to ensure that SLPs are receiving validation for their performance which can promote professional development and improvement for both the application of their skills and also their collaboration with other professionals. From the critical evaluation of others, SLPs can re-evaluate their services and continue to grow and learn and provide services that are not only efficient and effective, but also understood and valued. This current survey contributes to this evaluation.
CHAPTER THREE
METHODOLOGY

Participants

Respondents to a questionnaire were randomly selected from the email addresses publicly available on the Washington State Office of the Superintendent of Public Instruction (WAOSPI) website. The State of Washington was divided into four quadrants as represented on the WAOSPI websites’ school districts. From these quadrants, 25 schools were randomly selected using a random number generator system for each of the five educational professional categories. For principals, psychologists, and some special education teachers, the school selected contained one representative and that individual was included as a respondent. For teachers, para-educators, and schools with more than one special education teacher, the potential respondents were assigned random numbers and then one was randomly selected using the random number generator system from the school. In total, 500 respondents were emailed.

Of the 98 respondents who began the survey, 89 completed the survey. Five did not complete the survey due to unknown reasons and four responded no to the question, “Do you interact professionally with your current school-based SLP?” which terminated the survey. The respondents consisted of 11 elementary classroom teachers (kindergarten to sixth grade), 7 para-educators/classroom aides, 28 elementary school principals, 26 school psychologists, and 17 special education teachers. All were recognized employees of Washington State school districts and from rural or urban school districts. All respondents interacted professionally with their school-based SLP.
Materials

A questionnaire (see Appendix) was designed using questions from the Sanger et al. study (1995) and the questionnaire and web survey methods proposed by Dillman, Smyth, and Christian (2009) to obtain information on both the personal background of the respondent and opinions regarding SLPs’ services in the schools. Personal background information was presented in a multiple choice format addressing the respondents’ vocational background, years of experience, and amount of time spent interacting professionally with SLPs. Opinions regarding SLPs’ services in the schools focused on four main themes: the roles of SLPs; their academic preparation; their performance and interactions with students, other professionals, and the respondent; and the effectiveness of their services. These questions followed a 5-point Likert-type scale format with a response of “1” indicating “strongly agree” to a response of “5” indicating “strongly disagree.” Question 2 d), “the SLP provides intervention for a student who has illegible handwriting” was added to the questionnaire to prevent a response set where questions are answered the same without attending to the context.

Procedures

In early October 2009, emails were sent to 500 individuals informing the potential respondents of the purpose of the survey study, how they as questionnaire respondents could contribute, and a link to the secure online questionnaire to complete. Confidentiality was emphasized as well as appreciation for participating in the study. Of the 500 emails sent, 192 were unsuccessfully delivered due to inactive email addresses. A follow-up email was sent in late October 2009 to all potential respondents encouraging participation in the study. In early November 2009, a second and final email was sent to only previous non-respondents with a final
request to participate in the study. The concluding total of respondents was 89, which yielded a 29% percent response rate.

Overall means were computed for each 5-point Likert-type scale item and multiple-choice items on the questionnaire. As was done in the Sanger et al., (1995) study, an analysis of variance (ANOVA) was used to determine any significant differences between professional groups and responses to specific questionnaire items. Using the same statistical procedure performed in the Sanger et al. (1995) study allowed for direct comparisons to be made between both the current study and previous study.

Data Analysis

Following the arbitrary agreement cut-offs established by Sanger et al. (1995), means ranging from 1.00 to 2.49 were interpreted as agreement, means ranging from 2.50 to 3.50 were interpreted as neutral or uncertain responses, and means ranging from 3.51 to 5.00 were interpreted as disagreement. Frequencies and percentages of respondent ratings were also calculated for each of the questions.

An open-ended question at the end of the survey asked for respondents to provide comments on the professional relationship with his or her school-based SLP. The answers were collectively broken down into similar ideas or themes such as comments about ‘professionalism’ and being a ‘team member’. Once all the assorted ideas were placed into a category, related ideas were clustered into a more general theme.
CHAPTER FOUR
RESULTS

Background Information on Respondents

The respondents were unevenly distributed through the five professional categories. Elementary school principals and school psychologists were the largest population of respondents and para-educators had the smallest number of respondents. Respondents who did not fit into either category and entered “other” as their professional category were grouped into best fit categories based on similar roles and responsibilities (i.e. counselor placed in psychologist group) or generalizing their title (i.e. special education para-educator was placed in para-educator group).

Employment in the public school setting for more than two years was indicated by 97.75% (87/89) respondents. Educational professionals indicated employment with their current school-based SLP at 74.16% (n = 66/89) for a more than two year duration and 25.84% (n = 23/89) for a less than two years. Table 1 provides the amount of interaction in percentage of respondents from the five educational professional group s as well as the number of years worked with the current SLP.

The majority of respondents indicated that they interact professionally with students on the school-based SLPs’ caseload (94.38%; n = 84/89) with interactions mostly occurring on a daily basis (64.29%; n = 54/84), followed by a weekly basis (20.24%; n = 17/84); monthly basis (9.52%; n = 8/84), and yearly basis (5.95%; n = 5/84).
Table 1

Percentages obtained for each educational professional group on the amount of interaction with the SLP

<table>
<thead>
<tr>
<th>Educational Professional</th>
<th>Years with current SLP</th>
<th>Frequency of interaction with school-based SLP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than 2 years</td>
<td>More than 2 years</td>
</tr>
<tr>
<td>Classroom teachers</td>
<td>36.36%</td>
<td><strong>63.64%</strong></td>
</tr>
<tr>
<td>Para-educators</td>
<td>42.86%</td>
<td><strong>57.14%</strong></td>
</tr>
<tr>
<td>Principals</td>
<td>25.00%</td>
<td><strong>75.00%</strong></td>
</tr>
<tr>
<td>Psychologists</td>
<td>15.38%</td>
<td><strong>84.62%</strong></td>
</tr>
<tr>
<td>Special education teachers</td>
<td>29.41%</td>
<td><strong>70.59%</strong></td>
</tr>
</tbody>
</table>

The table lists the amount of interaction with the school-based SLP each educational professional group indicated in percentages. It also includes years the educational professional worked with the current SLP. Percentages in bold-face are the highest percentages obtained for the question.
Awareness of the Roles and Responsibilities of SLPs

Responses to survey questions that addressed the first research question, "Are educational professionals aware of the various roles and responsibilities of SLPs?" are presented here. One of the roles of a SLP is to be an advocate for his or her profession. Educational professionals indicated that SLPs are good advocates for their profession with 68.54% of respondents (n = 61/89) strongly agreeing with the statement (M = 1.48; SD = .816).

The roles and responsibilities SLPs have in providing intervention services to students with communication disorders were examined next. Educational professionals showed some discrepancy as to whom SLPs provide intervention. Educational professionals generally agreed that SLPs provide intervention for a student who has difficulty with abstract reasoning secondary to traumatic brain injury (M = 2.70; SD = .876); a student with swallowing issues (M = 2.29; SD = 1.00); a student who has difficulty segmenting words into their separate sounds (M = 1.84; SD = .891); a student who has difficulty taking other people’s perspectives (M = 2.46; SD = 1.056); a student with a cochlear implant (M = 2.06; SD = .831); and a student who has difficulty following directions in class (M = 2.48; SD = 1.11). Table 2 provides the means and standard deviations obtained for each of the five educational professional groups.

Disagreement was indicated by educational professionals for a student who has illegible handwriting (M = 3.71; SD = 1.10). Neutral or uncertain results were indicated for a student with a persistent hoarse voice (M = 2.58; SD = 1.05), a student learning English as second language (M = 3.16; SD = 1.20), and a student who has a hard time making friends (M = 3.00; SD = 1.10). Table 3 presents the percentage of respondents for each of the five ratings for services investigated in this question. Areas of uncertainty can be seen with higher percentages shown in the neither agree nor disagree ranking and the disagree ranking.
Table 2

Means and standard deviations for educational professional groups’ opinions on SLPs providing intervention in areas of specialty

<table>
<thead>
<tr>
<th>Question</th>
<th>Educational Professionals</th>
</tr>
</thead>
<tbody>
<tr>
<td>The SLP provides intervention for a student...</td>
<td>Classroom teachers</td>
</tr>
<tr>
<td>With a persistent hoarse voice</td>
<td>2.82 (1.25)</td>
</tr>
<tr>
<td>Who is learning English as a second language</td>
<td>2.86 (1.57)</td>
</tr>
<tr>
<td>Who has difficulty with abstract reasoning</td>
<td>2.36 (0.81)</td>
</tr>
<tr>
<td>Who has illegible handwriting</td>
<td>3.73 (1.19)</td>
</tr>
<tr>
<td>Who has swallowing issues</td>
<td>2.27 (0.79)</td>
</tr>
<tr>
<td>Who has difficulty segmenting words</td>
<td>2.27 (1.01)</td>
</tr>
<tr>
<td>Who has difficulty taking other people’s perspectives</td>
<td>3.00 (1.18)</td>
</tr>
<tr>
<td>With cochlear implant</td>
<td>2.09 (0.83)</td>
</tr>
<tr>
<td>Who has difficulty following directions in class</td>
<td>3.00 (1.05)</td>
</tr>
<tr>
<td>Who has a hard time making friends</td>
<td>3.63 (1.02)</td>
</tr>
</tbody>
</table>

This table presents the means and standard deviations (in parentheses) for each of the five educational professional groups that addresses the question, do SLPs provide services for a student with a specific communication disorder.
Table 3

Percentages indicating levels of agreement for SLPs providing intervention in areas of specialty

<table>
<thead>
<tr>
<th>Question</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>The SLP provides intervention for a student...</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>With a persistent hoarse voice</td>
<td>15.73%</td>
</tr>
<tr>
<td>Who is learning English as a second language</td>
<td>10.11%</td>
</tr>
<tr>
<td>Who has difficulty with abstract reasoning</td>
<td>23.60%</td>
</tr>
<tr>
<td>Who has illegible handwriting</td>
<td>4.49%</td>
</tr>
<tr>
<td>Who has swallowing issues</td>
<td>22.47%</td>
</tr>
<tr>
<td>Who has difficulty segmenting words</td>
<td>39.33%</td>
</tr>
<tr>
<td>Who has difficulty taking other people’s perspectives</td>
<td>17.98%</td>
</tr>
<tr>
<td>With cochlear implant</td>
<td>30.34%</td>
</tr>
<tr>
<td>Who has difficulty following directions in class</td>
<td>21.35%</td>
</tr>
<tr>
<td>Who has a hard time making friends</td>
<td>10.11%</td>
</tr>
</tbody>
</table>

The table lists the percentages of respondents who rated their level of agreement or disagreement to the question regarding the SLP providing intervention for a student with the presented communication disorders. Percentages in bold-face are the highest percentages obtained for the speciality area.

When comparing the means of each of the five groups of professionals for each of the intervention areas where neutral responses were suggested (see Figure 1), results showed that
psychologists and special education teachers agreed with SLPs’ role in providing services for a persistent hoarse voice but the remaining groups predominately indicated a neutral response. Computing between groups analysis of variance (ANOVA) indicated the difference to not be significant (F [4, 84] = 1.05, p > .05). The effect size for this analysis was small at $\eta_p^2 = 0.01$. For service provision for students learning English as a second language, individual group means showed that the neutral response was consistent for each of the five groups. Computing between groups ANOVA indicated the difference to not be significant (F [4, 84] = .536, p > .05). Again, the effect size was small at $\eta_p^2 = 0.03$. Finally, examination of the group means for SLPs providing services to students who have a hard time making friends showed general disagreement for teachers while the remaining groups were neutral. No significant difference was found after computing between groups ANOVA (F [4, 84] = 1.50, p > .05). The effect size was small at $\eta_p^2 = 0.04$.

Two survey questions looked at educational professionals’ opinions about the responsibility of SLPs using adequate service delivery methods to provide intervention to students on their caseload. According to the results collected, 93.3% (n = 83/89) of the respondents have SLPs who provide intervention services outside of the regular education classroom. This outside of the regular education classroom treatment was considered adequate for 87.6% (n = 78/89) of respondents.
Figure 1. Respondent ratings of uncertainty on SLPs providing intervention. Average Likert-scale scores (1= strongly agree to 5= strongly disagree) and standard deviations for each profession rating their level of agreement for an SLP providing intervention in three areas of speciality.

The range of 2.50 to 3.50 (arbitrary cut-off established by Sanger et al., 1995) indicated uncertainty about whether or not SLPs provide intervention services for students with a persistent hoarse voice, students learning English as a second language and students who have a hard time making friends.
Statements about methods of service delivery were provided by educational professionals when asked to comment about their professional relationship with their SLP. Approximately 5% of the comments (n = 3/61) mentioned that both within the class and outside the class services are used by their SLP. A special education teacher indicated that the SLP “see[s] students in their general ed classroom as well as on the playg[round], etc. in addition to the pull out model”. References to providing services through the pull-out model were not identified as favorable in 5% of the responses (n = 3/61): one special education teacher wrote about being “frustrated by 30 min per week pull-out model for most students regardless of need of student.”

Another respondent wrote about how both the pull-out model and medical model are not beneficial in the school setting. Instead, students “need skills that can be generalized to the classroom and they need someone provided (sic) the scaffolding in the classroom (outside classroom teaching, modeling and reminders in the classroom, monitoring progress until they reach mastery)”. One respondent, who indicated that in his or her experience the pull-out method was the most often used method of service delivery, stated that this method “may work for articulation practice, but is not effective for the broader communication needs of literacy, English language/vocabulary development, and oral comprehension and thinking skills”.

Adequate Training of SLPs

Responses to survey questions in this section focused on answering the second research question, “Do educational professionals believe that SLPs have adequate training in their areas of speciality?” The majority of educational professionals indicated that SLPs are qualified for the services performed with 77.53% of respondents (n = 69/89) selecting the strongly agree rating (M = 1.27; SD = .515). Fewer respondents indicated strong agreement for SLPs having an
understanding of general educational methods, such as curriculum and instruction at 38.20% (n = 34/89; M = 1.99; SD = 1.00), but 37.08% indicated agreement to the statement which altogether demonstrated positive opinion.

When examining the particular areas of specialty, educational professionals as a whole indicated that SLPs have adequate training in literacy, multicultural issues, feeding and swallowing disorders, English as a second language (providing services for ELLs), cochlear implant maintenance and troubleshooting and ASD. The only area where neutral or uncertain responses were presented was with behavior management. A comparison of these means can be seen in Figure 2. The means and standard deviations for each educational professional group are also presented in Table 4. When examining the percentages obtained for each of the Likert-scale ratings (see Table 5), the highest percentage of respondents selected agreement for all the statements except for English as a second language which had the highest percentage of respondents rating that they neither agree nor disagree with the statement.

When comparing means for each group, special education teachers (M = 2.18; SD = 1.02) and para-educators (M = 2.14; SD = .900) indicated SLPs have adequate training in behavior management, whereas the other groups indicate neutral responses. Between subjects one-way ANOVA results indicated no significant difference F [4, 84] = 1.33, p>.05. The effect size obtained was small at $\eta^2_p = 0.02$. 
Figure 2. Respondent ratings about training of SLPs. Average Likert-scale scores (1= strongly agree to 5= strongly disagree) and standard deviations of respondents when rating their degree of agreement for SLPs’ adequate training in speciality domains.

Educational professionals’ responses fell within the 1.00 to 2.49 range (arbitrary cut-off established by Sanger et al., 1995) indicating agreement for SLPs having adequate training in the majority of specialized domains presented except behavior management which was in the uncertainty range of 2.50 to 3.50.
Table 4

*Means and standard deviations for educational professional groups’ opinions on adequate training of SLP*

<table>
<thead>
<tr>
<th>Question</th>
<th>Educational Professionals</th>
</tr>
</thead>
<tbody>
<tr>
<td>To the best of my knowledge, the SLP has adequate training in...</td>
<td>Classroom teachers</td>
</tr>
<tr>
<td>Literacy</td>
<td>2.45 (0.93)</td>
</tr>
<tr>
<td>Multicultural issues</td>
<td>2.55 (0.93)</td>
</tr>
<tr>
<td>Feeding and swallowing disorders</td>
<td>2.09 (0.83)</td>
</tr>
<tr>
<td>English as a second language</td>
<td>2.45 (0.69)</td>
</tr>
<tr>
<td>Behavior management</td>
<td>2.81 (0.75)</td>
</tr>
<tr>
<td>Cochlear implant maintenance and troubleshooting</td>
<td>2.00 (0.77)</td>
</tr>
<tr>
<td>Autism-spectrum disorder</td>
<td>2.00 (0.63)</td>
</tr>
</tbody>
</table>

This table presents the means and standard deviations (in parentheses) for each of the five educational professional groups for the question that asks, do SLPs have adequate training in the presented areas of service.
Table 5

*Percentages indicating levels of agreement for adequacy of training of SLP*

<table>
<thead>
<tr>
<th>Question</th>
<th>Percentages</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>To the best of my knowledge, the SLP has adequate training in...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literacy</td>
<td>24.72%</td>
<td>39.33%</td>
<td>26.97%</td>
<td>8.99%</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Multicultural issues</td>
<td>21.35%</td>
<td>38.20%</td>
<td>33.71%</td>
<td>6.74%</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Feeding and swallowing disorders</td>
<td>29.21%</td>
<td>40.45%</td>
<td>29.21%</td>
<td>1.12%</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>English as a second language</td>
<td>13.48%</td>
<td>32.58%</td>
<td>46.07%</td>
<td>7.87%</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Behavior management</td>
<td>13.48%</td>
<td>37.08%</td>
<td>22.71%</td>
<td>13.48%</td>
<td>2.25%</td>
<td></td>
</tr>
<tr>
<td>Cochlear implant maintenance and troubleshooting</td>
<td>17.98%</td>
<td>42.70%</td>
<td>38.20%</td>
<td>1.12%</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Autism-spectrum disorder</td>
<td>35.96%</td>
<td>41.57%</td>
<td>16.85%</td>
<td>5.62%</td>
<td>0.00%</td>
<td></td>
</tr>
</tbody>
</table>

Table presenting the percentage of respondents who rated their level of agreement or disagreement to the question, the SLP has adequate training in the provided communication disorders. Percentages in bold-face are the highest percentages obtained for the area of specialty.
To further illustrate whether or not SLPs have adequate training in their profession, respondents were asked if their SLP colleagues provide effective services in given specialty areas. There was a general consensus with all educational professionals that SLPs provide effective services for students with articulation problems (M = 1.33; SD = .517), fluency problems (M = 1.39; SD = .556), augmentative and alternative communication needs (M = 1.71; SD = .772), cochlear implants (M = 2.07; SD = .809), language problems (M = 1.52; SD = .676); cognitive-communication deficits (M = 1.83; SD = .801), swallowing disorders (M = 2.11; SD = .859), literacy issues (M = 2.20; SD = .956), ASD (M = 1.69; SD = .777), and CAPD (M = 1.85; SD = .806). This is also illustrated in Table 6 with a comparison of the percentage of ratings given for each of the areas of specialty. The majority of respondents indicated either agreement or strong agreement for the statements provided.

The training of SLPs as well as their knowledge and skill base were themes identified in the statements provided by educational professionals on their professional relationship with their current SLP. Positive reference to the knowledge and/or skill of the SLP was found in 31% of the responses (n = 19/61). Respondents indicated that the SLP “shares a wealth of knowledge and expertise with our school”, “she has been proactive in informing me of new info in her field and has also gone out of her way to show videos or materials that relate to helping our students” and is a “great resource in our building”.

It was suggested in 3% of the comments (n = 2/61) that SLPs could benefit from further training and learning, with a principal specifying “learning in Professional Learning Communities and RTI [Response to Intervention]”. The same respondent stated that SLPs “should learn from as well as advise teachers” and also wrote, “Too often the SLP does not understand the instructional initiatives in the school building”.

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**Table 6**

*Percentages indicating levels of agreement for effective services of SLP*

<table>
<thead>
<tr>
<th>Question</th>
<th>Percentages</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The SLP provides effective services for students with...</td>
<td><strong>Strongly agree</strong></td>
<td><strong>Agree</strong></td>
<td><strong>Neither agree nor disagree</strong></td>
<td><strong>Disagree</strong></td>
<td><strong>Strongly disagree</strong></td>
</tr>
<tr>
<td>Articulation problems</td>
<td>69.66%</td>
<td>28.09%</td>
<td>2.25%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Fluency problems</td>
<td>64.04%</td>
<td>32.58%</td>
<td>3.37%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Augmentative and alternative communication needs</td>
<td>47.19%</td>
<td>35.96%</td>
<td>15.73%</td>
<td>1.12%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Cochlear implants</td>
<td>28.09%</td>
<td><strong>38.20%</strong></td>
<td>32.58%</td>
<td>1.12%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Language problems</td>
<td>58.43%</td>
<td>31.46%</td>
<td>10.11%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Cognitive-communication deficits</td>
<td>40.45%</td>
<td>37.08%</td>
<td>21.35%</td>
<td>1.12%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Swallowing disorders</td>
<td>30.34%</td>
<td>29.21%</td>
<td><strong>39.33%</strong></td>
<td>1.12%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Literacy issues</td>
<td>26.97%</td>
<td><strong>34.83%</strong></td>
<td>30.34%</td>
<td>6.74%</td>
<td>1.12%</td>
</tr>
<tr>
<td>Autism-spectrum disorder</td>
<td>48.31%</td>
<td>37.08%</td>
<td>12.36%</td>
<td>2.25%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Central auditory processing disorder</td>
<td><strong>39.33%</strong></td>
<td>37.08%</td>
<td>22.47%</td>
<td>1.12%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

Table presenting the percentage of respondents who rated their level of agreement or disagreement to the question, the SLP provides effective services for students with the selected communication disorders. Percentages in bold-face are the highest percentages obtained for the area of specialty.
SLPs’ Collaboration and Consultation with Others

The third research question, whether or not educational professionals agree that SLPs adequately collaborate and consult was addressed with the next set of questions. Also the fourth research question, “are para-educators receiving the same opportunities to collaborate with SLPs as other educational professionals”, was addressed. The majority of educational professionals indicated that SLPs interact appropriately with school staff as well as parents and students. Highest mean scores were found for students (M = 1.44; SD = .543), followed by special education teachers (M = 1.49; SD = .693), parents (M= 1.54; SD = .692), psychologists (M = 1.54; SD = .675), other professionals (M = 1.60; SD = .734), teachers (M = 1.61; SD = .806), principals (M = 1.63; SD = .774) and para-educators (M = 1.81; SD = .877).

The consultative efforts of SLPs in the classroom were addressed in two questions. Educational professionals indicated general agreement about SLPs providing appropriate solutions for managing communication problems in classrooms for children on her/his caseload (M = 1.90; SD = .942) with the majority of respondents strongly agreeing with that statement at 41.57%, and for offering appropriate suggestions for enriching overall communication environment in classrooms (M = 2.39; SD = 1.040). Only 22.47% of respondents indicated they strongly agree with the former statement, but agreement was also indicated by 33.71% of respondents suggesting a positive opinion overall.

General examination of the consultative and collaborative efforts of SLPs occurred by asking educational professionals to rate their agreement or disagreement to the provided statements in reference to themselves and to other team members. Educational professionals indicated that SLPs contribute information, educate on current issues, and collaborate and
consult when planning and implementing treatment programs with both the particular respondent and others (Figure 3). The only statement that yielded a less than 60% ranking of general agreement was "the SLP collaborates and consults with me when implementing treatment programs." These percentages as well as those from the other statements are displayed in Table 7. Means and standard deviations for each group are presented in Table 8 showing the variance in responses for each group although general agreement was obtained.

With regards to SLPs collaborating with para-educators, one-way ANOVAs were computed for the four questions related to collaboration and consultation when planning intervention and when implementing intervention to determine if a significant difference existed. All four comparisons yield differences that were not statistically significant as seen in Table 9 which suggests that there are no significant differences between the responses provided by the groups of educational professionals. Effect sizes are also presented in Table 9.

Themes related to consultation and collaboration were identified in the comments provided by educational professionals regarding their professional interaction with their school-based SLP. Twenty one percent (n = 13/61) of the comments indicated that SLPs were supportive and helpful, and 12% (n = 7/61) mentioned regular collaboration and impressive collaboration skills. Support and help was found not only in the classroom, but also in the classroom or resource room: “[the SLP] sees kids in therapy sessions, but is also available to come to my resource room and observe kids and provide suggestions for support”. Examples of comments indicating collaboration include “we collaborate frequently” and “she’s a vital member of our special ed team”.

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Figure 3. Respondent ratings on collaboration and consultation between SLPs and others. 

Average Likert-scale scores (1= strongly agree to 5= strongly disagree) and standard deviations of respondents when rating their degree of agreement on the collaboration and consultation between SLPs and themselves and SLPs and others.

Educational professionals’ responses fell within the 1.00 to 2.49 range indicating general agreement about the collaborative and consultative efforts of SLPs with other team members in the schools. When asked to rate how SLPs collaborate and consult with themselves, responses were within the 1.00 to 2.49 agreement range for all questions except one, collaborates and consults with me when implementing treatment programs which was within the uncertainty range of 2.50 to 3.50.
Table 7

Percentages indicating levels of agreement for collaboration and consultation between SLP and respondents

<table>
<thead>
<tr>
<th>Question</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>The SLP...</strong></td>
</tr>
<tr>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>Contributes important professional information</td>
<td>Me</td>
</tr>
<tr>
<td></td>
<td>Others</td>
</tr>
<tr>
<td>Educates on current SLP issues</td>
<td>Me</td>
</tr>
<tr>
<td></td>
<td>Others</td>
</tr>
<tr>
<td>Collaborates and consults when planning treatment programs</td>
<td>Me</td>
</tr>
<tr>
<td></td>
<td>Others</td>
</tr>
<tr>
<td>Collaborates and consults when implementing treatment programs</td>
<td>Me</td>
</tr>
<tr>
<td></td>
<td>Others</td>
</tr>
</tbody>
</table>

Table presenting the percentage of respondents who rated their level of agreement or disagreement to the collaboration and consultation questions that examined opinions about the SLP interacting with the particular respondent (referred to as ‘me’) and to other team members. Percentages in bold-face are the highest percentages obtained for the area of specialty.
Means and standard deviations for educational professional groups’ opinions about collaboration and consultation between SLP and others

<table>
<thead>
<tr>
<th>Question</th>
<th>Educational Professionals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The SLP...</strong></td>
<td>Classroom teachers</td>
</tr>
<tr>
<td><strong>Contributes important professional information</strong></td>
<td>Me 2.00 (1.18) 1.57 (0.53) 1.71 (1.01) 1.62 (0.64) 1.29 (0.47)</td>
</tr>
<tr>
<td><strong>Educates on current SLP issues</strong></td>
<td>Me 2.82 (1.17) 2.43 (0.98) 2.25 (1.14) 1.92 (0.89) 2.18 (1.13)</td>
</tr>
<tr>
<td><strong>Collaborates and consults when planning treatment programs</strong></td>
<td>Me 2.64 (1.43) 2.14 (1.21) 2.50 (1.00) 2.23 (0.95) 1.88 (1.05)</td>
</tr>
<tr>
<td><strong>Collaborates and consults when implementing treatment programs</strong></td>
<td>Me 2.82 (1.60) 2.29 (0.95) 2.43 (0.92) 2.69 (0.97) 2.12 (1.27)</td>
</tr>
</tbody>
</table>

This table presents the means and standard deviations (in parentheses) for each of the five educational professional groups for the question that asks, do SLPs have adequate training in the presented areas of service.
Table 9

*Between subjects ANOVA results for opinions on collaboration and consultation about treatment*

<table>
<thead>
<tr>
<th>Question</th>
<th>Between subjects ANOVA results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Question</strong></td>
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<tr>
<td></td>
<td>The SLP...</td>
</tr>
<tr>
<td>Collaborates and consults when planning treatment programs</td>
<td>Me</td>
</tr>
<tr>
<td></td>
<td>Others</td>
</tr>
<tr>
<td>Collaborates and consults when implementing treatment programs</td>
<td>Me</td>
</tr>
<tr>
<td></td>
<td>Others</td>
</tr>
</tbody>
</table>

Results from one-way ANOVA and effect size calculations for collaboration and consultation questions illustrating that there were no significant differences found between groups and thus no differences between para-educators ratings of SLPs and other educational professionals’ ratings.
Seven percent of the responses (n = 4/61) stated there is a lack of collaboration time with SLPs. One respondent stated high special education caseloads as an obstacle towards adequate collaboration. Two respondents stated difficulties in collaboration when educational professionals and SLPs work part-time or are at the designated school during different days of the week.

With regards to participation on multi-disciplinary teams, educational professionals showed positive opinions about the statements that SLPs are active participants in traumatic brain injury (M = 2.05; SD = .878), language-based reading problems (M = 1.78, SD = .876), ADHD (M = 2.09, SD = .984), ASD (M = 1.64; SD = .758), second language acquisition problems (M = 2.28, SD = .941), cochlear implants (M = 1.93, SD = .795), swallowing disorders (M = 2.06, SD = .858) and social or emotional disorders (M = 2.35, SD = .918). “Team membership” was the most frequently occurring theme in the comments section at 34% (n = 21/61). Comments included educational professionals having “a good relationship” with his or her SLP and stating that the SLP “works well with others” or “is an intricate part of our team”. 
CHAPTER FIVE

DISCUSSION

The results collected from the current questionnaire demonstrate that educational professionals generally agree that SLPs are performing their job well. Some issues concerning uncertainty in responses revealed in the Sanger et al. (1995) survey presented with more positive approval by respondents in the current study, while other previously identified issues remain a concern. These areas will be further discussed as well as other current concerns evidenced through the results.

Awareness of the Roles and Responsibilities of SLPs

Educational professionals indicated that they “neither agree nor disagree” with whether SLPs treat students with voice disorders, students learning English as a second language, and students who have a hard time making friends. The first two populations were also found to have uncertain responses in the Sanger et al. study (1995) while the latter population was added to the current study.

Voice disorders. Educational professionals continue to be unsure of SLPs’ involvement in the assessment, treatment and prevention of voice disorders. It is the responsibility of the SLP to educate and advocate for his or her role in this area of specialty. This can be achieved through collaboration with classroom teachers on projects such as on vocal hygiene, which can help educate not only teachers, but the general student body (Hooper, 2004). Additionally, SLPs can provide in-service workshops, pamphlets, or screening checklists to educate educational
professionals about voice disorders and help them identify students who may be at risk (Ruddy & Sapienza, 2004).

It should be noted that SLPs are required to provide services for students with communication disorders if the communication disorder adversely affects their academic achievement and functional performance in the school setting (IDEA, 2006; ASHA, 2000). Given this caveat, providing intervention for students with voice disorders may not be a high priority on an SLP’s caseload, and thus not viewed by educational professionals as a service that SLPs typically provide in the school setting given that it may not have educational relevance. Although treatment of voice disorders may not occur with great frequency in the schools, SLPs can still contribute towards educating about the prevention of voice disorders for not only students, but staff as well.

**English Language Learners.** Neutral responses were again indicated for SLPs providing intervention to ELLs and these responses were consistent for each of the five groups. Student populations are becoming increasingly culturally and linguistically diverse. With this demographic change comes the need to have culturally and linguistically sensitive multi-disciplinary team members, including SLPs. Schools provide services for students with limited English proficiency such as English as a Second Language (ESL) programs, but SLPs have the important role of identifying and assessing students who exhibit delays in both their first language (L-1) and second language (L-2) (ASHA, 2000). It is the responsibility of the SLP to determine whether or not there is a language difference or disorder, and also to educate others about the terms and what they mean with regards to the speech-language pathology profession.

Upon further inspection of the ELL intervention question, it is suspected that neutral responses may have been due to the ambiguity of the question. The statement asks respondents to
indicate whether they agree or disagree with SLPs providing intervention for a student learning English as a second language. This statement was meant to imply that the student has a delay or disorder in his or her L-1, but it could have been interpreted as intervention for students who have limited English proficiency, not a language disorder. A clearer way of framing the question would have been, "Do SLPs provide services for students learning English as a second language who present with difficulties in either their primary language or English, or both?" For this reason, the responses made by educational professionals may reflect uncertainty to a question that can be interpreted in two ways.

Educational professionals indicated general agreement regarding SLPs having adequate training in providing services for English as a second language students – although with a mean of 2.49, it is close to the neutral response cut-off - and a general combined agreement percentage of 46.06% (strongly agree = 13.48% combined with agree = 32.58%) which suggests SLPs are demonstrating their knowledge and skill base when providing services for this population. However this question also imparts the presumption that the educational professional considers ELLs to be in need of speech-language services because of a language disorder, rather than a difference; a presumption that is not fair to make. Again this question should be revised to specifically address whether or not SLPs have adequate training in providing services for ELLs who have delays or disorders in their L1 or L2.

Social-Emotional Communication Disorders. Uncertain responses were also indicated by educational professionals for the statement that SLPs provide services for students who have a hard time making friends. This statement represented the population of students with social-emotional communication disorders as well as students diagnosed on the autism spectrum, such as students diagnosed with Asperger syndrome. The neutral responses by educational
professional suggest that SLPs need to advocate their role in supporting students who have difficulties communicating effectively and appropriately. Their involvement on multidisciplinary teams includes identifying at-risk students, differentiating between psychosocial disorders and communication impairments, and contributing to the development of strategies to assist students in repairing communication breakdowns in various environments (ASHA, 2000). As the experts in communication, SLPs should educate school staff and students that a SLP does not only provide services for speech and language, they also provide services on how to use speech and language successfully.

SLPs have the responsibility of providing services with delivery methods that are best catered to the strengths and needs of the individual student. They also must follow the regulation of the providing these services in the least restrictive environment for the student (IDEA, 2004). Results indicated that 93% of the respondents were using the pull-out model for service delivery. However, respondents were only given two responses to choose from and not a combined choice of both delivery models; hence respondents likely answered what method SLPs used most often rather than what method was exclusively used. Five percent of the respondents commented in the open-ended question that both service models were used and also provided their opinions about these models, specifically, the too frequent use of the pull-out method and a preference for more in-class collaboration.

IDEA 2004 mandates that students be provided with services outside the regular educational environment only if services and supports are not effective in the classroom due to the nature or severity of the disorder. Comments made by educational professionals about methods of service delivery address this issue by stating that the pull-out model “[...] may work for articulation practice, but is not effective for the broader communication needs of literacy,
English language/vocabulary development, and oral comprehension and thinking skills.” A clearer examination of which service delivery methods are being used by SLPs is warranted as well as further investigation into educational professionals’ concerns about SLPs not providing services following the least restrictive environment statute.

Adequate Training of SLPs

Behavior management continues to be an area needing improvement for SLPs. Although special education teachers and para-educators believe that SLPs have adequate performance in behavior management, regular classroom teachers, principals and psychologists feel otherwise. These neutral opinions may be due to the SLP’s role extending into the classroom setting. SLPs have training in social-emotional communication, but this training is quite different when compared to training in behavior management. An SLP can provide communication strategies to promote positive conversation interactions with peers, but when they are expected to direct a classroom of 25 or more students, they may lack in behavior control and classroom management skills. The optimal resource for a SLP in need of behavior management support is the classroom teacher. This support can be achieved through collaborative teaching efforts, such as when both the classroom teacher and SLP teach the lesson or one team member teaches while the other provides ongoing support and supervision to students during the lesson.

In the Sanger et al. study (1995), educational professionals indicated uncertainty with regards to the training of SLPs in the areas of literacy, multicultural issues, and English as a second language. The current study showed general agreement for all three areas as well as general agreement for the additional areas of training in cochlear implants, dysphagia and ASD. SLPs are considered by their interdisciplinary colleagues as adequately trained in their areas of
specialty and this was further illustrated by positive indications of the effectiveness of their 
services. Educational professionals indicated general agreement for all statements on effective 
services provided by SLPs in the Sanger et al. (1995) study and the same was found in the 
current study with the inclusion of services for cochlear implants, dysphagia, literacy, ASD and 
CAPD. Although SLPs may harbor some personal uncertainties about the effectiveness of their 
services in specialty areas such as dysphagia (Bailey, et al., 2008; O’Donoghue & Dean-Claytor, 
2008), educational professionals view SLPs as providing satisfactory, if not exceptional 
evaluation and intervention to students on their caseloads.

SLPs’ Collaboration and Consultation with Others

According to the professional educator respondents, SLPs are considered active team 
members for multi-disciplinary teams (MDT) for students with various communication 
disorders, including ADHD. Agreement for SLPs on an MDT for ADHD was not the case in the 
Sanger et al. study (1995). This change suggests greater awareness of a SLP’s role in assisting in 
the identification and treatment of students with ADHD. SLP’s collaborative efforts are also 
welcomed on multi-disciplinary teams for students with swallowing disorders, cochlear-implants, and social-emotional communication disorders. This recognition of the value of the 
SLP’s services in these areas demonstrates satisfactory advocacy of their roles and 
responsibilities and effective presentation of their knowledge and skills.

The collaborative efforts of SLPs with educational professionals were reported as 
positive. Educational professionals indicated that they personally were receiving positive 
collaborative interactions and that they believed their colleagues were also receiving the same. 
This was also resoundingly presented in the comments provided by respondents.
Although the arbitrary cut-offs implemented by Sanger et al. (1995) indicated that overall agreement was found for all collaboration and consultation statements, one statement stood out with its lower percentage ranking of agreement compared to the other statements: the SLP collaborates and consults with me when implementing treatment programs. There are several possible reasons for this lower rating. It may be due to the time-constraints for effective collaboration faced by team members who have few opportunities to communicate. Part-time psychologists or psychologists who visit several schools throughout the week may have difficulties collaborating with SLPs, especially if the SLP also has a part-time position or multiple schools to visit. Also, the educational professional may not be involved in the treatment process. A comment made by a psychologist indicated that collaboration occurs during the assessment process, but that involvement is less frequent once evaluations are complete which suggests collaboration for intervention is not necessarily needed. Inflexible schedules may also limit opportunities to collaborate: a SLP cannot interrupt a classroom teacher from teaching her class to discuss a student; both team members must find a time and place that fits into their schedules.

Examined barriers that prevent collaborative opportunities are when roles and objectives are not clearly defined as well as when each team member has a different understanding of what collaboration involves (Dunsmuir, Clifford, & Took, 2006; Hartas, 2004). SLPs may feel they are collaborating effectively with regards to intervention, but perhaps educational professionals want to participate more in the treatment process. This was directly addressed by a classroom teacher who indicated in the comments section of the questionnaire, “I wish there was more time built in for more collaboration. I could be more intentional regarding pathology if I knew the student's target sounds etc”. Directly asking educational professionals to express their opinions
about collaboration rather than rate their agreement or disagreement on a scale would have provided more detailed results.

Para-Educators

From the results obtained, there appears to be no difference in opinion between para-educators and the other four educational professional groups with regards to collaboration. The results suggest that para-educators have adequate opportunities for collaboration between SLPs and para-educators. Unfortunately, the group of para-educators had the smallest response rate (n = 7) which limits the ability to generalize these results and thus answer the research question with great confidence.

Of importance is the fact that after the author first contacted potential respondents with the survey, two para-educators replied stating they chose to not complete the questionnaire due to feeling they did not have enough experience in the field of speech-language pathology to provide feedback. Other para-educators may have felt the same way and opted out of completing the survey as well. Greater exploration of the opinions of para-educators is needed to ensure they are given opportunities to learn from and collaborate with SLPs and furthermore, ensure they feel confident to evaluate a SLP in the areas highlighted in this study.

Limitations and Future Research

A significant limitation to this study was the small number of responses collected which reduces the potential to generalize the results to all of the state of Washington and to the nation as a whole. It also limits the comparisons that can be made to the Sanger et al. study (1995) which surveyed four states with a total of 628 respondents. A large number of email addresses
collected from the WAOPSI websites were no longer valid, immediately reducing the number of potential respondents to 308. From this number, only 98 educational professionals participated in the survey. Additionally, educational professionals without email addresses were unable to contribute to the study. A suggestion for future survey studies where questionnaires are sent through email is to designate a representative from a school, such as the principal to distribute the questionnaire to potential respondents.

There was also an imbalanced dispersion of respondents in each of the educational professional groups. Twenty-eight principals and 26 psychologists responded to the survey while only 7 para-educators contributed. The varying response rates for each profession could be due to available time to complete the survey, undependability of email addresses being current and accessible, disinterest in providing opinions, and as was already discussed, the unwillingness of respondents to complete the survey due to lack of experience in the subject. Incentives could be offered for future studies to potentially increase the response rate for participating groups. Also, clearer explanations of how respondents can contribute to the research even if they feel they do not have adequate background knowledge on the contents of the questionnaire should be composed.

Some questionnaire statements were poorly phrased which may have led respondents to indicate agreement or disagreement for a statement that if more explicitly defined would have yielded a different response. The statements concerning ELLs were used in the Sanger et al. study (1995) which also questions the results obtained in that study. Phrasing the statements to specifically address what the respondent must rate is essential in order to avoid ambiguities in statements or implied beliefs. Also, a third option that included both service delivery models in
the service delivery questions would have generated different results that would have likely better reflected how SLPs are providing services in the schools.

Future studies should focus on increasing the sample size of respondents for all professions so that results can be generalized to the nation as a whole. An examination of whether or not SLPs in the medical setting are socially validated by their interdisciplinary colleagues should also occur. It would be constructive to see how SLPs feel about their methods of collaboration and consultation with other professionals, such as occupational therapists and nurse practitioners, and examine if they believe they are performing at a satisfactory level.

Summary

From the population of respondents who contributed to the study, the results demonstrate that professional educators’ opinions of SLPs in the schools are similar to the ones collected in the Sanger et al. study in 1995, with some differences noted. Due to the small number of respondents who provided these results, evidence of this difference being significant cannot be stated. The results do suggest that with added roles, expanded responsibilities and more detailed expectations, SLPs are generally representing their profession well.

Educational professionals continue to be unsure as to whether or not SLPs are involved in some specialized services. This suggests the importance of SLPs continuing to educate team members about their profession and their domains of speciality. Also collaboration, consultation and service delivery model issues continue to necessitate modifications so that educational professionals and SLPs can agree upon the most effective methods of implementation. Although there are areas of improvement, the dedicated and diverse efforts of SLPs in the schools are for the most part, socially validated by their interdisciplinary colleagues.


Questionnaire

Background Information:

1. Do you interact professionally with your current SLP?
   a. Yes.
      i. How often do you interact professionally with the school-based SLP?
         1. Daily.
         2. 1 to 2 times per week.
         3. 1 to 2 times per month.
         4. 1 to 2 times per year.
   b. No. (End of survey). Thank you for participating. If you would like to receive the results of the study, please indicate so by entering your email in the space provided.)

2. What is your current profession: (check one)
   a. Classroom teacher
   b. Para-educator/Classroom aide
   c. Principal
   d. Psychologist
   e. Special education teacher
   f. Other (please specify): ______________________

3. How many years have you been employed in the public school setting?
   a. Less than two years
   b. More than two years

4. How many years have you worked with your current SLP?
   a. Less than two years
   b. More than two years

5. Do you interact professionally with students that are on your SLP’s caseload?
   a. Yes.
      i. How often do you interact professionally with students who are on your SLP’s caseload?
         1. On a daily basis.
         2. On a weekly basis.
3. On a monthly basis.
4. On a yearly basis.

b. No.

For the following questions, please use this rating scale to express your opinion:

SA = Strongly agree  A = Agree  NA = Neither agree nor disagree  D = Disagree  SD = Strongly disagree

Questions:

1. The SLP is a good advocate of his or her profession.

2. The SLP provides intervention for:
   a. A student with a persistent hoarse voice.
   b. A student who is learning English as second language.
   c. A student who has difficulty with abstract reasoning secondary to traumatic brain injury.
   d. A student who has illegible handwriting.
   e. A student with swallowing issues.
   f. A student who has difficulty segmenting words into their separate sounds.
   g. A student who has difficulty taking other people’s perspectives.
   h. A student with a cochlear implant.
   i. A student who has difficulty following directions in class.
   j. A student who has a hard time making friends.

3. To the best of my knowledge, the SLP is qualified for the services he or she performs.

4. To the best of my knowledge, the SLP has adequate understanding of general education methods, such as curriculum and instruction.
5. To the best of my knowledge, the SLP has adequate training in:
   a. Literacy.
   b. Multicultural issues.
   c. Feeding and swallowing disorders.
   d. English as a second language.
   e. Behavior management.
   f. Cochlear implant maintenance and troubleshooting.
   g. Autism-spectrum disorder.

6. The SLP contributes important professional information to me.

7. The SLP contributes important professional information to other team members.

8. The SLP educates me on current issues related to his or her field.

9. The SLP educates other team members on current issues related to his or her field.

10. The SLP collaborates and consults with me when planning treatment programs.

11. The SLP collaborates and consults with other team members when planning treatment programs.

12. The SLP collaborates and consults with me when implementing treatment programs.

13. The SLP collaborates and consults with other team members when implementing treatment programs.

14. The SLP provides appropriate solutions for managing communication problems in classrooms for children on her/his caseload.
15. The SLP offers appropriate suggestions for enriching overall communication environment in classrooms.

16. The SLP interacts appropriately with:
   a. Parents.
   b. Teachers.
   c. Special education teachers.
   d. Para-educators/classroom aides.
   e. Psychologists.
   f. Principals.
   g. Students.
   h. Other professionals (i.e. occupational therapists, literacy specialists).

17. The SLP actively participates in multidisciplinary teams for students with:
   b. Language-based reading problems.
   c. Attention deficit hyperactivity disorders.
   d. Autism-spectrum disorder.
   e. Second language acquisition problems.
   f. Cochlear implants (hearing disorders).
   g. Swallowing disorders.
   h. Social or emotional disorders.

18. The SLP provides effective services for students with:
   a. Articulation problems.
   b. Fluency problem (i.e. stuttering).
   c. Augmentative and alternative communication needs.
   d. Cochlear implants.
   e. Language problems.
   f. Cognitive-communication deficits (i.e. students with TBI).
g. Swallowing disorders.

h. Literacy issues.

i. Autism-spectrum disorder.

j. Central auditory processing disorder.

For the following questions, indicate what you consider to be the best answer.

19. The SLP provides services:
   a. Outside of regular education classroom in a separate therapy room or location.
   b. Within the regular education or special education classroom.

20. The period the SLP spends with students to improve communication skills is adequate when treatment occurs:
   a. Outside of regular education classroom in a separate therapy room or location.
   b. Within the regular education or special education classroom.

21. Please comment about your professional relationship with the SLP.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
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