

## ABSTRACT

COLLABORATION BEGINS IN THE CLASSROOM: FUTURE TEACHERS  
DISCUSS THEIR KNOWLEDGE, PREPAREDNESS, AND PERCEPTIONS  
REGARDING SPEECH-LANGUAGE CONCEPTS AND  
COLLABORATION WITH SPEECH-LANGUAGE  
PATHOLOGISTS

By

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Since the education system has shifted towards inclusive classrooms, the need for collaboration between teachers and the special education team has increased. This study was a survey design completed by 8 student teachers from California State University, Long Beach. The purpose of this study was to investigate the knowledge base, preparedness, and perceptions of future teachers as these factors relate to collaboration with SLPs in the elementary school setting. The participants' responses suggested positive perceptions of speech-language pathologists, and motivation to collaborate, yet teachers' knowledge is limited regarding speech-language topics and collaboration. Further, student teachers report limited preparedness to collaborate and address the needs of students with speech-language disorders. Clinical implications and the need for further research are discussed.



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PATHOLOGISTS

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## LIST OF ABBREVIATIONS

SLP	Speech-language pathologist
ASHA	America Speech-Language Hearing Association

## CHAPTER 1

### INTRODUCTION

According to the U.S. Department of Education, National Center for Education Statistics (Snyder & Dillow, 2013) 86.5% of all students with speech or language impairments spend 80% or more of their day in the general education classroom. This highlights a need for teachers to be knowledgeable and prepared to address the specific needs of these individuals. While teachers' responsibilities are vast within the classroom, it is essential they do not consider themselves alone in the endeavor to educate future generations. Through collaboration, all members of the special education team, including the general education teacher, contribute expertise and provide support to the needs of the individual student. In this way, the responsibility of each student's education lies with the team. The education system supports inclusive classrooms, yet the need for a system that fosters positive and successful collaboration remains.

Since these students are now in the classroom with the general education teacher, teachers must be trained accordingly and have access to the necessary resources. According to American Speech-Language Hearing Association (ASHA) *Code of Ethics* (2010), speech-language pathologists (SLPs) have a responsibility to support the development of services to meet the needs of the public and educate others regarding our profession. It is, therefore, the responsibility of SLPs in the school setting to recognize the training needs of teachers and work together with the teacher to improve services

provided to students.

## CHAPTER 2

### LITERATURE REVIEW

#### Introduction

The following literature review discusses the need for collaboration between teachers and speech-language pathologists (SLPs) in order to address student's speech and language needs in the classroom. The system change and need for collaboration is discussed first, followed by the collaborative process, its benefits and its obstacles. Additionally, research regarding teachers' knowledge, preparedness, and general perceptions is reviewed. Despite positive perceptions about the field of speech-language pathology and a general willingness by teachers to collaborate, teachers may not be trained sufficiently in speech and language concepts and, therefore, teachers may require increased preparation in order to support students in the classroom with speech and language needs.

#### System Change: Inclusion Means Collaboration

The shift from segregation to inclusion of students with disabilities into the general education classroom is a complex systematic change. Legislature began suggesting inclusion in 1975 through the Education for All Handicapped Children Act (EHA). The Individuals with Disabilities Education Act (IDEA) from 1990, 1997, and 2004 emphasized the need for inclusion in the general education classroom. The discussion included concepts like the least restrictive environment (LRE) and varied placement options (Zavatto et al., 2007). This challenged the common dichotomy of



inclusion versus exclusion to general education. Inclusion began categorizing students based on their abilities instead of their disabilities which provided all students the opportunity to come together with a diverse group of students in the education setting.

According to Soodak, Podell, and Lehman (1998) and Grenier (2010), teachers expressed frustration through this transition as the movement to inclusion often was not accompanied by adequate support or resources. Although their classrooms now included students with varying abilities and needs, they were not prepared to support the needs of the child in the academics (Bines & Lei, 2011; Scott, Vitale, & Masten, 1998). Therefore, a shift towards inclusion calls for a systemic change emphasizing collaboration of professionals. According to Pena and Quinn (2003), inclusive classrooms shift responsibility from a single professional to a team of professionals. A collaborative relationship leads to success in this inclusive system.

### Collaborative Process

#### Development of Collaboration

SLPs are responsible for providing collaborative team-based services for children with communication difficulties (ASHA, 2010). As discussed by Pena and Quinn (2003), the development of effective and collaborative teams in the classroom is a multistep process. Their case study involved two teachers with their classroom assistants from the Head Start program and two SLP graduate students. Each class consisted of 19-20 students with about four to six students with language impairments. The goal of the case study was to create an effective collaboration team in the classroom. Data was collected based on student clinician daily logs. Results indicated that the collaborative process involved the following steps: becoming acquainted, trial and error, collective indecision,

crisis, tentative purpose, resolution, and team maintenance. It was noted that the outcomes of these steps can be positive but collaboration is a varying learning process that occurs over time. Suggestions from Pena and Quinn (2003) for increased success included spending more time preparing in the beginning of the process and involving all participants, fostering ownership and shared responsibility of the goals, training participants to identify the problem, becoming familiar with the classroom culture, and creating a shared definition for collaboration and what it means to the team. Moreover, it is imperative that all parties are willing to collaborate and understand the process involved to develop an effective collaborative team. A weakness of this study was that the teachers were recruited from their employers and were not voluntary participants.

P. Hall (2005) described the differences between professions as cultures. He defined these variances as values, beliefs, attitudes, customs, and behaviors specific to and evolving with the specific profession. The purpose of this study was to provide insight into educational, systemic, and personal barriers hindering interprofessional teamwork. P. Hall's notion was that the specific evolution and history of each profession determines the context in which a professional is trained and the culture each professional adopts. Each profession has dutifully created an identity, values, practice guidelines, and specific roles ensuring the indispensable nature of their profession. While these components are necessary to ensure the students of each profession take ownership in their future field, the author suggests that strong professional identification may create an isolation of professions, fortifying each in a silo of their own culture and beliefs, separate and independent of other professions. The differences in learning environments and value systems may create perspectives that ultimately assess the same situation in

potentially opposing ways. P. Hall submitted that collaboration during the professionals' training period may provide individuals with the ability to understand the varying perspectives. In the same way, collaboration will facilitate shared responsibility and highlight the areas of shared knowledge and abilities. While shared responsibility is an apparent outcome to collaboration, it risks unequal distribution of responsibility, unclear boundaries, and assumption of a professional's perceived responsibility, which may all potentially lead to conflict. P. Hall suggested that the education system not only does not prepare them to effectively work with other professionals, it also instills barriers such as unfamiliar vocabulary, different methods regarding problem-solving, and minimal understanding of other professionals cultures. In order to resolve this issue, it is recommended that students are given the opportunity to learn and work together from the earliest of stages of their training. The goal of this type of interdisciplinary education is to build bridges among professions before the professional divide eliminates the opportunity for collaboration.

### Maintaining Collaboration

Once collaboration begins, actions must be taken to maintain the level of collaborative functioning. Freeth (2001) addressed the lack of research regarding sustaining interprofessional collaboration by reiterating widely recognized factors that relate to successful, or unsuccessful, collaboration. She then discussed the factors leading to sustained collaborative relationships and the evidences of an ending collaborative relationship. A case study was conducted at the Clinical Skills Centre at St Bartholomew's Hospital in London where an interprofessional skills center was created. The purpose of this case study was to outline the phases and contributions of this center

from design to closing as it related to sustained collaboration. Freeth found that while there exists an abundance of factors that may positively or adversely affect collaboration, the key to sustained collaboration is an imbalance towards positive benefits. In other words, successful collaboration continues when the disadvantages associated with collaboration are outweighed by the many benefits.

This imbalance is one that favors the benefits and compensates for any disadvantages. Freeth's (2001) study suggested that sustained collaboration is a product of valued individuals with various contributive skills creating a focused interprofessional collaboration team. She also noted that sustained collaboration may create unique problems separate from the ones discussed in this article such as stagnation and complacency. Given that effective and long-lasting collaboration is the goal, it is beneficial to discuss thoroughly the value in working as a team.

### Value in Collaboration

#### Direct Student Advantages

When discussing the importance of collaboration, it is necessary to evaluate the effectiveness of the practice as it relates to language gains in the classroom for students with speech and language disorders. Throneburg, Calvert, Sturm, Paramboukas, and Paul (2000) compared the effectiveness of the collaborative approach, a classroom-based intervention model, and a traditional pull-out model for children with qualifying communication difficulties in Kindergarten through third grade. The same curricular vocabulary targets and materials were used in all contexts to examine the vocabulary skills of mainstream education students. The results of this study indicated that the collaborative model elicited the most gains in vocabulary in the students with and without

speech and language disorders. The students with speech and language disorders benefited from all models; however, the collaborative approach demonstrated the most gains, then the classroom-based intervention, and then the pull-out method. The time spent planning lessons and discussing strategies was considerably higher for the collaborative method and was supported by the organization through increased grant funding. The discussions that took place in the collaborative process encouraged the exchange and development of ideas in both therapy and instruction contexts. The teacher also incorporated many related activities throughout the week to support the collaborative lesson. This also provides an explanation for the significant increase in gains for students without speech and language disorders in the collaborative classroom compared to the pull-out model where SLP input was not incorporated. This study was supported financially with a grant; therefore, generalization of the expected time commitments to successfully implement the collaborative model may be restricted without organizational support or funding.

Improving the student's speech and language skills in a meaningful way, while maintaining the least restrictive environment, is the ultimate outcome (American Speech-Language-Hearing Association, n.d.). With improved and more frequent collaboration practices, the use of a collaborative service delivery model may be implemented more often as the traditional pull-out model (services are provided outside of the classroom) is still overwhelmingly the most common service-delivery model used (ASHA, 2008; Brandel & Loeb, 2011; Mullen & Schooling, 2010). Research by Beck and Dennis (1997) suggested the limited use of this model is due to a lack of time to collaborate in general; however, the benefits to the student are unique and valuable. The teachers from

this study recognized the potential significance in this because the clients were receiving services in their natural and academic environment. The opportunity for continued involvement in all classroom activities and social interactions also gives reason to consider the collaborative model when determining service delivery options for a student. According to Elksnin and Capilouto (1994), it is beneficial to the child when there is increased opportunity for the child to practice their communication behaviors in the most natural environment with appropriate reinforcement. With the teacher and SLP working together, these opportunities may be created in various contexts throughout the day.

#### Indirect Student Advantages: Team Support

Ultimately, Ehren (2000) suggested, collaboration allows both teachers and SLPs to provide the best services to children with speech and language disorders, as is their responsibility. According to the Individuals with Disabilities Education Act (2004), it is required by law that the individual education program supports the child's advancement in the general curriculum in any setting. Therefore, therapy, regardless of the service delivery model, must involve classroom curriculum to ensure this progression. In this context, collaboration is the foundation on which this responsibility is fulfilled. While this may cause confusion regarding specific responsibilities, Ehren encouraged SLPs to recognize their unique value in the classroom. SLPs have a specific expertise that is different from that of other professionals. The knowledge and skills of SLPs compliment the expertise of teachers, and the reverse is also true. Therefore, effective collaboration encourages the appreciation and development of these skills, not the "watering down" or dismissal of them.

Another advantage to collaboration is the shared responsibility of the student's progress. It may be tempting to assume that language goals are the primary responsibility of the SLP and curriculum goals are the main responsibility of the teacher, however, this is a disservice to the team and, most importantly, the student. Ehren (2000) explained that without the collaborative process, students with language disorders will be limited in their ability to generalize their language gains in a meaningful and academic way. Instead, it is both teachers and SLPs who share the responsibility of the academic success of students with speech and language disorders. When collaboration occurs, SLPs are able to support the curriculum during intensive therapy sessions and teachers may give appropriate and integrated speech and language support in the student's natural environment. Since it is not feasible to provide direct services in every possible context, collaboration is necessary.

Tollerfield (2003) also highlighted the value in the process of collaboration. Tollerfield examined the ways professionals share their knowledge and skills, and how they overcome barriers through the collaboration process. The study took place in an infant classroom at a school for children with physical difficulties over the course of thirteen weeks. The class received SLP services during three lessons a week, in addition to some pull-out services. Brainstorming sessions were conducted following the study which involved seven SLPs at the first session and eight teachers at the second session. Data were collected through SLP diary notes completed once per week, transcripts from classroom practice, and transcripts from brainstorming sessions. This study found that teachers and SLPs have related and individual skills and knowledge they contribute to the teaching of the class. In this mutual teaching environment, both professionals contribute

to the classroom dynamic and, in turn, they acquire new skills and knowledge through the collaborative process. Further, the findings indicated that the common barriers found in the collaboration process were resolved in this classroom setting. The differences between the two professions, as described by McCartney (1999), sometimes were found beneficial to the collaborative working relationship. Research also emphasized the value of diversity throughout the collaboration process as collaborative problem solving produces increasingly innovative solutions (Lacey & Lomas, 1993; Tollerfield, 2003). It was noted that this study was limited in the data available as the participants focused disproportionately on the benefits of the SLP in the classroom rather than on the benefits of the teacher in the classroom; therefore, an accurate comparison could not be considered. It is evident, however, that collaboration has a wide influence on the perceptions and, therefore methods, of professionals, and student gains.

#### System-Based Barriers to Collaboration

While there are clearly many promising outcomes to working as a team, these often come at a price and barriers to collaboration are not always easy to overcome. According to McCartney (1999), barriers to collaboration may be examined using a systems analysis approach. The systems analysis approach divides the potential barriers into four dimensions: functions, structures, process, and systems-environment. One functional barrier involved notions of who the service is provided to. For example, teachers prepare curriculum and resources given to the whole class while SLPs provide services to the individual as necessary. Teachers also focus more on the context in which the individual is learning than on the difficulty, whereas SLPs often focus on addressing



the difficulty.

Another functional barrier includes varying models of interprofessional interactions. These professions may have different definitions of collaboration, and minimal knowledge regarding the context wherein each individual performs. Structural barriers are determined based on the opposing time periods of the two professions. Teachers function within a highly structured school day whereas SLPs must remain flexible in their work day. McCartney emphasized that time and continuity are key factors to successful collaboration. Management structures may create barriers such as sharing a classroom, as it may be uncomfortable for teachers. In the same way, sharing power in decision making may be uncomfortable for SLPs. Curriculum structures are varied for teachers and SLPs as well. Teachers depend on a highly structured curriculum whereas SLPs make individual decisions based on research. On the other hand, process barriers are minimal and supportive of a collaborative team. According to McCartney, understanding the context in which the other members of the team function is a significant contributing factor to developing mutual understanding, and team progress.

In the same way, P. Hall (2005) identified barriers that would inhibit this emerging understanding such as unfamiliar vocabulary, different methods regarding problem solving, and minimal understanding of other professional's cultures. A deeper analysis of the research is needed in order to further understand a teachers' knowledge base regarding SLPs and working with students with speech and language disorders.

#### A Teacher's Knowledge Base

### Knowledge is Unfinished: Role of the SLP

Recent research regarding teacher's knowledge of the role of SLPs is scarce. According to early research by Sanger, Hux, and Griess (1995) teachers did not understand the SLPs role as it related to specific populations. Another more recent study addressing teacher knowledge about the roles of SLPs was completed (Wellman, 2006). The results from this study also suggest that teachers and SLPs did not agree regarding the roles of the SLP in literacy as outlined by ASHA (ASHA, 2001). The questions pertaining to teacher referral practices, reactions to the open-ended question, and Likert-scale items suggest that teachers maintain the traditional view of SLPs in that they believe SLPs work only with sound production. Further research regarding the perceptions of teachers and the specific role of the SLP is necessary.

### Knowledge is Unfinished: Speech and Language Concepts and Student Support

Research indicates there is a gap in the knowledge base and training of teachers, not only as it relates to the roles and responsibilities of the SLP, but also in the fulfillment of the educator's role in regards to teaching students with speech and language difficulties. Dockrell and Lindsay (2001) highlighted knowledge gaps as one of the three primary barriers teachers face when working with students with speech and language disorders. For example, when asked to give a working definition of the term "specific speech and language difficulties," responses showed that 21% had never heard of the term or didn't know the meaning, 19% provided vague or inadequate definitions (e.g., using the words speech and language in the definition or giving analogy with specific learning difficulties), 15% focused on the speech portion alone, and 45% gave more detailed definitions including receptive and expressive language components. Given the

prevalence of students with speech and language disorders in the classroom and an inclusion model, the lack of basic familiarity with speech and language concepts from the professionals educating these students is a concern.

These concerns received additional support when Marshall, Ralph, and Palmer (2002) investigated teachers' attitudes to children with speech and language difficulties. Two questionnaires were completed by 268 student teachers from Manchester, United Kingdom. The first questionnaire only consisted of two open-ended questions where students were asked to define "a speech and language difficulty" and "a communication difficulty." The second questionnaire defined the term "speech and language difficulty" and then asked 22 questions that were divided into subquestions. The results of this study provided quantitative and qualitative data. The comments made by teachers were concerned about resources, including time and knowledge base. The authors recommended further discussion regarding inclusion and additional knowledge and resources to the teachers so they may be better informed to support all of the students in their classrooms.

In a similar study, Mroz and Hall (2003) evaluated teachers' knowledge, skills, and training needs as they relate to speech and language development. A questionnaire was completed by 829 Early-Years professionals (e.g., teachers, teacher assistants, crèche worker in family centers, nurses), 294 of these were Foundation Stage teachers (teachers of children aged 3 to 5 years old), and 50 interviews were completed. These teachers typically have no interactions with speech-language pathologists and work independently to identify children with communication difficulties. The six-page questionnaire consisted of open and closed demographic questions and 5-point Likert scale questions

investigating the teachers initial training, degree of confidence, and future training needs in the following six language areas: comprehension, attention and listening skills, the relationship between play and language development, speech sound development, expressive language, and the use of language in social contexts. The final portion of the questionnaire involved case history questions where the teacher was required to determine if the child should be referred for assessment or if the child's language was considered within the normal range. The questionnaire was sent to all registered Early-Years settings in six regional authorities in the North East of England.

The results of this study suggested that Early-Years professionals recognize their responsibility to assess all children for referral needs in their classroom. There is a concern, however, that the professionals do not have the necessary tools and knowledge base to perform this general assessment for children in regards to their speech and language development or identify a delay or disorder (Mroz & Hall, 2003; E. Hall, 2005). In the interview portion, 30% stated training in the area of identification is needed. A concern was also raised in this study as 16% of these professionals believed they did not need any training in this area. A correlation was found between these high confidence levels, no training necessary, and having no children identified with communication difficulties in their specific settings, although prevalence rates were at 13% (Klee, Pearce, & Carson, 2000). It is possible these settings have no children with communication difficulties, but it is a concern that children with speech and language difficulties will continue to be deprived of necessary services due to high confidence levels of the professionals around them paired with their lack of training and knowledge. Those who were interested in further education suggested identification of children with

communication difficulties as a training area through curriculum focused on basic speech and language development. This extra training may allow professionals to make informed decisions regarding referrals and minimize the need to rely on comparisons, uncertainty, and social norms.

Sadler (2005) investigated the knowledge, attitudes, and beliefs of mainstream teachers of children with speech and language difficulties. A 12-item questionnaire was completed by 89 teachers of Reception, Year 1 and Year 2 classes including children with a preschool diagnosis of moderate or severe speech and language difficulties. A majority of the teachers had more than 5 years of experience teaching, yet nearly half stated they had no experience working with children with speech and language difficulties. Nearly all of the teachers (90%) did not remember receiving any initial training regarding speech and language disorders. Of the participants who received some training, none identified the training as adequate. Teachers found hands on experience and books to be the most frequent source of knowledge but a portion also noted that short courses, professional development (e.g., in-services), and training modules were also a good source of knowledge. A majority of participants described their knowledge base as limited or very limited.

More recent research by Mroz (2006) also investigated the knowledge, skills, and understandings of teachers regarding children's speech and language development as well as the influence of initial training and the systems in place to support teachers in the identification of children with communication difficulties. This article was based on data found in the research previously discussed by Mroz and Hall (2003). Results indicated that seventy-seven teachers said they received no training on delay or difficulty in speech

and language development. While 30% of nursery teachers (teaches 3 to 4 year olds) received some input, only 18% of reception teachers (teaches 4- to 5-year-olds) received some input. The study found that 56.5% of teachers perceived that training had been brief in all areas, except for play. Regarding speech sound development, 26% of participants noted that they received no training. Teachers highlighted a need for future training primarily in the areas of identifying speech and language disorders and speech sound development. It was determined there was no direct correlation between confidence in skill and competence. Overall, these results together suggest that Foundation Stage teachers lack the appropriate level of training in the area of speech and language, specifically in the ability to identify children with communication difficulties, and teachers are interested in further guidance and training.

#### Knowledge is Complete: Role of SLP

According to Shaughnessy and Sanger (2005), teachers demonstrated a basic familiarity with language development although it was not noted whether this was through experience or initial training. One participant's comment attributed personal knowledge in the area of language development and classroom interventions to collaborative experiences rather than initial training. While the sample size was large, generalization to teachers of other grades and in other regions was limited.

While earlier research strongly suggests that teachers fail to have sufficient information regarding SLPs and working with students with speech-language difficulties, the newest research, although minimal, demonstrates that teachers maintain a basic understanding of key language concepts and have sufficient knowledge in the area of speech and language. Due to the relatively conflicting data, and limited recent research,

additional research is necessary regarding extent of teacher knowledge of the fundamentals of speech and language.

### A Teacher's Preparedness

After reviewing the research regarding teachers' knowledge, teachers may not be prepared to collaborate with SLPs or support the academic needs of students with speech and language disorders.

### Preparedness to Support Students with Speech-Language Disorders

Dockrell and Lindsay (2001) provided valuable insights into teachers' perspectives about working with children with specific speech and language difficulties in the classroom. The purpose of the study was to gather information regarding teachers' perspectives on the issue and the effects different perspectives have on inclusive education. The study included 133 8 year-old children who were identified by teachers, educational psychologists, and SLPs as experiencing primary difficulty in the area of speech and language. Fifty-nine children and a subsample of 10 children, all 8 years old, who attended specialist regional schools, participated in further research. The teachers of the students in the study ranked the students behavior on a rating scale and completed individual interviews. The results of the study showed three areas of difficulty often encountered by teachers: the difficulties this population experienced in addition to their peers, a teacher's personal knowledge gap, and the obstacles affecting a teacher's ability to meet children's needs. Twenty-seven percent of the teachers noted that their own knowledge and expertise was limited in the area of speech and language, specifically as it relates to the nature of the problem, the appropriate interventions and implementation in the classroom, and the distribution of responsibility. It was noted that the teachers who

more recently received their credential demonstrated an increase in training qualifications suggesting speech and language development was integrated into the teacher training curriculum. A majority of teachers cautioned that the resources available in the classroom may not be meeting the children's needs and may adversely affect their future progress.

Again, Sadler's (2005) evaluation of teacher perspectives regarding their perceived abilities to fulfill their responsibilities is concerning. The author found that no teacher out of the 89 participants regarded themselves as very confident in their ability to service the educational needs of students with severe speech and language difficulties. A majority described themselves as not at all confident or not very confident in this same responsibility. Mroz (2006) found, in general, teachers were more confident in areas that had been covered in depth in their initial training. This highlights the need for initial training programs that better prepare student teachers to support children with speech and language disorders in the classroom setting.

#### Preparedness to Collaborate with Speech-Language Pathologists

As discussed previously, P. Hall (2005) believed that the education system does a disservice to student teachers and fails to prepare them to work effectively with other professionals; instead, it cultivates barriers across professions. Further analysis by E. Hall (2005) of the previously discussed study by Mroz & Hall (2003) focused on the roles and needs of early-years professionals and SLPs. The interview data provided insight into the complexity of early-years professionals' roles as most participants included identification, support, and liaison as part of their primary purpose. The majority claimed, however, that lack of training regarding available support, lack of



information regarding the referral process, and difficulty communicating with parents and SLPs hindered their ability to be effective in their role. When faced with these types of challenges, teachers may feel unprepared to address them. For example, during the identification stage, a majority of professionals implemented strategies in the classroom to support the student's communication and nearly half did this without consulting other professionals or the child's parents. Without knowledge of supports and resource information available to them and with a history of difficulty communicating with SLPs, some teachers consider themselves unprepared to address speech-language issues in the classroom, yet continue to do so alone. The individualistic approach to students' communication difficulties is a significant concern as many students who participated in this study presented with complex communication difficulties, and the professionals frequently had no training in this area. The input from these Early-Years professionals demonstrates a considerable need for "more" from SLPs who are already maintaining workloads that are at capacity. Training involving available supports, resources and the referral process is an essential next step to facilitate teacher preparedness to ensure children with communication concerns are not at a disadvantage as they experience extended "watching and waiting" periods before resources are provided.

#### Preparedness, Motivation, and Self-efficacy

Although the need for increased preparedness through supplemental training may exist, according to research (McCartney, 1999; Dockrell & Lindsay, 2001; P. Hall, 2005; Sadler, 2005), teachers must first be motivated to learn. Specialized training without this motivation would not result in the same benefits to teacher (Thoonen, Slegers, Oort, Peetsma, & Geijsel, 2011). Thoonen et al., (2011) described motivated behaviors as a

result of motivating factors. These motivational factors can be broken down into three main areas: expectancy, value, and affective components. First, the expectancy component embodies the teacher's desire for success and their belief that they will be successful. This is also referred to as teacher self-efficacy. High levels of self-efficacy lead to greater levels of planning and organization, a willingness to collaborate and experiment with new ideas, increased persistence, and resiliency when issues arise. The value component addresses the teacher's perception of the goal. If the goal is of high importance or interest, the value increases. Lastly, the affective component considers the teacher's emotional state in relation to the goal, collaborative team, and organization as a whole. While research is limited, Van Veen and Slegers (2009) emphasized one emotional concern of many teachers is their individual well-being. It is suggested this may lead to general feelings of uncertainty or lack of confidence. This characteristic is of concern as it limits the teacher's motivation to take risks or remain flexible when collaborating with others. Other emotions may be present and may negatively affect the teacher's emotional state and preparedness to collaborate.

The significance of teacher self-efficacy in relation to special education is discussed again in a study by Guo, Dynia, Pelatti, and Justice (2014). While this study evaluates special education teachers specifically, the shift towards inclusive classrooms bridges the gap between the populations within each classroom. The two-part research study included 28 early childhood special education teachers and 108 children. A limitation of this study is the small sample size and generalization to other populations is restricted. The first portion included a reading program where teachers read aloud to their students four times a week. Then, a 19-item questionnaire modified from the

*Teacher Self-Efficacy Scale (TSES; Bandura, 1997)* was completed by the teachers. The results of this study indicated a positive relationship between high teacher self-efficacy and children's language and literacy gains. This insight further supports the benefits of self-efficacy, both in teacher motivation and student gains. While preparedness and differing knowledge in speech and language development will expectedly decrease a teacher's self-perceptions of competence and capability, adequate knowledge in this same area will likely increase a teacher's self-perceived ability to succeed.

Poor motivation will limit a teacher's preparedness to collaborate. Understanding the motivational factors present, or absent, when working with a team, will provide the SLP with insight into teacher's response to training and preparedness to collaborate. Research suggests collaboration and motivation have a reciprocal relationship; collaboration increases motivation in the same way motivation increases collaboration (Dzubay, 2001; Thoonen et al., 2011). A study by Dzubay (2001) discussed circumstances involving professionals who are not prepared to collaborate. The results warned against coercion and forced participation in the necessary training areas as this will often result in decreased motivation and other negative consequences. Instead, addressing the issue resulting in resistance and attempting to understand the teacher's perspective may prove more beneficial to the collaborative process.

### A Teacher's Perspective

Before educating others regarding speech and language concepts, it is crucial that SLPs understand the perspectives of teachers, including their current circumstances and their future goals. The following research addressed the perspective of teachers regarding the role of SLPs, collaboration in general, and other influences related to

collaboration.

### Perceptions Regarding the Role of the SLP

A mutual understanding of team roles and perspectives is a building block onto which a successful collaborative partnership is built (McCartney, 1999; P. Hall, 2005; E. Hall, 2005). As noted throughout this review, research supports the conclusion that teachers have a limited understanding of the role of SLPs and SLP concepts (Sanger et al., 1995; Dockrell & Lindsay, 2001; Mroz & Hall, 2003; E. Hall, 2005; Sadler, 2005; Mroz, 2006; Wellman, 2006), yet SLPs are responsible for the education of professionals in the content of speech and language disorders (ASHA, 2010). Hartas (2004) examined teachers' and SLPs' perceptions regarding collaboration with their coworkers. Twenty-five teachers and seventeen SLP's from a special school that services children with communication difficulties participated in the study. They were asked questions, through a questionnaire and group discussion, regarding ways the school system supports collaboration between teachers and SLPs; the barriers that hinder collaboration; the extent to which people's values, chemistry and personality affect collaboration; the individual changes that occurred to adapt to the specific school's culture as it relates to collaboration; and, perceived future challenges to collaboration. Data were analyzed quantitatively and qualitatively. The role of both professionals included a responsibility to collaborate and provide individual contributions in order to build an effective interprofessional relationship. The results propose that teachers and SLPs were motivated by the mutual understanding that child development is complex and that teachers and SLPs have complimentary roles with skills and knowledge that together will benefit the common goal. Therefore, teachers see the SLP role as a necessary part of the

collaboration process where the SLP provides specific skills and knowledge to improve services provided to children with speech-language disorders.

More specifically, Shaughnessy and Sanger (2005) investigated the perceptions of kindergarten teachers regarding SLPs and their roles and responsibilities. A survey consisting of 36 open ended and Likert rating scale questions was completed by 484 kindergarten teachers in one Midwestern state. While some items were noted as ambiguous by the participants and researchers, results suggested a positive general perception of SLPs as it related to effective services and varied service delivery models, suggestions made, and shared responsibility in serving children with communication difficulties. One general theme within the comments portion was the appreciation of SLPs knowledge and help. This suggests a willingness to collaborate on behalf of teachers and a need for increased growth in this area.

#### Working with an SLP

Many teachers are ready for change and are enthusiastic about collaboration. One service delivery model that fundamentally thrives on collaboration is classroom-based interventions because the SLP and the teacher co-exist in the same space to reach their goals. Beck and Dennis (1997) gathered information regarding the advantages and disadvantages of these classroom-based interventions. A three page survey was completed by 21 SLPs from the three school districts in the Chicago and Illinois region and 21 teachers who worked at one school within each district mentioned previously. All teachers worked at a school that used classroom-based interventions. The first page of the survey was specific to either SLP or teacher and contained demographic questions; the second page asked all respondents, both SLPs and teachers, to rate advantages and

disadvantages concerning classroom-based speech-language interventions on a 5-point scale. The third page consisted of ranking six forms of classroom-based interventions on their frequency and appropriateness of use. The third page also contained two open-ended questions involving their perception of advantages and disadvantages of classroom-based interventions. This study showed there were many areas of agreement between the two groups. The results found that both professionals identified team teaching as the most appropriate model, although the “one teach, one drift” model was more frequently used in the classroom. This may be due to the issue of time restraints for consultation; the “one teach, one drift” model was agreed upon by both groups as problematic. An important concern was also identified in that some SLPs noted a lack of support and interest to collaborate from teachers despite the general agreement and positivity toward collaboration noted throughout the survey by both groups of professionals. This study was limited in the number of SLP participants and the small sample area; therefore, generalization to other SLPs and teachers is limited.

Again, positive sentiments were shared in the study by Mroz and Hall (2003). They found that the individuals who were interviewed were supportive of future training in the area of speech and language. Increased training and collaboration may lead to more shared successes. Shared successes likely will increase eagerness for further joint discussions (Tollerfield, 2003). According to Sadler (2005), teachers agreed that the advantages of inclusion of children with speech and language disorders outweigh the disadvantages. This accompanied a generally positive outlook on this model and willingness to collaborate.

Perceived Contributing Factors and Barriers to Collaboration

Although contributing factors and barriers to collaboration will differ across experiences and circumstances, research by Hartas (2004) investigated the teacher's and SLP's perceptions of the variables influencing collaboration. Data analysis found that factors that contribute to collaboration include time availability, individual contribution, communication flow, team work, and, most importantly, the existence of an organizational structure. A school-organized system with supports in place to encourage collaboration and clarify roles and expectations is important to facilitating collaboration. In addition, personality plays a role in individual contribution to collaboration while "personality clashes" discourage collaboration. A weakness of this study was that the staff dynamic at this school involved SLPs working alongside teachers within the classroom; this system, and the school's emphasis on interprofessional collaboration, may have influenced staff's perception of collaboration.

Additionally, E. Hall's (2005) focus on the roles and needs of early-years professionals and SLPs highlighted their outlook on the collaborative experience. The majority of teachers indicated that difficulty communicating with parents and SLPs hindered their ability to be effective in their role. The interview data also noted that almost every professional suggested more and better communication was needed between the professional and the SLP. Other obstructive factors noted in the interviews included limited time, over-worked SLPs due to high caseloads, being short staffed, limited funding, and SLPs working in generally adverse conditions. The professionals emphasized a desire for easier access to the SLP for specific consultation and training purposes, and a reprieve of the isolation-based system that often left the professionals feeling uninformed and restricted. This theme continued as noted through the SLPs

attempts to support professionals yet doing so using forms and vocabulary that were unfamiliar and jargon-based. This called on the individual to take initiative to clarify the information, and when this occurred the SLP was often helpful and supportive. This is time consuming, however, for the individual and not an ideal situation to support a system of professionals who are functioning on limited time and resources.

In a similar study by Baxter, Brookes, Bianchi, Rashid, and Hay (2009), the potential issues involving interprofessional collaboration were further investigated. A total of 95 questionnaires were completed by 25 different schools in England. Results reported differing rationale for working together, limited understanding of the referral process and contacting the SLP, increased frequency of meetings, and a lack of information regarding available training options.

Despite many barriers, the teachers maintain a positive outlook regarding the role of the SLP and are aware of the value SLPs bring to the collaborative team. Furthermore, teachers are willing to work with SLPs and recognize the collaboration, although challenging, is worth the outcomes in the end.

### Summary

Further research is necessary in order to develop a comprehensive understanding of teachers' perspectives, training needs, and preparedness to collaborate with professionals, and identify and support students with speech and language disorders in the classroom. Discussing teachers' knowledge, preparedness, and general perceptions related to the role of the SLP and other speech and language issues will better prepare SLPs to perform as an integral part of the collaborative team. More frequent and effective collaboration is necessary in order to better train and better prepare teachers to



provide academic support to students with speech and language disorders.

### Research Questions

The researcher hypothesizes that future teachers will maintain positive perceptions regarding collaboration with SLPs and a willingness by teachers to collaborate. The second hypothesis is that teachers are not trained sufficiently in speech and language concepts related to the collaboration process. The researcher also hypothesizes that teachers will request additional preparation to support the speech-language needs of students in the classroom. Lastly, the researcher hypothesizes that participants' demographics will significantly affect teacher's knowledge, attitude and perceptions of collaboration with SLPs.

## CHAPTER 3

### METHODS

#### Design

This descriptive research was completed using survey research design. Quantitative and qualitative data were collected using a survey created by the primary investigator and was based on Sadler's (2005) survey. The participants were selected based on purposive sampling.

#### Participants

A total of nine students enrolled in the Multiple Subject Credential Program at California State University, Long Beach participated in the study. All participants had completed all coursework in the credential program and were completing their first or second semester of student teaching in local California elementary schools.

All 90 students enrolled in the 2014 California State University, Long Beach Multiple Subject Credential Program student teaching courses were emailed by the program director inviting them to partake in the survey (Appendix A). Sixty students were invited in person, either during a class meeting period as allowed by the professors or before a mandatory academic assembly of all students in their final semester of student teaching (Appendix B). Informed consent was acquired online (Appendix C), and the survey was accessed and completed online through an encrypted website, Survey Monkey (Appendix D).

The survey was completed by 9 participants. One participant failed to respond to

the last three portions of the survey but provided valuable insight through the open-ended questions, and the portion assessing the knowledge of teachers ( $n=9$ ). All participants were female, with an age-range of 18-35 years, and identified as either Hispanic or Latina or White or Caucasian (Table 1). One participant chose not to respond to all demographic questions.

TABLE 1. Demographic Summary of Participants

Participant #	Age	Ethnicity	Gender	Academic Standing
1	18-24	Hispanic or Latina	female	Post-Bachelor's degree
2	18-24	Hispanic or Latina	female	Senior
3	25-34	Choose not to answer	female	Post Bachelor's degree
4	18-24	White or Caucasian	female	Post Bachelor's degree
5	18-24	White or Caucasian	female	Post Bachelor's degree
6	25-34	White or Caucasian	female	Post Bachelor's degree
7	NA	NA	NA	NA
8	25-34	White or Caucasian	female	Post Bachelor's degree
9	25-34	White or Caucasian	female	Post Bachelor's degree

### Data Analysis

A 28-item survey was created to investigate student teacher knowledge, perceptions, and preparedness as it relates to collaboration (see Appendix C). The survey was piloted with five students from California State University, Long Beach from the Departments of Speech-Language Pathology and Liberal Arts; these students would not be participating in the research study. The scoring criteria were coded for the Likert scale questions (Table 2) and the Agree/Disagree questions (Table 3) in order to report the mode and range.

TABLE 2. Score for Likert Scale Questions

Score	Scoring Criteria
-------	------------------

0	Choose Not to Answer
1	Strongly Disagree
2	Disagree
3	Neither Disagree nor Agree
4	Agree
5	Strongly Agree

TABLE 3. Score for Agree/Disagree Questions

Score	Scoring Criteria
1	Don't Know
2	Incorrect Response
3	Correct Response

The open-ended questions were read several times in order to familiarize the author with the data. Recurring themes were identified through the familiarization phase of the analysis. Further analysis evaluated the strength of the theme and relevance to the field of speech-language pathology. The survey responses were analyzed in the following sections: knowledge, preparedness, and perceptions. Each section was then studied for broad patterns and themes. A question-by-question evaluation provided data on general findings per question and allowed for cross tabulation analysis, comparing the participant response and the participant demographics.

## CHAPTER 4

### RESULTS

The data collected by the survey consisted of four open-ended questions, six agree/disagree questions with an option of “don’t know” and “choose not to answer,” 14 questions on a 5-point Likert scale (e.g., “strongly disagree,” “disagree,” “neither disagree nor agree,” “agree” and “strongly agree”) and four multiple-choice demographic questions. The agree/disagree questions and Likert scale questions were divided into three categories assessing general speech-language knowledge, preparedness to collaborate, and perceptions of collaboration.

A general section analysis and question-by-question analysis summarizing the data was completed for each section.

#### Knowledge

##### Section Analysis

This summary of data includes descriptive statistics addressing the knowledge of student teachers as it relates to SLPs and a cross tabulation of data by demographics.

Nearly half of the queries were answered correctly by the participants (Table 4). The results show that two queries were answered more than 75% correct ( $n=7, 8$ ), one was answered 66%-74% correct ( $n=6$ ) and three queries were answered less than 34% correct ( $n=2, 3$ ). Six participants identified the possibility that a student performing poorly in a single class may have a language learning disability. The majority of student teachers demonstrated knowledge regarding the need to refer students with suspected

learning disabilities to the SLP and refer bilingual students presenting with difficulties in both languages. The participants failed to demonstrate knowledge related to language differences when referring bilingual students with a speech-language difficulty in only one language. The participants demonstrated limited knowledge of SLPs' responsibilities as they relate to helping students acquire the language necessary to access the curriculum and helping students with reading and writing difficulties. Approximately half of the participant responses were correct; the remaining responses were incorrect or the participant marked that they did not know the answer (Figure 1).

TABLE 4. Student Teacher General Knowledge Summary

Assessment of teacher knowledge regarding speech-language issues:	Agree	Disagree	Don't Know	Percent Correct
The general education teacher and the speech-language pathologist are responsible for teaching the curriculum to students with speech-language disorders.	66.67% 6	33.33% 3	0.00% 0	33.33% 3/9
A bilingual student should be referred to the speech-language pathologist if the student is having difficulty in one of the languages.	44.44% 4	22.22% 2	33.33% 3	22.22% 2/9
A bilingual student should be referred to the speech-language pathologist if the student is having difficulty in both languages.	77.78% 7	22.22% 2	0.00% 0	77.78% 7/9
The speech-language pathologist's role includes helping students with reading and writing problems.	33.33% 3	44.44% 4	22.22% 2	33.33% 3/9
Students with suspected learning disabilities should not be referred to the speech-language pathologist.	11.11% 1	88.89% 8	0.00% 0	88.89% 8/9
If a student performs poorly in a single class (e.g., science, mathematics, history), it may be due to a language learning disability.	66.67% 6	22.22% 2	11.11% 1	66.67% 6/9
Total Average:	---	----	8.93% 5/56	51.79% 29/56

Results indicated that no significant correlation was found between the participants' performance and demographic factors (Table 4). When age, ethnicity, and academic standing were considered, all groups scored between 50.00%-66.67% correct (Table 5). This survey assessed only five main content areas of student teachers' knowledge base and is not considered a comprehensive assessment of teachers' knowledge of all speech-language topics.

#### Question by question analysis

A question-by-question analysis was completed in order to determine the questions that resulted in the largest number of correct responses in the series of Knowledge queries (Table 4). This analysis was also completed to provide a descriptive analysis for the "agree/disagree" questions evaluating the knowledge of student teachers regarding collaboration. Cross tabulation analysis was used to compare the relationship between participant responses and demographics.

1. *The general education teacher and the speech-language pathologist are responsible for teaching the curriculum to students with speech-language disorders.* The overall mode score was 2 with a range of 1. The mode score for participants aged 18-24 was 2 with a range of 1. No score was found most frequently for participants aged 25-35, therefore, there is no mode. Score range is 1. The mode score for participants who identified as White or Caucasian was 2 with a range of 1. The mode score for participants who identified as Hispanic or Latina was 2 with a range of 0. The mode score for participants in their senior year of college was 2 with a range of 0. The mode score of participants earning their post-bachelor's degree was 2 with a range of 1. The dissection of the participant responses is summarized in Table 6.

TABLE 5. Demographic Summary of Student Teachers' General Knowledge

Demographics:	Average Correct	Average Incorrect	Average "Don't Know"
<b>Age</b>			
18-24 (n=4)	54.17% (3.25/6)	25.00% (1.5/6)	20.83% (1.25/6)
25-35 (n=4)	54.17% (3.25/6)	41.67% (2.5/6)	4.17% (.25/6)
Choose not to answer/Skip (n=1)	50.00% (3/6)	50.00% (3/6)	0.00% (0/6)
<b>Ethnicity</b>			
White or Caucasian (n=5)	53.33% (3.2/6)	30.00% (1.8/6)	16.67% (1/6)
Hispanic or Latina (n=2)	50.00% (3/6)	41.67% (2.5/6)	8.33% (.5/6)
Choose not to answer/Skip (n=2)	58.33% (3.5/6)	41.67% (2.5/6)	0.00% (0/6)
<b>Academic Standing</b>			
Senior (n=1)	66.67% (4/6)	33.33% (2/6)	0.00% (0/6)
Post-Bachelor's Degree (n=7)	52.33% (3.14/6)	33.33% (2/6)	14.33% (.86/6)
Choose not to answer/Skip (n=1)	50.00% (3/3)	50.00% (3/3)	0.00% (0/0)
<b>Total (n=9)</b>	<b>53.67% (3.22/6)</b>	<b>35.17% (2.11/6)</b>	<b>11.17% (.67/6)</b>



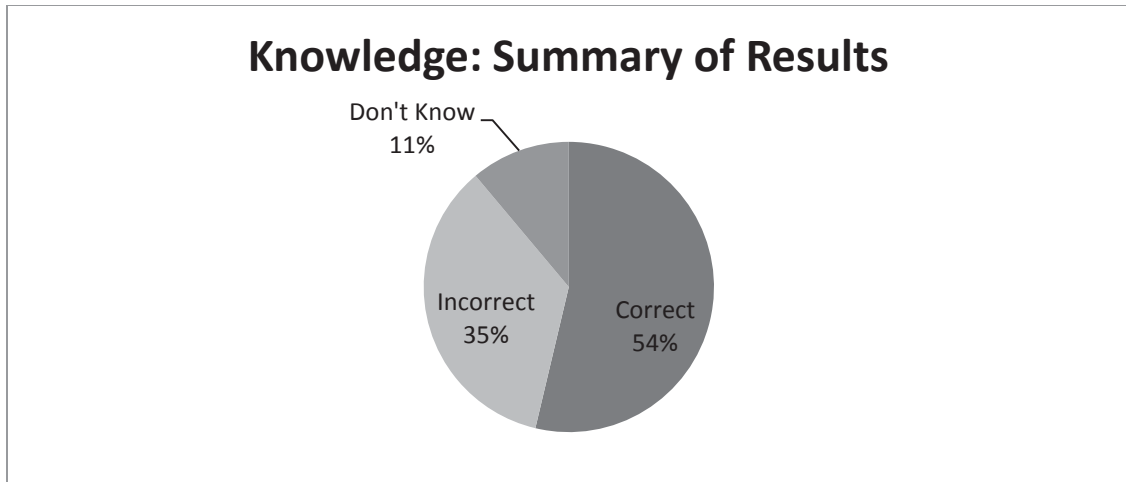


FIGURE 1. Knowledge: Summary of results

2. *A bilingual student should be referred to the speech-language pathologist if the student is having difficulty in one of the languages.* The overall mode score was 2 with a range of 2. No score was found most frequently for participants aged 18-24; therefore, there is no mode. Score range is 1. The mode score for participants aged 25-35 was 2 with a range of 2. The mode score for participants who identified as White or Caucasian was 0 with a range of 2. The mode score for participants who identified as Hispanic or Latina was 2 with a range of 0. The mode score for participants in their senior year of college was 2 with a range of 0. No mode score was found most frequently for participants earning their Post-Bachelor's Degree; therefore, there is no mode. There is a range of 2. The analysis of the participant responses is summarized in Table 7.

3. *A bilingual student should be referred to the speech-language pathologist if the student is having difficulty in both languages.* The overall mode score was 3 with a range of 1. The mode score for participants aged 18-24 was 3 with a range of 0. The mode score for participants aged 25-35 was 3 with a range of 1. The mode score for participants who

identified as White or Caucasian was 3 with a range of 1. The mode score for participants who identified as White or Caucasian was 3 with a range of 0. The mode score for participants who identified as Hispanic or Latina was 3 with a range of 0. The mode score for participants in their senior year of college was 3 with a range of 0. The mode score of participants earning their post-bachelor's degree was 3 with a range of 1. Participant responses to question 3 are summarized in Table 8.

TABLE 6. Knowledge Question 1 Responses and Demographics

The general education teacher and the speech-language pathologist are responsible for teaching the curriculum to students with speech-language disorders.		Correct	Incorrect	Don't Know
<b>Age</b>				
	18-24 (n=4)	X	XXX	
	25-35 (n=4)	XX	XX	
	Choose not to answer/Skip (n=1)	X		
<b>Ethnicity</b>				
	White or Caucasian (n=5)	XX	XXX	
	Hispanic or Latina (n=2)		XX	
	Choose not to answer/Skip (n=2)	X	X	
<b>Academic Standing</b>				
	Senior (n=1)		X	
	Post-Bachelor's Degree (n=7)	XXX	XXXX	
	Choose not to answer/Skip (n=1)		X	
<b>Total (n=9)</b>		<b>XXX</b>	<b>XXXXXX</b>	

X=1 participant

4. *The speech-language pathologist's role includes helping students with reading*

*and writing problems.* The overall mode score was 2 with a range of 2. No score was found most frequently for participants aged 18-24; therefore, no mode exists. Score range was 2. The mode score for participants aged 25-35 was 2 with a range of 1. The mode score for participants who identified as White or Caucasian was 2 with a range of 2. No score was found most frequently for participants who identified as Hispanic or Latina; therefore, no mode exists. Score range was 2. The mode score for participants in their senior year of college was 3 with a range of 0. The mode score of participants earning their post-bachelor's degree was 2 with a range of 2. The dissection of the participant responses is summarized in Table 9.

*5. Students with suspected learning disabilities should not be referred to the speech-language pathologist.* The overall mode score was 3 with a range of 1. The mode score for participants aged 18-24 was 3 with a range of 1. The mode score for participants aged 25-35 was 3 with a range of 0. The mode score for participants who identified as White or Caucasian was 3 with a range of 0. No score was found most frequently for participants who identified as Hispanic or Latina; therefore, there is no mode. Score range was 1. The mode score for participants in their senior year of college was 3 with a range of 0. The mode score of participants earning their post-bachelor's degree was 3 with a range of 1. The examination of the participant responses is summarized in Table 10.

TABLE 7. Knowledge Question 2 Responses and Demographics

A bilingual student should be referred to the speech-language pathologist if the student is having difficulty in one of the languages.		Correct	Incorrect	Don't Know
<b>Age</b>				
	18-24 (n=4)		XX	XX
	25-35 (n=4)	X	XX	X
	Choose not to answer/Skip (n=1)	X		
<b>Ethnicity</b>				
	White or Caucasian (n=5)	X	X	XXX
	Hispanic or Latina (n=2)		XX	
	Choose not to answer/Skip (n=2)	X	X	
<b>Academic Standing</b>				
	Senior (n=1)		X	
	Post-Bachelor's Degree (n=7)		X	XXX
	Choose not to answer/Skip (n=1)	X		
	Total (n=9)	XX	XXXX	XXX

X=1 participant

6. *If a student performs poorly in a single class (e.g., science, mathematics, history), it may be due to a language learning disability.* The overall mode score was 3 with a range of 2. The mode score for participants aged 18-24 was 3 with a range of 2. No score was found most frequently for participants aged 25-35; therefore, there is no mode. Score range is 1. The mode score for participants who identified as White or Caucasian was 3 with a range of 2. The mode score for participants who identified as

Hispanic or Latina was 3 with a range of 0. The mode score for participants in their senior year of college was 2 with a range of 0. The mode score of participants earning their post-bachelor's degree was 3 with a range of 2. Table 11 compares participant responses and demographics.

TABLE 8. Knowledge Question 3 Responses and Demographics

A bilingual student should be referred to the speech-language pathologist if the student is having difficulty in both languages.		Correct	Incorrect	Don't Know
<hr/>				
Age				
	18-24 (n=4)	XXXX		
	25-35 (n=4)	XXX	X	
	Choose not to answer/Skip (n=1)		X	
<hr/>				
Ethnicity				
	White or Caucasian (n=5)	XXXX	X	
	Hispanic or Latina (n=2)	XX		
	Choose not to answer/Skip (n=2)	X	X	
<hr/>				
Academic Standing				
	Senior (n=1)	X		
	Post-Bachelor's Degree (n=7)	XXXXXX	X	
	Choose not to answer/Skip (n=1)		X	
<hr/>				
	Total (n=9)	XXXXXXXX	XX	
<hr/>				

X=1 participant

TABLE 9. Knowledge Question 4 Responses and Demographics

The speech-language pathologist's role includes helping students with reading and writing problems.		Correct	Incorrect	Don't Know
<b>Age</b>				
18-24 (n=4)	XX			XX
25-35 (n=4)	X		XXX	
Choose not to answer/Skip (n=1)			X	
<b>Ethnicity</b>				
White or Caucasian (n=5)	X		XXX	X
Hispanic or Latina (n=2)	X			X
Choose not to answer/Skip (n=2)	X		X	
<b>Academic Standing</b>				
Senior (n=1)	X			
Post-Bachelor's Degree (n=7)	XX		XXX	XX
Choose not to answer/Skip (n=1)			X	
Total (n=9)	XXX		XXXX	XX

X=1 participant

TABLE 10. Knowledge Question 5 Responses and Demographics

Students with suspected learning disabilities should not be referred to the speech-language pathologist.		Correct	Incorrect	Don't Know
Age				
	18-24 (n=4)	XXX		X
	25-35 (n=4)	XXXX		
	Choose not to answer/Skip (n=1)	X		
Ethnicity				
	White or Caucasian (n=5)	XXXXX		
	Hispanic or Latina (n=2)	X		X
	Choose not to answer/Skip (n=2)	XX		
Academic Standing				
	Senior (n=1)	X		
	Post-Bachelor's Degree (n=7)	XXXXXX		X
	Choose not to answer/Skip (n=1)	X		
	Total (n=9)	XXXXXXXX		X
X=1 participant				

TABLE 11. Knowledge Question 6 Responses and Demographics

If a student performs poorly in a single class (e.g., science, mathematics, history), it may be due to a language learning disability.		Correct	Incorrect	Don't Know
Age				
	18-24 (n=4)	XXX		X
	25-35 (n=4)	XX	XX	
	Choose not to answer/Skip (n=1)	X		
Ethnicity				
	White or Caucasian (n=5)	XXX	X	X
	Hispanic or Latina (n=2)	XX		
	Choose not to answer/Skip (n=2)	X	X	
Academic Standing				
	Senior (n=1)		X	
	Post-Bachelor's Degree (n=7)	XXXXXX		X
	Choose not to answer/Skip (n=1)		X	
	Total (n=9)	XXXXXX	XX	X

X=1 participant

### Preparedness

#### Section Analysis

This summary of data includes descriptive statistics addressing the preparedness of student teachers as it relates to collaborating with SLPs, including the ability to identify students in the classroom in need of speech-language assessment (Table 12).

Seven participants stated that their education taught them that collaborating with the SLP is beneficial to student success. Half of the participants (n=4) reported that they



were confident in their abilities to identify a child in need of speech-language assessment. Furthermore, half of the participants ( $n=4$ ) reported that they were not trained in using teaching models that include the SLP in the classroom such as co-teaching, station teaching, or parallel teaching.

Moreover, more than half of the participants ( $n=5$ ) claimed that they had not been taught about working with SLPs. When asked if their education taught them that working with the SLP is a high priority, half of the participants ( $n=4$ ) disagreed. All of the participants maintained that they were not trained to collaborate with the SLP, and most of the participants ( $n=7$ ) would like more related instruction integrated into their education. More than half ( $n=5$ ) reported that they look to their student teaching experiences to learn about collaboration with other professionals, including SLPs.

#### Question by Question Analysis

A question-by-question analysis was completed in order to determine the areas student teachers believed they were most prepared to collaborate and to what extent. It also provided descriptive analysis for the Likert Scale questions evaluating preparedness of student teachers regarding collaboration.

Cross tabulation analysis was used to compare the relationship between participant response and demographics.

1. *My education has taught me that collaborating with the speech-language pathologist is not beneficial to student success.* The dissection of the participant responses is summarized in Table 13. The overall mode score was 2 with a range of 2. The mode score for participants aged 18-24 was 2 with a range of 1. The mode score for participants aged 25-35 was 1 with a range of 2. No score was found most frequently for

participants who identified as White or Caucasian, participants who identified as Hispanic or Latina, or those earning their post-bachelor's degree; therefore, there is no mode. Score range for participants who identified as white or Caucasian is 2 and for those who identified as Hispanic or Latina was 1. The mode score for participants in their senior year of college was 2 with a range of 0. Score range of participants earning their post-bachelor's degree was 2.

2. *My education has not taught me about working with the speech-language pathologist.* The overall mode score was 4 with a range of 4. The mode score for participants aged 18-24 was 4 with a range of 3. The mode score for participants aged 25-35 was 4 with a range of 3. The mode score for participants who identified as White or Caucasian was 4 with a range of 4. No score was found most frequently for participants who identified as Hispanic or Latina; therefore, there is no mode. Score range is 2. The mode score for participants in their senior year of college was 4 with a range of 0. The mode score of participants earning their post-bachelor's degree was 4 with a range of 4. The comparison of the participant responses and demographics is summarized in Table 14.

3. *My education has taught me that working with the speech-language pathologist is a high priority.* The overall mode score was 2 with a range of 2. The mode score for participants aged 18-24 was 2 with a range of 2. The mode score for participants aged 25-35 was 2 with a range of 2. No score was found most frequently for participants who identified as White or Caucasian or participants who identified as Hispanic or Latina; therefore, there is no mode. Score range is 2 for participants who

TABLE 12. Preparedness: Type, Degree, and Value of Education Received by Student Teachers

Preparedness	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
My education has taught me that collaborating with the SLP is not beneficial to student success.	37.50% 3	50.00% 4	12.50% 1	0.00% 0	0.00% 0
My education has not taught me about working with the SLP.	12.50% 1	25.00% 2	0.00% 0	50.00% 4	12.50% 1
My education has taught me that working with the SLP is a high priority.	0.00% 0	50.00% 4	25.00% 2	25.00% 2	0.00% 0
I am trained to collaborate with the SLP.	50.00% 4	50.00% 4	0.00% 0	0.00% 0	0.00% 0
I am confident in my abilities to identify a child in need of speech-language assessment.	12.50% 1	25.00% 2	12.50% 1	50.00% 4	0.00% 0
I am trained in using teaching models that include the SLP in the classroom (e.g., co-teaching, station teaching, parallel teaching).	37.50% 3	12.50% 1	25.00% 2	12.50% 1	12.50% 1
I would like to have more instruction integrated into my education regarding collaboration with SLPs.	0.00% 0	0.00% 0	12.50% 1	62.50% 5	25.00% 2
I am relying on my student teaching experience to learn about collaboration with other professionals (e.g., psychologist, occupational therapist, and SLPs).	12.50% 1	25.00% 2	0.00% 0	62.50% 5	0.00% 0

Identified as White or Caucasian, while score range for participants who identified as Hispanic was 1. The mode score for participants in their senior year of college was 3

with a range of 0. The mode score of participants earning their post-bachelor's degree was 2 with a range of 2. The comparison of the participant responses and demographics is summarized in Table 15.

TABLE 13. Preparedness Question 1 Responses and Demographics

My education has taught me that collaborating with the speech-language pathologist is not beneficial to student success.		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
<b>Age</b>						
	18-24 (n=4)	X	XXX			
	25-35 (n=4)	XX	X		X	
<b>Ethnicity</b>						
	White or Caucasian (n=5)	XX	XX		X	
	Hispanic or Latina (n=2)	X	X			
	Choose not to answer/Skip (n=2)		X			
<b>Academic Standing</b>						
	Senior (n=1)			X		
	Post-Bachelor's Degree (n=7)	XXX	XXX		X	
	Total (n=8)	XXX	XXXX		X	

X=1 participant

4. *I am trained to collaborate with the speech-language pathologist.* The overall mode score could not be recorded as no score was found most frequently. The data shows that all of the participants (n=8) either disagree or strongly disagree. The overall score range is 1. No mode score was found most frequently for those aged 18-24 or 25-

35. Both groups had a score range of 1. The mode score for participants who identified as White or Caucasian was 1 with a range of 1. The mode score for participants who identified as Hispanic or Latina was 2 with a range of 0. The mode score for participants in their senior year of college was 2 with a range of 0. The mode score of participants earning their post-bachelor's degree was 1 with a range of 1. The comparison of the participant responses and demographics is summarized in Table 16.

TABLE 14. Preparedness Question 2 Responses and Demographics

My education has not taught me about working with the speech-language pathologist.		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
Age						
	18-24 (n=4)		X		XX	X
	25-35 (n=4)	X	X		XX	
Ethnicity						
	White or Caucasian (n=5)	X	X		XX	X
	Hispanic or Latina (n=2)		X		X	
	Choose not to answer/Skip (n=2)				X	
Academic Standing						
	Senior (n=1)				X	
	Post-Bachelor's Degree (n=7)	X	XX		XXX	X
	Total (n=8)	X	XX		XXXX	X

X=1 participant

TABLE 15. Preparedness Question 3 Responses and Demographics

My education has taught me that working with the speech-language pathologist is a high priority.		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
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Age				
	18-24 (n=4)	XX	X	X
	25-35 (n=4)	XX	X	X
Ethnicity				
	White or Caucasian (n=5)	XX	X	XX
	Hispanic or Latina (n=2)	X	X	
	Choose not to answer/Skip (n=2)	X		
Academic Standing				
	Senior (n=1)		X	
	Post-Bachelor's Degree (n=7)	XXXX	X	XX
	Total (n=8)	XXXX	XX	XX

X=1 participant

5. *I am confident in my abilities to identify a child in need of speech-language assessment.* The overall mode score was not found as no score was found most frequently. Half of the participants either disagreed or strongly disagreed to the statement. The overall range score was 4. The mode score for participants aged 18-24 was 2 with a range of 2. The mode score for participants aged 25-35 was 4 with a range of 2. The mode score for participants who identified as White or Caucasian was 4 with a range of 2. No mode score was recorded for participants who identified as Hispanic or Latina because no score was found most frequently. The score range was 2. The mode score for participants in their senior year of college was 3 with a range of 0. The mode score of participants earning their post-bachelor's degree was not recorded as no score was found most frequently. The comparison of the participant responses and

demographics is summarized in Table 17.

TABLE 16. Preparedness Question 4 Responses and Demographics

I am trained to collaborate with the speech-language pathologist.		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
Age						
	18-24 (n=4)	XX	XX			
	25-35 (n=4)	XX	XX			
Ethnicity						
	White or Caucasian (n=5)	XXX	XX			
	Hispanic or Latina (n=2)		XX			
	Choose not to answer/Skip (n=2)	X				
Academic Standing						
	Senior (n=1)			X		
	Post-Bachelor's Degree (n=7)	XXXX	XXX			
	Total (n=8)	XXXX	XXXX			
X=1 participant						

TABLE 17. Preparedness Question 5 Responses and Demographics

I am confident in my abilities to identify a child in need of speech-language assessment.		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
Age						
	18-24	X	XX	X		

	(n=4) 25-35 (n=4)		X		XXX
Ethnicity					
	White or Caucasian (n=5)		XX		XXX
	Hispanic or Latina (n=2)	X		X	
	Choose not to answer/Skip (n=2)		X		
Academic Standing					
	Senior (n=1)			X	
	Post-Bachelor's Degree (n=7)	X	XXX		XXX
	Total (n=8)	X	XXX	X	XXX

X=1 participant

6. *I am trained in using teaching models that include the speech-language pathologist in the classroom (e.g., co-teaching, station teaching, and parallel teaching).*

The overall mode score was 1 with a range of 4. No score was found most frequently for participants aged 18-24; therefore, there is no mode. Score range was 3. The mode score for participants aged 25-35 was 1 with a range of 2. No score was found most frequently for participants who identified as White or Caucasian or those who identified as Hispanic or Latina; therefore, there is no mode. Score range for participants who identified as White or Caucasian is 4. Score range for those who identified as Hispanic or Latina was 2. The mode score for participants in their senior year of college was 2 with a range of 0. The mode score of participants earning their post-bachelor's degree was 1 with a range of 4. The comparison of the participant responses and demographics is summarized in Table 18.



7. *I would like to have more instruction integrated into my education regarding collaboration with speech-language pathologists.* The overall mode score was 4 with a range of 2. The mode score for participants aged 18-24 was 4 with a range of 1. The mode score for participants aged 25-35 was 4 with a range of 2. No score was found most frequently for participants who identified as White or Caucasian; therefore, there is no mode. Score range was 2. The mode score for participants who identified as Hispanic or Latina was 4 with a range of 0. The mode score for participants in their senior year of college was 4 with a range of 0. The mode score of participants earning their post-bachelor's degree was 4 with a range of 2. The comparison of the participant responses and demographics is outlined in Table 19.

8. *I am relying on my student teaching experience to learn about collaboration with other professionals (e.g., psychologist, occupational therapist, and speech-language pathologist).* The overall mode score was 4 with a range of 3. The mode score for participants aged 18-24 was 4 with a range of 3. The mode score for participants aged 25-35 was 4 with a range of 2. The mode score for participants who identified as White or Caucasian was 4 with a range of 3. The mode score for participants who identified as Hispanic or Latina was 4 with a range of 0. The mode score for participants in their senior year of college was 4 with a range of 0. The mode score of participants earning their post-bachelor's degree was 4 with a range of 3. I would like to have more instruction integrated into my education regarding collaboration with speech-language pathologists. The comparison of the participant responses and demographics is summarized in Table 20.

TABLE 18. Preparedness Question 6 Responses and Demographics

I am trained in using teaching models that include the SLP in the classroom (e.g., co-teaching, station teaching, parallel teaching).		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
Age						
	18-24 (n=4)		X	X	X	X
	25-35 (n=4)	XXX		X		
Ethnicity						
	White or Caucasian (n=5)	XX		XX		X
	Hispanic or Latina (n=2)		X		X	
	Choose not to answer/Skip (n=2)	X				
Academic Standing						
	Senior (n=1)		X			
	Post-Bachelor's Degree (n=7)	XXX		XX	X	X
	Total (n=8)	XXX	X	XX	X	X

X=1 participant

TABLE 19. Preparedness Question 7 Responses and Demographics

I would like to have more instruction integrated into my education regarding collaboration with SLPs.		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
Age						
	18-24 (n=4)				XXX	X
	25-35			X	XX	X

		(n=4)		
Ethnicity	White or Caucasian	X	XX	XX
	(n=5)			
	Hispanic or Latina		XX	
	(n=2)			
	Choose not to answer/Skip		X	
	(n=2)			
Academic Standing	Senior		X	
	(n=1)			
	Post-Bachelor's Degree	X	XXXX	XX
	(n=7)			
Total		X	XXXXX	XX
		(n=8)		

X=1 participant

### Perceptions

#### Section Analysis

This summary of data includes descriptive statistics addressing the perceptions of student teachers as it relates to SLPs and collaboration (Table 21).

The student teachers responses suggested a generally positive attitude toward working with SLPs. All of the participants (n=8) either agreed or strongly agreed that effective collaboration between the teacher and the SLP is a reasonable goal. In the same way, all of the participants (n=8) indicated, by agreeing or strongly agreeing, that they

TABLE 20. Preparedness Question 8 Responses and Demographics

I am relying on my student teaching experience to learn about collaboration with other professionals (e.g., psychologist, occupational therapist, and speech-language pathologist)	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
Age	18-24	X	X	XX	

	(n=4) 25-35		X	XXX
Ethnicity	(n=4) White or Caucasian	X	XX	XXX
	(n=5) Hispanic or Latina			XX
	(n=2) Choose not to answer/Skip			X
	(n=2)			
<hr/>				
Academic Standing	Senior			X
	(n=1) Post-Bachelor's Degree	X	XX	XXXX
	(n=7)			
<hr/>				
	Total	X	XX	XXXXX
	(n=8)			

X=1 participant

were highly motivated to learn language strategies to support students with language disorders in the classroom. Moreover, 75% of participants reported that it was highly likely that they will involve the SLP in co-teaching, parallel teaching, or other models of teaching in the classroom. The student teachers did not always demonstrate agreement in the responses to the perception statements. For example, 50% of the participants specified that they were not well-trained in using language strategies to support students with language disorders. Twenty-five percent neither agreed nor disagreed to the statement (Question 3), and 25% reported that they were well-trained in this area. Similarly, while 50% of the participants stated it was best for the students to be pulled out of the classroom to receive speech-language services, 50% of the participants neither disagreed nor agreed to this concept. Lastly, no general consensus was found when the student teachers responded to the statement regarding the SLPs' training in general

education practices.

Question by Question Analysis

A question-by-question analysis was completed in order to determine the student teachers’ perceptions of collaboration. It also provides descriptive analysis for the Likert Scale questions evaluating perceptions of the participants regarding collaboration. Cross tabulation analysis was used to compare the relationship between participant response and demographics.

*1. It is highly likely I will involve the speech-language pathologist in co-teaching, parallel teaching, or other models of teaching in the classroom.* The comparison of participant responses and demographics is described in Table 22. The overall mode score was 4 with a range of 1. The mode score for participants aged 18-24 was 4 with a range of 0. No score was found most frequently for participants aged 25-35; therefore, there is no mode. Score range is 1. The mode score for participants who identified as White or Caucasian was 4 with a range of 1. The mode score for participants who identified as Hispanic or Latina was 4 with a range of 0. The mode score for participants in their senior year of college was 4 with a range of 0. The mode score of participants earning their post-bachelor’s degree was 4 with a range of 1.

TABLE 21. Student Teachers’ Perceptions of Collaboration, Confidence, and Student Needs

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Choose Not to Answer
It is highly likely I will involve the speech-language pathologist in co-teaching, parallel teaching, or other models of teaching in the classroom.	0.00% 0	0.00% 0	25.00% 2	75.00% 6	0.00% 0	0.00% 0

It is best for the students to be pulled out of the classroom to receive speech-language services.	0.00% 0	0.00% 0	50.00% 4	25.00% 2	25.00% 2	0.00% 0
I am well-trained in using language strategies to support students with language disorders.	25.00% 2	25.00% 2	25.00% 2	25.00% 2	0.00% 0	0.00% 0
I am highly motivated to learn language strategies to support students with language disorders in my classroom.	0.00% 0	0.00% 0	0.00% 0	50.00% 4	50.00% 4	0.00% 0
The speech-language pathologist has sufficient training in general education practices (e.g., curriculum, planning, and instruction).	0.00% 0	12.50% 1	50.00% 2	25.00% 2	0.00% 0	12.50% 1
Effective collaboration between the teacher and the speech-language pathologist is a reasonable goal.	0.00% 0	0.00% 0	0.00% 0	25.00% 2	75.00% 6	0.00% 0

2. *It is best for the students to be pulled out of the classroom to receive speech-language services.* The overall mode score was 3 with a range of 2. The mode score for participants aged 18-24 was 3 with a range of 1. The mode score for participants aged 25-35 was 5 with a range of 2. No score was found most frequently for participants who identified as White or Caucasian; therefore, there is no mode. The score range for this group is 2. The mode score for participants who identified as Hispanic or Latina was 3 with no range. The mode score for participants in their senior year of college was 3 with no range. The mode score of participants earning their post-bachelor's degree was 3 with a range of 2. The comparison of the participant responses and demographics is summarized in Table 23.

TABLE 22. Perception Question 1 Responses and Demographics

It is highly likely I will involve the speech-language pathologist in co-teaching, parallel teaching, or other models of teaching in the classroom.	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
<b>Age</b>					
18-24 (n=4)				XXXX	
25-35 (n=4)			XX	XX	
<b>Ethnicity</b>					
White or Caucasian (n=5)			X	XXXX	
Hispanic or Latina (n=2)				XX	
Choose not to answer/Skip (n=2)			X		
<b>Academic Standing</b>					
Senior (n=1)				X	
Post-Bachelor's Degree (n=7)			XX	XXXXX	
Total (n=8)			XX	XXXXXXX	

X=1 participant

3. *I am well-trained in using language strategies to support students with language disorders.* The overall mode score was not identified as no score was found most frequently. Scores 1 through 4 had 2 participants each; therefore, the range was 3. The mode score for participants aged 18-24 years and 25-35 years was not found as no score was reported more frequently by participants. Each of these two demographic groups had a range of 3. Again, the mode score was not found for participants who identified as White or Caucasian (score range=2), or Hispanic or Latina (score range=1). The mode score for participants in their senior year of college was 2 with no range of scores. The mode score of participants earning their post-bachelor's degree was not

found as no score was reported more frequently. The score range was 3. The comparison of participant responses and demographics is described in Table 24.

TABLE 23. Perception Question 2 Responses and Demographics

It is best for the students to be pulled out of the classroom to receive speech-language services.		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
<b>Age</b>						
	18-24 (n=4)			XXX	X	
	25-35 (n=4)			X	X	XX
<b>Ethnicity</b>						
	White or Caucasian (n=5)			X	XX	XX
	Hispanic or Latina (n=2)			XX		
	Choose not to answer/Skip (n=2)			X		
<b>Academic Standing</b>						
	Senior (n=1)			X		
	Post-Bachelor's Degree (n=7)			XXX	XX	XX
	Total (n=8)			XXXX	XX	XX
X=1 participant						

TABLE 24. Perception Question 3 Responses and Demographics

I am well-trained in using language strategies to support students with language disorders.		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
<b>Age</b>						
	18-24 (n=4)	X	X	X	X	
	25-35 (n=4)	X	X	X	X	
<b>Ethnicity</b>						
	White or Caucasian (n=5)		X	XX	XX	



Hispanic or Latina (n=2)	X	X			
Choose not to answer/Skip (n=2)	X				
<hr/>					
Academic Standing					
Senior (n=1)			X		
Post-Bachelor's Degree (n=7)	XX	X		XX	XX
<hr/>					
Total (n=8)	XX	XX		XX	XX

X=1 participant

4. *I am highly motivated to learn language strategies to support students with language disorders in my classroom.* The overall mode score was not found as no score was noted more frequently; however, all of the participants agreed or strongly agreed with the statement. The overall score range was 1. The mode score for participants aged 18-24 was 4 with a range of 1. The mode score for participants aged 25-35 was 5 with a range of 1. The mode score for participants who identified as White or Caucasian was 5 with a range of 1. No score was found most frequently for participants who identified as Hispanic or Latina; therefore, there was no mode. The mode score for participants in their senior year of college was 4 with no score range. The mode score of participants earning their post-bachelor's degree was 5 with a range of 1. The comparison of the participant responses and demographics is summarized in Table 25.

TABLE 25. Perception Question 4 Responses and Demographics

I am highly motivated to learn language strategies to support students with language disorders in my classroom.	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
<hr/>					
Age					

	18-24 (n=4)	XXX	X
	25-35 (n=4)	X	XXX
Ethnicity			
	White or Caucasian (n=5)	XX	XXX
	Hispanic or Latina (n=2)	X	X
	Choose not to answer/Skip (n=2)	X	
Academic Standing			
	Senior (n=1)	X	
	Post-Bachelor's Degree (n=7)	XXX	XXXX
	Total (n=8)	XXXX	XXXX

X=1 participant

5. *The speech-language pathologist has sufficient training in general education practices (e.g., curriculum, planning, and instruction).* The overall mode score was 3 with a score range of 4. The mode score for participants aged 18-24 was 3 with a range of 1. The mode score for participants aged 25-35 was 3 with a range of 4. The mode score for participants who identified as White or Caucasian was 4 with a range of 4. The mode score for participants who identified as Hispanic or Latina was 3 with a range of 0. The mode score for participants in their senior year of college was 3 with no score range. The mode score of participants earning their post-bachelor's degree was 3 with a range of 4. The comparison of the participant responses and demographics is summarized in Table 26.

TABLE 26. Perception Question 5 Responses and Demographics

The speech-language pathologist has sufficient training in general education practices (e.g., curriculum, planning, and instruction).	Choose Not to Answer	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
<b>Age</b>						
18-24 (n=4)				XXX	X	
25-35 (n=4)	X		X	XX	X	
<b>Ethnicity</b>						
White or Caucasian (n=5)	X		X	X	XX	
Hispanic or Latina (n=2)				XX		
Choose not to answer/Skip (n=2)				X		
<b>Academic Standing</b>						
Senior (n=1)				X		
Post-Bachelor's Degree (n=7)	X		X	XXX	XX	
Total (n=8)	X		X	XXXX	XX	

X=1 participant

TABLE 27. Perception Question 6 Responses and Demographics

Effective collaboration between the teacher and the speech-language pathologist is a reasonable goal.	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
<b>Age</b>					
18-24 (n=4)				X	XXX
25-35 (n=4)				X	XXX
<b>Ethnicity</b>					
White or Caucasian (n=5)					XXXXX
Hispanic or Latina (n=2)				X	X
Choose not to answer/Skip (n=2)				X	
<b>Academic Standing</b>					

Senior (n=1)	X	
Post-Bachelor's Degree (n=7)	X	XXXXXX
Total (n=8)	XX	XXXXXX

X=1 participant

#### 6. *Effective collaboration between the teacher and the speech-language*

*pathologist is a reasonable goal.* The overall mode score was 5 with a range of 1. The mode score for participants aged 18-24 years and participants aged 25-35 years was 5 with a score range of 1. The mode score for participants who identified as White or Caucasian was 5 with no score range. The mode score for participants who identified as Hispanic or Latina was not present because no score was reported more frequently. The score range was 1. The mode score for participants in their senior year of college was 4 with no score range. The mode score of participants earning their post-bachelor's degree was 5 with a range of 1. The comparison of the participant responses and demographics is summarized in Table 27.

#### Open-Ended Questions

When evaluating the qualitative responses from the 4 open-ended questions, several themes were identified and evaluated. Each theme was then coded by communication, service-delivery, collaboration and responsibility, motivation to collaborate and student benefits, types of experience, and barriers to collaboration. More detailed themes were identified within each of these sections.

#### Unclear and Undefined Terminology

A common theme established throughout the qualitative data gathered from the teachers' responses was the varying use of the terms "speech" and "language." While SLPs use these terms in a specific and intentional way, the same definitions may not be shared by the general education teacher. The data suggest the terms "speech" and "language" may be used interchangeably. For example, one student teacher discusses the role of the SLP as one that provides "language" support if the child needs "speech therapy". The term "speech therapy" was used by two different student teachers. Traditionally, speech-language therapy is referred to as "speech therapy," however, this term is often considered obsolete by current speech-language pathologists (Ehren, 2007).

When asked to define the role of an SLP, the majority of student teachers emphasized the student's ability to speak or produce language ( $n=6$ ), while the child's ability to comprehend language was never mentioned ( $n=0$ ). This suggests student teachers may perceive speech and language disorders as difficulties with "speaking", either in the area of speech or expressive language. One student teacher defined the role of the SLP as one that helps students with "speaking difficulties." Receptive language disorders may be less familiar to student teachers and require further training in this area.

#### Service Delivery Model: Pull-out

Although service delivery models were not specifically queried in the open-ended questions, three of the student teachers mentioned one service delivery method in particular, the pull-out method. When asked about the role of the SLP, one student teacher specifically mentioned that speech-language therapy is a "pull-out program," a service delivery model that removes the child from the classroom to receive services. Another student teacher conveyed concern regarding this method. The student teacher

expressed that SLPs should work with the general education teachers so the SLP may provide instruction that “parallels what the rest of the class is learning, so that being pulled from class does not hinder the rest of their studies.” On the other hand, another student teacher described her internship experience and learning how to account for missed class time for these students. This student teacher mentioned that her teacher coordinated her lessons in consideration of the speech-language sessions to ensure students were not at an academic disadvantage, as described by the previous student teacher. Despite the noted difficulties involving this method, the pull-out model is perceived by many ( $n=3$ ) as the single service delivery model used by speech-language pathologists.

Despite research supporting various service delivery models (Ehren, 2000; Throneburg et al., 2000), half of the student teachers agreed or strongly agreed it is best for the student to be pulled out of the classroom to receive speech-language services. The other half of the participants maintained a neutral response and neither disagreed nor agreed that the traditional pull-out method was the best service delivery option for students receiving speech-language therapy. Similarly, half of the student teachers also indicated that they are not trained in using teaching models that include the SLP in the classroom, such as co-teaching, station teaching, and parallel teaching. Both of the student teachers who strongly agreed that it is best for students to be pulled out of the classroom to receive speech-language services also strongly reported that they were not trained in using teaching models that include the SLP. This unfamiliarity and general lack of training regarding other service delivery models apart from the traditional pull-out method may impact the student teacher’s perception that it is best for the student to

receive therapy outside of the classroom.

Seventy-five percent of the participants aged 25-34 years claimed that they were not trained in using teaching models that include the SLP, only 25% of participants aged 18-24 years reported the same lack of training. Similarly, 75% of participants aged 25-34 years agreed or strongly agreed that it is best for students to be pulled from the classroom, while only 25% of participants aged 18-24 years agreed this is the best method.

### Collaboration and Responsibility

When evaluating teacher's perceptions regarding collaboration with SLPs, a few themes were identified. A general sense of responsibility was found throughout the participant responses. The responsibility shifted between responses from that of the teacher's, the SLP's, or shared responsibility. Two of the participants, as the future general education teacher, claimed full responsibility for the student reaching their individual education goals and emphasized the need to collaborate with the SLP in order to fulfill their job responsibility to ensure the child meets those goals.

Three of the participants suggested it is the SLPs responsibility to provide information to the teacher. For example, one stated that collaborating is important because the teacher "needs to know what is going on with the [SLP]." Yet another participant describes collaboration as an opportunity for the SLP to learn what the general education teachers are teaching in the classroom at the time of the session so the SLP can "provide instruction that parallels what the rest of the class is learning" to ensure the student is not at a disadvantage academically. Lastly, another participant requested the SLP send updates to the teacher to ensure the teacher was apprised of student progress.

While each of these student teachers highlights an important aspect of collaboration, the collaboration described is primarily the responsibility of the SLP.

Another theme noted in the responses was a sense of shared responsibility. While this theme was less established, the comments that fostered shared responsibility were typically more general statements indicating a positive perspective on collaborating with an SLP. For example, the four participants supporting shared responsibility expressed excitement and positivity regarding collaborating with SLPs without shifting responsibility between parties. These positive sentiments were followed by neutral responses such as SLPs are “essential in helping students to improve in their overall academics.” Another participant expressed her desire to learn speech-language “tips” to implement in the classroom so she can also help her students in need. The sense of responsibility from both the SLP and the teacher to complete this task supports a shared responsibility.

### Student Gains

As the prospective teachers discussed their perceptions regarding collaboration with SLPs, they often discussed the benefits in terms of student gains. These benefits varied from general improvements, academic gains, and progress in the student’s individualized education program goals. Two participants noted collaboration as a means to support the student with difficulties. One participant valued collaboration because the services provided by SLPs were beneficial to the student’s academic success. However, 4 participants emphasized the value of collaboration was in the support given to the student to meet their IEP goals. Seven participants highlighted student gains as a benefit



to collaboration between the teacher and the SLP, although the specific area of achievement varied.

Collaboration with SLPs: Teacher Preparedness and Experience

The experiences and sources of knowledge discussed by the student teachers varied as they evaluated their course work, internship program, and other life experiences that prepared them to collaborate with SLPs in the future (Table 28). Each participant, potentially, may receive multiple types of training and experiences; however, this was uncommon. Two participants received more than one type or source of training. For example, one participant received first-hand experience with an SLP at the internship and in other experiences while another received general training through the program’s course work and second-hand SLP-specific training during the internship program. According to two other participants, the Multiple Subject Credential program course work provided training that generally included issues related to collaboration with Speech-Language Pathology, such as IEP training and general special education

TABLE 28. Student Teacher’s Source of Knowledge Regarding Speech-Language Pathology

Type of Teacher- SLP Experience	Multiple Subject Credential Program Course Work	Multiple Subject Credential Program Internship	Other Experience	Minimal-No training received
First Hand Experience with an SLP		X	XXX	XXXXXX
<i>Examples:</i>		<i>Observation hours</i>	<i>Received speech- language therapy, worked as a behavioral therapist and substitute teacher, Education</i>	

		<i>Specialist Credential Program</i>	
Second Hand Training Specifically Regarding SLP			X
<i>Examples:</i>		<i>Trained by teacher to consider schedule of students with services</i>	
Training generally includes SLPs (e.g., special education as a whole)	XX		X
<i>Examples:</i>	<i>Course regarding IEPs and special education</i>	<i>Observation of an IEP meeting with SLP present</i>	

X=1 participant response (may be more than one response area per participant)

considerations. While it is likely all participants received this same general training as they completed the same course requirements, two-thirds of the students expressed that they had minimal to no training or experience that has prepared them to collaborate with an SLP in the future. One-third of the participants did not specifically highlight their lack of preparedness to collaborate with SLPs. These individuals either gained first- or

TABLE 29: Student Teacher's Age and Source of Knowledge Regarding Speech-Language Pathology

Type of Teacher- SLP Experience	Multiple Subject Credential Program Course Work	Multiple Subject Credential Program Internship	Other Experience	Minimal-No training received
First Hand Experience with an SLP		18-24yrs X	18-24yrs X	18-24yrs XX

			25-34yrs X	
			No Response X	
<i>Examples:</i>		<i>Observation hours</i>	<i>Received speech-language therapy, worked as a behavioral therapist and substitute teacher, Education Specialist Credential Program</i>	25-34yrs XXX
Second Hand Training Specifically Regarding SLP		25-34yrs X		
<i>Examples:</i>		<i>Trained by teacher to consider schedule of students with services</i>		
Training generally includes SLPs (e.g., special education as a whole)	18-24yrs X	25-34yrs X		No Response X
	25-34yrs X			
<i>Examples:</i>	<i>Course regarding IEPs and special education</i>	<i>Observation of an IEP meeting with SLP present</i>		

X=1 participant

second-hand training specific to collaborating with SLPs in the internship program, or indicated the general training provided in the program coursework regarding IEPs and collaboration with special education was sufficient. Data shows that age was not a factor in the type of training or experience reported by the participants (Table 29).

### Barriers to Collaboration between Teachers and SLPs

Prospective teachers were asked to identify existing barriers to successful collaboration between teachers and SLPs. Poor communication and a lack of time were two prominent themes found in the open responses. Four participants mentioned poor communication as a barrier. Other barriers were also mentioned that were related to

communication. For example, the use of jargon that is too complex for general education teachers to understand was noted as a specific barrier related to communication.

Similarly, the participants included barriers related to interpersonal skills, such as being flexible, cordial, and professional while interacting and communicating with other professionals. Almost half of the participants ( $n=4$ ) stated time constraints as a barrier to successful collaboration. One participant's insight stated collaboration was often "put on the back burner" when it should be a priority. Other barriers that were identified included poor location and parent cooperation.

## CHAPTER 5

### DISCUSSION

The purpose of this study was to investigate the knowledge base, preparedness, and perceptions of future teachers as these factors relate to collaboration with SLPs in the elementary school setting. The results of this study confirmed the first hypothesis that each participant maintained a positive perception of collaboration and a willingness to collaborate. The results supported the second hypothesis, that is, teacher education related to speech-language concepts and collaboration was identified as an area of improvement by the participants. While only half of the knowledge base questions were answered correctly, this information alone is not sufficient to confirm the hypothesis that participants' training is limited as it relates to understanding speech and language concepts and ways to collaborate with SLPs. The results of the study confirmed the third hypothesis that teachers are interested in additional preparation to support students with speech-language needs in the classroom. The fourth hypothesis was not supported by evidence in this study as demographics had no effect upon participant responses to the survey. The next section will discuss the data reported as it relates to the literature, clinical implications, limitations, and future research suggestions.

#### Survey

##### Knowledge and Literature

This study indicated that there are gaps in teachers' knowledge regarding basic speech and language concepts as previously discussed by Dockrell and Lindsay (2001)

and Marshall et al., (2002). The primary investigator of this study identified the following topics as areas of concern: bilingualism and speech-language disorders, disciplinary literacy, the role of the SLP in facilitating the language needed to access the curriculum, the role of the SLP in helping students with reading and writing difficulties. Conversely, this study suggests that most teachers are aware of the need to refer a student with a suspected learning disorder to the SLP for further assessment.

The results of the “Knowledge” portion of the survey are concerning in that about half of the questions were answered correctly. It is essential to remember that the participants included in this study were student teachers. The participants had completed all course requirements and were enrolled in their student teaching year. While teachers will continue to gain knowledge about the topics covered in this study through experience, professional development, and future training modules, results show their initial training is unfinished within the context of speech-language topics (Sadler, 2005; Mroz & Hall, 2003). Given the transition towards inclusion in the classroom, teachers must respond to students’ speech-language needs, yet teachers’ knowledge base does not widely include speech-language concepts. According to Mroz and Hall (2003) teachers must rely on comparisons, uncertainty, and social norms to respond to the students’ needs until further training regarding identification, language supports, and available resources is completed. Research by Shaughnessy and Sanger (2005) suggested that teachers’ knowledge regarding basic language development was completed; however, this research did not differentiate between knowledge gained through initial training and knowledge gained through the collaborative process. The reported data suggest that initial training provides teachers with a different knowledge base, not including speech-language

concepts. The principle investigator believes that the primary source of teachers' knowledge of speech language concepts is through post-credential training and hands-on experience with SLPs in the field.

### Preparedness and Literature

The results of this study support that a majority of participants would like to have more instruction integrated into their education regarding collaboration with SLPs. This suggests a self-awareness of the aforementioned knowledge set. Dockrell and Lindsay (2001) identified the differing knowledge base as a common difficulty experienced by teachers, specifically in the areas of etiology, interventions and implementation in the classroom, and the distribution of responsibility. Similarly, only half of the participants in the current study reported that they were confident in their abilities to identify a student in need of speech-language disorders. Given that speech and language concepts and the collaborative process require further preparation, a majority of the participants reported that they were relying on their field work to provide them with this training. Experience based training, however, fails to have specific learning outcomes and will vary from teacher to teacher. Meanwhile, when faced with challenges in the classroom specific to the speech-language disorder population, teachers may not be aware of resources/support and information regarding the referral process (E. Hall, 2005). Without fostering the collaborative process, teachers may feel inclined to take the individualistic approach to support students in the classroom with speech-language disorders despite having no training in this area. The data reported in this study and previous research by E. Hall (2005) highlight the need for teacher training involving speech-language topics

and the collaborative process.

Similar to research by Sadler (2005), the reported data confirmed that all of the participants considered themselves untrained to collaborate with SLPs. Mroz (2006) found that concepts that had been covered in depth during initial training increased teachers' confidence in those areas in the future. Unfortunately, this lack of confidence may negatively affect teachers' self-efficacy, the belief that they will be successful, and decrease teachers' motivation to collaborate in the future (Thoonen et al., 2011). To further emphasize the value of teacher self-efficacy, research by Guo et al., (2014) submitted that there is a positive relationship between teacher self-efficacy and children's language and literacy gains. Another factor that may limit teachers' motivation to collaborate is that half of the participants in this study claimed that their education has not taught them that collaborating with SLPs is a high priority. According to Thoonen et al. (2011), teacher goals that are considered of high priority/importance have increased value, and, therefore, increase teacher's motivation to collaborate. The results of this study submitted that the education system is not preparing students in this way to collaborate with SLPs in the future given these limiting factors to motivation (E. Hall, 2005). On the other hand, it is important to also note that the student teachers were taught that collaborating with SLPs is beneficial to student success which is a certainly a motivating factor (Thoonen at al., 2011). As an SLP, it is essential to identify the motivating factors influencing the collaborative process. While some motivating factors may or not be present, forced participation without addressing these inhibiting factors will further decrease motivation to collaborate (Dzubay, 2001). For this reason, understanding the team's preparedness and perceptions of collaboration will contribute to



positive synergetic relationships between SLPs and teachers.

### Perceptions and Literature

This study reported that student teachers believe effective collaboration with SLPs is a reasonable goal. Hartas (2004) emphasized the value of both SLPs and teachers when working towards a common goal. The skills and knowledge of each profession are equally necessary to support students with speech-language disorders in the classroom. This is an increasingly important principle when considering that half of the participants did not consider themselves as well-trained in using language strategies to support students with language disorders. In the same way, all of the participants in this study reported that they were highly motivated to learn language strategies to support students with language disorders in the classroom. Research suggests that teachers had a generally positive perception of SLPs and appreciated their contribution to help serve the needs of students (Sadler, 2005; Shaughnessy and Sanger, 2005; Mroz & Hall, 2003). The data reported from the current study combined with findings by Shaughnessy and Sanger (2005) suggest that teachers are eager to collaborate in support of students in need. This is not often the case according to Beck and Dennis (1997). While the teacher is willing, the system appears to be weak. A majority of the participants stated it was highly likely they would involve the SLP in more classroom based service-delivery models (e.g., co-teaching, parallel teaching, station teaching). Research by Dennis and Beck (1997), however, suggested that the system may be working against this type of service delivery model. For example, teachers found “team teaching” as the most beneficial model to teach students, yet the most common in-classroom model used was the “one teach, one drift” model. Despite this model having obvious difficulties, it

required less time collaborating outside of the class session. Collaboration time is often not included in teachers' schedule that makes the planning portion of co-teaching impractical. It is also essential to note that the data reported previously also show that half of the participants believed the "pull-out" service delivery model is best for students with speech-language disorders.

### Demographics

There was no demographic factor including age, ethnicity, and academic standing that significantly affected the performance on the *Knowledge, Preparedness, and Perceptions* portion of the survey.

### Clinical Implications

#### Survey

It is fundamental that SLPs understand the expansive knowledge base of current teachers as the collaborative process thrives on this exchange of information and resources. Further, it is the SLPs' responsibility to minimize the knowledge gap by educating current teachers regarding basic speech-language concepts and roles and responsibilities of SLPs. The first step in the training process requires collaboration in order to determine what areas require further training, clarification, or elaboration. Since current teachers have their own professional experiences contributing to their knowledge and understanding of speech-language concepts, teachers and SLPs must work together to identify areas of need. While initial training may not have provided educators with a strong foundation of standardized knowledge with specific learning outcomes related to speech-language concepts, professional experiences shared by teachers provide functional information that contributes to the knowledge of SLPs. It also allows the SLP

to identify knowledge areas that teachers may benefit from further training, clarification, or elaboration. The opportunity may also arise for SLPs to provide specific strategies to facilitate students' speech and language needs. It is necessary to note that experience-based knowledge will likely vary; therefore, SLPs should not expect uniform knowledge and understanding across teachers and contexts.

The data reported suggest that acquiring new knowledge is an ongoing process in the areas of speech and language following initial teacher training. This implies a need for collaboration as early as possible during initial training in order to increase self-efficacy and create a strong foundation of knowledge shared between teachers and SLPs. P. Hall (2005) emphasized the need for interdisciplinary education. The goal of this education model is to ensure that collaboration between teachers and SLPs is a deeply rooted fundamental that is initiated in the earliest stages of professional identity development. Interdisciplinary education suggests that learning together will build a bridge between professions that may be established further through future collaborations.

Student teachers maintain a different set of skills learned during initial training that may not sufficiently carry-over to all situations involving students with speech-language needs. In the same way, they may not feel prepared to collaborate with SLPs given that they may not understand the role of SLPs. In order to ensure students with speech-language difficulties are receiving maximal support across all contexts, SLPs should consider it a high priority to provide training, resources, and time to teachers requiring ongoing preparation. It is the SLPs' responsibility to collaborate and educate teachers regarding roles of SLPs and speech-language topics. This will increase teachers' preparedness and, in turn, positively affects students' language and literacy gains.

Increased familiarity and preparedness to collaborate may increase teachers' likelihood to collaborate and minimize the use of the individualistic approach discussed previously (E. Hall, 2005). Motivation and readiness to collaborate are affected by multiple areas; therefore, it is recommended that SLPs investigate and address any limiting factors (i.e., philosophies, interpersonal conflicts, preparedness, self-efficacy, etc.) before beginning collaboration and the training process. Providing training that increases teachers' success and confidence to address speech-language difficulties in the classroom will increase teachers' motivation to collaborate. It is important to note that student teachers have a generally positive view of SLPs and are appreciative of their knowledge and contribution to the team. While teachers see effective collaboration as a reasonable goal, they also identified several potential barriers to attaining this goal.

#### Open-ended questions

When joining forces with teachers, it is recommended that terminology is made accessible and definitions are clarified with concrete examples to limit confusion and ensure communication is effective and universally understood. As the students teachers involved in the study reported varied experiences leading up to their completion of the program, from no training to multiple levels of training, it was difficult to predict general knowledge or level of understanding regarding speech-language topic areas. In this same light, clarifying the roles and responsibilities of SLPs is an fundamental first step towards a positive working relationship with teachers as many teachers have a vague or ambiguous idea of what it means to be an SLP. This may also aid in the clarification of who is responsible for the collaboration process. An inconsistency was identified that discussed collaboration as SLPs' responsibility while others discussed collaboration as

the responsibility of teachers. In fact, successful collaboration is equal parts responsibility for both teachers and SLPs. This equal disbursement of accountability requires both parties to be invested and motivated throughout the collaborative process.

A common misconception identified in the current research study is the idea that speech-language therapy is a “pull out” service (ASHA, 2008). This is problematic as there are many types of service delivery models that involve servicing students in the classroom; yet, the expected service delivery model may continue to be the “pull out” method. It is necessary to understand that varying the means of service delivery may be a transition for many teachers. Providing education regarding the many possible models and benefits, as well as including teachers in the decision-making process may aid in the transition, capitalize on the collaborative relationship, and provide progressively more individualized means of therapy. A majority of the student teachers in this study value collaboration, despite the many barriers, primarily because it facilitates student gains, a seemingly high priority for these student teachers. Barriers that were identified in this study include poor communication, interpersonal differences, and a lack of time to invest in collaboration. SLPs and teachers should be aware of these potential barriers and address them proactively in a way that works for the team. This may include setting a collaboration schedule in advance, discussing interpersonal preferences and communication styles, and clarifying all jargon used in the collaborative setting. While it is well known that barriers to successful collaboration exist, it is the team’s responsibility to account for these barriers and address them early in the collaborative process.

### Limitations

The sample size of the current study was not large enough to complete statistical analysis or determine significance of the findings. This study is also limited by the homogenous group of females used in this study. The limited sample size and population diversity in terms of gender do not allow for generalization to other student teacher knowledge, attitude, or preparedness related to collaboration with SLPs. In the same way, the data reported regarding demographic information also do not allow for generalization to the greater demographic population (i.e., age, ethnicity, or academic standing). Another limitation of this study is that the investigator could not control for the participants' varied amounts of previous experience and the effects this experience had on their responses. Self-reported data are limited by various potential biases maintained by the participants. Participants may have selective memory when completing the survey and not consider all experiences that may apply to each particular question. Participants may also consider certain experiences as more significant or less significant apart from what the data actually imply.

The measure used to collect the data was a non-standardized measure created by the primary investigator. Research does not state whether this measure is reliable or valid. It is a brief survey, including both quantitative and qualitative research, used to gain knowledge regarding teachers' knowledge, preparedness, and perceptions of collaboration with SLPs. Additional data are needed to gather a comprehensive understanding of teachers' knowledge base related to speech-language topics, perceptions of collaboration with SLPs, and their preparedness across a mass number of contexts. One limitation of this study is the intertwined concepts of knowledge, preparedness, and perceptions and the difficulty isolating the individual factors. Another limitation of this

study is that qualitative data analysis also relies on the skill of the primary investigator to determine patterns and significance of data findings; therefore, findings may be considered subjective.

### Future Research

In order to develop a deeper understanding of the knowledge, preparedness, and perceptions of student teachers immediately following initial training, further research is recommended with a larger sample size across multiple schools. It is also recommended future research complete a comprehensive assessment of student teachers' knowledge regarding speech-language concepts. This will provide vital information regarding extent of knowledge of speech-language concepts to administrators within the fields of speech-language pathology and education. Professional development may then be created that is tailored to the needs of first year elementary teachers. This information will also be beneficial to SLPs so they may work with teachers within their schools to begin the training process informally.

It is also recommended that future research investigate the learning outcomes for courses within the multiple subject credential programs across the country and identify what learning outcomes relate to topics of speech-language development. For example, language acquisition courses may have many learning outcomes directly related to speech-language pathology. Teachers' learning outcomes from initial training serve as a foundation of knowledge that may contribute to more effective communication and collaboration between professionals. With a deeper understanding of teachers' knowledge and preparedness, SLPs will have the opportunity to tailor their interactions to the abilities of the teacher and use language that is more familiar and accessible to the

teacher.

Due to the potential benefits of collaboration, further research is recommended regarding the effects of interdisciplinary education on teachers' knowledge, preparedness, and perceptions of speech-language concepts and collaboration. The goal of interdisciplinary education is to build a bridge of communication and understanding between professions. This type of initial training supports interdisciplinary collaboration in the student teachers' first classroom, where they are the student. Following interdisciplinary education, research then should evaluate teachers' knowledge, preparedness, and perceptions of speech-language topics and collaboration.



## CHAPTER 6

### CONCLUSION

This study provided insight into student teachers' knowledge of specific speech-language topics, preparedness to collaborate and address these issues in the classroom, and perceptions regarding collaboration with SLPs. Although the results of this study cannot be generalized due to the limited sample size, the student teachers provided valuable information that reveals a need for future research in this area. If this study is indicative of student teachers' preparedness to collaborate and address speech-language concerns in the classroom, an opportunity exists for improvement of the collaborative process involving student SLPs and student teachers in the initial stages of training. Student teachers' knowledge of certain basic speech-language topics is unfinished following completion of coursework. The data reported by the student teachers suggested a self-awareness of this knowledge gap by indicating limited preparedness to address speech-language issues and collaborate with SLPs in the future. Despite this perception, student teachers are highly motivated to learn more about speech-language concepts and the collaboration process. The student teachers also maintained generally positive perceptions of SLPs and collaboration regardless of their demographics. This study can serve as a catalyst for further research and improved interdisciplinary practices to address the need for increased teacher training of speech-language topics and collaboration during initial training.

## APPENDICES

APPENDIX A  
STUDY RECRUITMENT EMAIL

STUDY RECRUITMENT EMAIL

Dear Future Elementary School Teacher,

You have been selected to participate in a fellow CSULB student's graduate level research study. *This is a confidential and exclusive survey for CSULB students currently enrolled in the multiple subjects credential program.* The survey will take around 8-10 minutes to complete. I would like to express my sincerest gratitude for your participation in this study.

The purpose of this study is to discuss the value of teamwork among teachers and speech-language pathologists (SLP) within the school system, identify barriers hindering effective teacher-SLP partnerships, and provide SLPs with information regarding new teachers' preparedness to collaborate.

You will have the opportunity to pursue a deeper understanding of your knowledge, attitude, and preparedness as it relates to future collaboration with SLPs.

Please complete this survey by the closing date, **November 1<sup>st</sup>, 2014**, so that it is included in the analysis of the study.

The link to complete the survey is below:

[www.surveymonkey.com/futureteacherfeedback](http://www.surveymonkey.com/futureteacherfeedback)

Sincerely,  
Leah Grigas, B.A.  
Graduate Student  
Department of Speech-Language Pathology  
CSULB

APPENDIX B  
STUDY RECRUITMENT SCRIPT

## Study Recruitment Script

“Hello, My name is Leah Grigas. I am a graduate student here in the Department of Speech-Language Pathology. I wanted to introduce myself and my research study. You will all be invited to participate in an 8-10 minute online survey. You will be getting an email from your department introducing the survey and inviting you to participate. The survey link will be included in the email as well. The survey is looking to future elementary school teachers for feedback about collaborating with speech-language pathologists. I am looking forward to seeing your responses and I am grateful for your time now and your time if you choose to participate. Thank you very much.”

APPENDIX C  
INFORMED CONSENT FORM

## Informed Consent Form

You are asked to participate in a research study conducted by Leah Grigas, B.A., from the Department of Speech Language Pathology at California State University, Long Beach. The results will contribute to a graduate level thesis. You were selected as a possible participant in this study because you are enrolled in the student teaching course within the multiple subject credential program.

### PURPOSE OF THE STUDY

The purpose of this study is to investigate the knowledge, attitude, and preparedness of students enrolled in the multiple subject credential program at California State University, Long Beach to work and collaborate with speech-language pathologists within the school setting.

### PROCEDURES

If you volunteer to participate, you will be asked to do the following: Complete and submit an 8-10 minute online survey involving questions related to your knowledge, attitudes, and preparedness regarding collaboration with speech-language pathologists. After which, you will be asked questions about your demographics.

### POTENTIAL RISKS AND DISCOMFORTS

The risks for a survey conducted on human participants could include psychological factors such as embarrassment or frustration with poor performance, loss of time, as well as issues concerning privacy and confidentiality. This survey is being administered through Survey Monkey, a confidential software tool. Performance is anonymous as the survey does not ask any personal identifiers such as the participant's name or address. The participant is not to include any personal information in the fill-in response in order to protect confidentiality.

### POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

The benefits to participation are that the participant will be able to review their understanding of their personal knowledge, attitude, and preparedness as it relates to future collaboration with speech-language pathologists. Researchers in the field of speech-language pathology may use this study's research findings as a basis for future related research. In addition, the findings from this study will provide speech-language pathologists and administrators of the Departments of Speech-Language Pathology and Teacher Education at California State University, Long Beach with a deeper understanding of prospective teacher's knowledge, attitude, and preparedness to collaborate with speech-language pathologists. Moreover, this study will identify potential strengths and areas of improvement regarding the academic preparation of prospective elementary school teachers to collaborate with speech-language pathologists.



#### PAYMENT FOR PARTICIPATION

There is no compensation or incentives for participating in this survey.

#### CONFIDENTIALITY:

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law.

#### PARTICIPATION AND WITHDRAWAL:

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. Participation or non-participation will not affect your relationship with the College of Education or the Department of Speech-Language Pathology or any other personal consideration or right you usually expect. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which in the opinion of the researcher warrant doing so.

#### IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact Principle Investigator, Leah Grigas, B.A., at (916) 899-7790, or the faculty supervisor, Geraldine Wallach, Ph.D. CCC-SLP at (562) 985-1973.

#### RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact the Office of University Research, CSU Long Beach, 1250 Bellflower Blvd., Long Beach, CA 90840; Telephone: (562) 985-5314. eMail: ORSP-Compliance@csulb.edu

#### SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

By answering "yes" to the following questions, you are stating that you are 18 years old or older and that you understand the procedures and conditions of your participation described above. Your questions have been answered to your satisfaction, and you agree to participate in this study.

Are you 18 years or older?  Yes  No

Do you agree to participate in this survey?  Yes  No

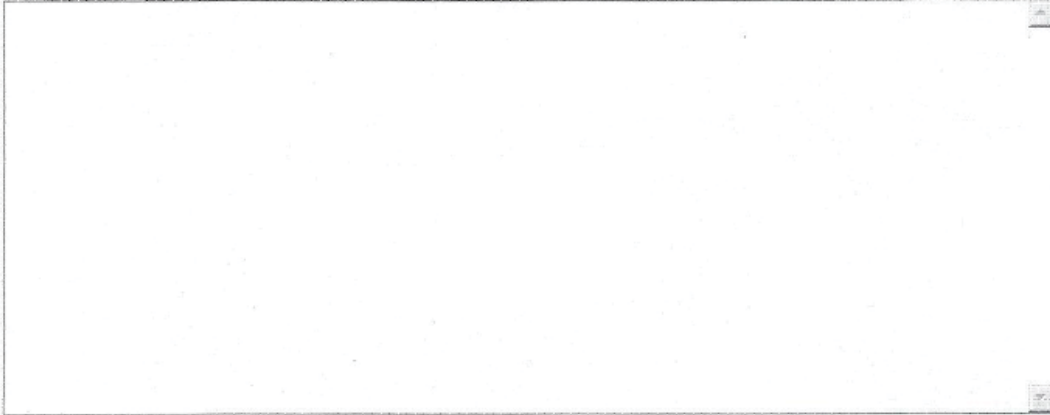
APPENDIX D

SURVEY: FEEDBACK FROM PROSPECTIVE ELEMENTARY SCHOOL  
TEACHERS AS IT RELATES TO COLLABORATION WITH SPEECH-LANGUAGE  
PATHOLOGISTS

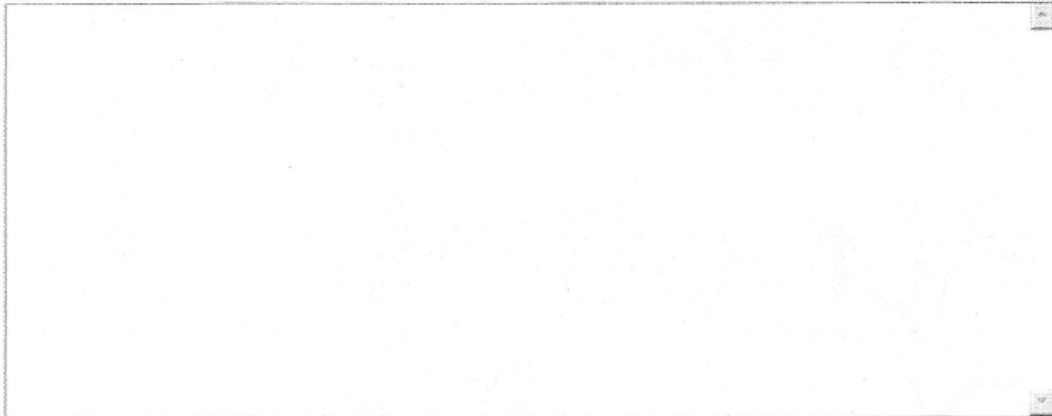
## Survey: Feedback from Prospective Elementary School Teachers as it Relates to Collaboration with Speech Language Pathologists

Please answer the following questions. In order to maintain confidentiality, do not include any personal or identifying information on the fill-in response. You may choose not to answer any of the following questions by leaving the text box blank and selecting "next" at the bottom of the page to continue in the survey.

### **1. What is the role of the speech-language pathologist in the school setting?**



### **2. In 1-3 sentences, discuss your attitude toward collaboration with speech-language pathologists.**



**3. In 1-3 sentences, describe how your experiences (e.g., education, employment) have prepared you to collaborate with speech-language pathologists in the future.**

**4. What, if any, barriers exist preventing successful collaboration between a teacher and a speech-language pathologist?**

**1. Please answer the following questions as accurately as possible. You may opt out of answering any question by selecting "choose not to answer."**

**Indicate whether you agree or disagree with the following statements.**

**If you do not have enough information about a statement to determine whether you agree or disagree, indicate "Don't Know."**

	Agree	Disagree	Don't Know	Choose Not to Answer
The general education teacher and the speech-language pathologist are responsible for teaching the curriculum to students with speech-language disorders.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students with suspected learning disabilities should not be referred to the speech-language pathologist.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The speech-language pathologist's role includes helping students with reading and writing problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If a student performs poorly in a single class (e.g., science, mathematics, history), it may be due to a language learning disability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A bilingual student should be referred to the speech-language pathologist if the student is having difficulty in one of the languages.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A bilingual student should be referred to the speech-language pathologist if the student is having difficulty in both languages.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>





## Demographics

### 1. Please indicate your age:

- 18-24
- 25-34
- 35-49
- 50 and over
- Choose not to answer

### 2. Please indicate in which of the following categories you would place yourself:

- Hispanic or Latino(a)
- American Indian or Alaska Native
- White or Caucasian (Non-hispanic)
- Other
- Asian
- Black or African American
- Native Hawaiian or other Pacific Islander
- Choose not to answer

### 3. What is your gender?

- Male
- Female
- Choose not to answer

### 4. What is your academic standing?

- Freshman
- Sophomore
- Junior
- Senior
- Post-bachelors degree
- Choose not to answer

## Debriefing

Thank you for participating in the survey!

The survey was created by the Principle Investigator, Leah Grigas, to explore future elementary school teachers' knowledge, attitude and preparedness as it relates to collaborating with speech-language pathologists.

For further questions, or if you would like to see the results of this survey, please email Leah Grigas at \_\_\_\_\_@gmail.com.

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