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Effectiveness of Literacy Intervention Provided by School-Based SLPs: Roles & Impressions on Literacy Teams

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Effectiveness of Literacy Intervention Provided by School-Based SLPs:

Roles and Impressions on Literacy Teams

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By

Ashley Rose Alvarado

In Partial Fulfillment of the

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ANNOUNCEMENT OF ORAL EXAMINATION

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Degree Program and Major: Master of Science Speech/Language Pathology

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Thesis Abstract

The purpose of this study was to determine how effective speech-language pathologists (SLPs) are meeting all areas of responsibility for literacy intervention. To meet this purpose, SLPs from Minnesota, North Dakota, and South Dakota were surveyed. The survey examined SLP's roles on literacy teams, areas of involvement, potential attitudes, impressions, and educational experiences of SLPs to explain why their role and opinions on involvement in literacy intervention may vary.

Acknowledgements

Throughout this journey, there have been many people to thank who have helped me be successful in the process. I would like to thank my thesis committee for initially guiding me in the right direction and being supportive of my final product. My advisor and committee chair person, Dr. Kris Vossler, who provided her insight, knowledge, and feedback, which helped me complete this project. Thank you for sharing you time, expertise, and energy with me, I could not have done it without your guidance.

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This has been an incredible journey and learning process. I am so thankful for the opportunity to continue to grow in knowledge in my chosen field.

Chapter One

Introduction

Literacy has many definitions, but in its most simplistic form, it is the ability to read and write (ASHA, n.d. c). Literacy may be expanded beyond the broad categories of reading and writing, to include spelling and other fundamental aspects of language, such as phonological awareness, which correlate to spoken language as well. There are extensive amounts of literature pertaining to spoken language disorders, however research regarding written language disorders and reading disorders are far less common.

Numerous influences can affect a child's likelihood for successful literacy development before they get to school such as parental involvement, socioeconomic status, and access to reading materials (High & Klass, 2014). Development of literacy skills in elementary schools is also fundamental for setting the student up for academic success into their high school years and beyond (High & Klass, 2014). Yet, as students start kindergarten, 1 in 3 children lack the basic skills needed to begin learning to read (High & Klass, 2014). Thankfully, speech-language pathologists (SLPs) garner a skill set to address literacy needs early through identification, prevention, assessment, etc. and may combat against later difficulties for students throughout their academic career.

SLPs play a number of roles when it comes to reading and writing, including prevention, identifying at-risk children, assessment, documenting outcomes, program development, advocating for effective literacy practices, and advancing the knowledge base (ASHA, n.d. a). Although it is clear that SLPs have an important role in literacy intervention, there has been very little research to document the effectiveness of the interventions they provide, how they are fulfilling their roles, and the outcome it is having on the students with whom they work.

Purpose of this Study

The purpose of this quantitative research study was to explore if school-based SLPs are effective at meeting all areas of responsibility when providing literacy intervention. If they are not meeting all areas, which roles are SLPs filling and what factors may be influencing their role. This study explored potential attitudes, impressions, and educational experiences of SLPs to explain varied roles and opinions on involvement in literacy intervention. The research questions were, "What role do SLPs believe they should serve in literacy intervention?", "What role do SLPs serve on literacy teams?", and "Do SLPs on literacy teams focus more on assessment or intervention (when they are involved?)." The hypothesis at the onset of this study was that school-based SLPs have mixed opinions about how they view their role and have varied amounts of involvement in literacy intervention and that SLPs are more involved in assessment of reading or writing disorders but less involved in interventions due to a number of factors such as other professionals taking on that role, lack of educational background in literacy, or demands of other client types on their caseloads.

Chapter Two

Literature Review

The purpose of this literature review was to investigate research studies and articles in the area of literacy and literacy intervention as it relates to the role of the speech language pathologist (SLP) on literacy teams. The literature review helped form a solid basis of information for the validation of this research and provided insight into the importance of literacy intervention being provided in schools by SLPs.

Problem

While there are no well-known or accepted resources to estimate the total number of students that are seen by SLPs in the school settings, the literature does contain multiple reports that give estimates on the total number of children who have been seen for speech therapy in a given time period. For instance, the National Center for Health Statistics reported that in 2015, 55.2% of all children aged 3-17 had received intervention services for any type of speech and language disorder within the last 12 months (Black, Vahratian, & Hoffman, 2015).

Caseload In recent years, school-based SLPs have provided services for caseloads averaging 53 students, if not more (Cirrin et al., 2003). As the size of SLP's caseloads has grown, so has the range and complexity of disorder types for students on those caseloads. The scope of practice for SLPs includes an extensive list of client severities and types ranging from culturally and linguistically diverse to traumatic brain injuries with many areas in between. It is the SLP's responsibility to remain up to date on the latest research and clinical skills in order to keep up with these growing demands.

There are many disorder types commonly addressed by school-based SLPs, such as articulation and phonological disorders, autism spectrum disorder, etc., but there is one disorder type that may not be

being adequately addressed, literacy. Literacy involves various levels of reading, writing, and spelling, all of which can be common areas of difficulty in school age students. With their specialized knowledge in the area of language, SLPs are often key professionals in identifying children who have reading and writing difficulties (American Speech-Language-Hearing Association, n.d. a). There are ways for SLPs to intervene and ways within their scope of practice to provide services to struggling readers and writers including target areas such as phonological awareness, teaching auditory cues in reading and writing, analyzing the demands of school curriculum, and analyzing reading, writing, and spelling (ASHA, n.d. a).

Barriers to Providing Literacy Services There may also be a number of barriers that influence the attitudes of SLPs and their willingness to participate in literacy intervention. Ehren and Ehren (2001), looked at the obstacles of individual inhibitors and system inhibitors that affect SLP's involvement in the attempt to expand literacy roles. Some of the individual factors included their personal perception of their role as not including the areas of reading and writing, a lack of training that contributed to their apprehension towards adding in those new roles, a desire for autonomy with the pressures of school districts and other mandates that require SLPs to design and implement new programs to increase the success of literacy in schools, and a fear of change in their role and how it is viewed by others (Ehren & Ehren, 2001). The other type of barrier is a system inhibitor, which included large caseloads that may make an SLP feel like they have even more responsibilities to add onto their current demands. Other system inhibitors included, the delivery method and treatment goals, willingness of other staff members to collaborate and accept the SLP's role in literacy, time limitations, and policies of school districts that limit the connection between spoken and written language (Ehren & Ehren, 2001). However, the authors eluded that despite these setbacks, they felt it was important for the SLPs to think in terms of "working smarter, not harder," meaning that when SLPs become involved in reading and writing intervention, that may involve working with students already on their caseload, as well as broadening their interventions to fit a range of needs for the student.

Literacy

According to Sulzby and Teale (1989), emergent literacy refers to "the skills, knowledge, and attitudes that are precursors to conventional reading and writing" (as cited by Whitehurst and Lonigan, 1998, p. 849). Emergent literacy is recognized by the American Speech-Language-Hearing Association (ASHA) as "an essential prerequisite for social well-being, academic achievement, and lifetime opportunities," (ASHA, n.d. b, par 1). There are a number of fundamental skills that are needed for successful literacy development, including phonological awareness, print concepts, alphabetic knowledge, oral language development, and emergent writing (Kaderavek, 2015). Therefore, the purpose of literacy intervention is to focus on these predominant skills needed in order to help the child be successful in literacy.

Emergent literacy is the foundation that builds reading and writing skills, and most children are able to develop emergent literacy skills easily due to the exposure they have to it from a young age (Justice, Chow, Capellini, Flanigan, & Colton, 2003). However, there are two main influences that increase the risk for children to develop a delay in their acquisition of emergent literacy. One risk factor is poverty. High and Klass (2014) found children in families of lower socioeconomic status are less likely to be exposed to early literacy through having reading materials available or being read to and this puts children at a great risk for falling behind in literacy development from an early age. Justice, Chow, Capellini, Flanigan, and Colton (2003) agreed that emergent literacy skills can be negatively affected by factors resulting from having a lower socioeconomic status and postulated that these children's performance will likely vary compared to peers from higher socioeconomic levels.

Another way that development of emergent literacy can be impacted is through having an oral language disorder. When analyzed retrospectively, Justice et al. (2003) found that children who developed later literacy difficulties had greater deficits in oral language when they were younger. Due to the correlations between oral language and writing or reading skills, it is not surprising that oral language could have an impact on emergent literacy skills as well.

Reading

Data conducted by the National Assessment of Education Progress (NAEP) in 2015 found that 33% of fourth-grader students scored at or above proficient reading level, a 1% increase from scores in 2013. The NAEP described a proficient reading level as, "Fourth-grade students performing at the Proficient level should be able to integrate and interpret texts and apply their understanding of the text to draw conclusions and make evaluations," (National Assessment of Education Progress [NAEP], 2015). While data from the NAEP shows gradual increases for fourth-grade children scoring proficient on these standardized reading assessments, 34% of fourth-graders are still scoring below basic understanding of reading content (NAEP, 2015). Many SLPs are aware that there is increased awareness about their responsibilities in helping with the prevention of reading disabilities and in contributing to the available evidence-based solutions to reducing disparities between children in their reading achievement; however, the problem lies in SLPs in how they feel they blend in to the number of other school professionals all working towards reducing reading difficulties (Justice, 2006). Thomas and Lance (2014) and Justice (2006), stated that SLPs would be better able serve children struggling with reading difficulties if they worked collaboratively "with other school professionals to heighten the quality of general education" (Justice, 2006, p. 285)

As children begin to learn more about language, they develop their skills for reading through multiple stages of a developmental process. It is necessary for children to move through these stages in order to build on their skills and be able to have a solid foundation in their reading comprehension so that that knowledge can be applied to increasingly complex tasks as they get older. The development of early reading abilities occurs across four primary stages of learning including the logographic stage, transition stage, alphabetic stage, and orthographic stage (ASHA, n.d. b). The first stage, logographic is when children are beginning to understand the connection between sound and letter relationships and to recognize printed words. Once they have a firm understanding of the sound-letter relationship and they are beginning to recognize words using that cueing, they have proceeded to the transition stage. Children

in the transition stage may begin to develop some sight word recognition; however, they still rely on sound-letter assumptions when identifying words. During the alphabetic stage, children are able to decode full words based on their knowledge of letter-sound relationships, but they are still not considered fluent readers. Next, children are able to recognize "chunks" of words making them more able to recognize parts of words without needing to decode as many of the sounds of letters (ASHA, n.d. b). Eventually children progress to recognizing full words automatically. This is a crucial step in grasping word recognition (ASHA, n.d. b).

Writing

As described by Katusic, Colligan, Weaver, and Barbaresi (2009), "writing is one of the most complex human functions; a critical skill for academic success, social and behavioral wellbeing" (p. 1306). According to ASHA (2000), written language disorders may involve any of the areas of spoken language, such as phonology, morphology, syntax, semantics, and pragmatics. Usually this diagnosis is given initially, but if the written language disorder begins to affect writing abilities, then the diagnosis may become a learning disability, which would be addressed differently (ASHA, n.d. d). It is possible for a written language disorder to co-occur with other conditions that may also affect the child's ability to learn and to be successful in the areas of reading and writing. Some potential coexisting conditions include spoken language disorders, attention deficit hyperactivity disorder (ADHD), emotional disability, intellectual disability, deaf or hard-of-hearing (HOH), and autism spectrum disorder (ASD), (ASHA, n.d. d). A specific learning disability means, "a disorder in 1 or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations," (Department of Education [US], n.d., para. 1).

Stoeckel et al. (2013) completed a study in Rochester, MN to determine the correlation between early speech-language impairments and the potential risk for developing a written language disorder. This study used a population-based, birth cohort for its participants. In this study, the researchers drew

conclusions on the negative impacts that speech and language impairments (S/LI) have on an expansive number of academic skills including difficulties with reading, writing, attention, cognition, and social skills. Through their research, Stoeckel et al. (2013) found that there was a strong correlation between children who had a language impairment during early childhood and the later risk for a written language disorder (WLD). For children already diagnosed with an S/LI, there was an increased risk of a WLD. The children with the greatest risk were those who had a reading disorder (RD). These children were found to have the highest likelihood for a WLD (Stoeckel et al., 2013). Multiple previous studies have suggested that boys are at a greater risk for WLD, which was consistent with results from this study. However, when the correlation between WLD and S/LI was considered, girls demonstrated a greater incidence than had been seen in previous research (Stoeckel et al., 2013).

These results emphasized the need for SLPs to be aware of the possible connections between early S/LI and the later negative impact they can have on a child to develop a WLD. Knowing the potential risks that an S/LI can have provides further support for SLPs to be knowledgeable in the area of literacy so they can reduce literacy disorders by addressing language concerns early. The recommendations of these researchers fall in line with the need for SLPs to take an active role in the prevention, identification, assessment, and intervention for students at a greater risk, "Given the strong association between S/LI and WLD, children who present with early S/LI should be closely monitored for reading and written language problems so that appropriate educational services can be provided before problems become severe," (Stoeckel et al., 2013, p. 43).

Long Term Literacy Outcomes

In addition to being at a greater risk later on in academic years, individuals who have reading and writing difficulties may also face challenges when using language to communicate, think, and learn (ASHA, 2000). Leitao and Fletcher (2003) completed a longitudinal research study in which they followed a group of students with a specific speech impairment at the beginning of their academic careers ages 5-6 then followed-up later at ages 12-13 to determine their literacy skills across time. The

researchers found that in relation to the group of developmental peers, the students who had early literacy and speech disorders had lower scores in the areas of reading accuracy, spelling, phonological awareness, and reading comprehension (Leitao & Fletcher, 2004). The researchers concluded that since these individuals were at a greater risk for language and literacy difficulties throughout their schooling, there was a high need for therapists to address these issues. Each of the numerous roles that SLPs can provide including identification, intervention, and assessment are vital in helping students improve their specific speech impairment and literacy needs before they create a lasting impact.

Role of the SLP in Literacy Intervention

ASHA outlined eight areas where the SLP can play a role in literacy development. These areas include prevention, identifying at-risk children, assessing, providing intervention, documenting outcomes, program development, advocating for effective literacy practices, and advancing the knowledge base (ASHA , n.d. a).

Prevention The first role is prevention. When working with younger children, SLPs serve as leaders in preventive literacy intervention programs. These are designed to work with children early in their academic careers in an effort to keep them from developing reading difficulties as they continue school (Kaderavek, 2015). The goal at this stage is identifying students who may be struggling with reading before they reach reading failure by providing support and encouraging reading development immediately (Kaderavek, 2015). Another responsibility SLPs have during this stage is to work with parents and teachers to share possible risk factors and teach strategies that contribute to age-appropriate reading and writing development (ASHA, n.d.).

Although ASHA has clear and detailed guidelines on how the SLP's role is defined in literacy, there is little research that specifically looks at these areas of involvement in isolation. Lefebvre, Trudeau, and Sutton (2008), looked at the role of Canadian S-LPs in the prevention of reading and writing difficulties through a survey. Interestingly, there are currently no guidelines for Canadian S-LPs that

acknowledge their role in prevention, yet they are expected to have knowledge in literacy for their competencies. There is a push for the SLPs to have more of a role in prevention of literacy disorders as there is in the United States.

ASHA's guidelines for preventing written language problems outline eight roles pertaining to prevention (ASHA, 2000). Lefebvre, Trudeau, & Sutton (2008) conducted a study where they took a more in-depth look at what prevention is, and how it can be applied to SLP's in the prevention of reading and writing difficulties. Since there are no official prevention guidelines for SLPs in Canada, this study applied their results to the recommendations of ASHA. The researchers surveyed 151 SLPs and addressed the areas of service delivery, targeting emergent literacy components, targeted clienteles, collaborative efforts, and training. The most significant findings were that despite a strong number of SLPs involved in prevention, the time they devoted to it was less committed (Lefebvre et al., 2008). The research also speculated possible influencing factors that explained that despite involvement in prevention, less time was focused on it.

These findings were consistent with Ehren and Ehren (2001) and Cirrin et al. (2003), indicating that factors such as large caseloads and time constraints were possible barriers to devoting more time to prevention efforts. Other insights from the study included that while the SLP's tended to follow ASHA's guidelines, they were most likely to focus their emergent literacy targets on areas of language they were the most comfortable with (i.e. phonological awareness or vocabulary) and that the indirect or direct role SLP's play may be influenced by how complex targets and teaching strategies were (Lefebvre et al, 2008). This study suggested that similarly, SLPs in the US are involved in prevention of literacy difficulties, but there is limited information on this specific role.

Identification The next role is identifying at-risk children, which can be done through informal observation checklists, screening measures, and referral procedures when needed (ASHA, n.d. a). Although identification is often viewed from the emergent stages of literacy as early identification, it is still important to identify older students who have literacy concerns. The roles are outlined for SLPs

depending on the population of students with whom they work (ASHA, 2000). This role has overlap with the collaborative effort of working with other professionals to identify risk factors and helping other professionals recognize signs and factors that may interfere with reading and writing development (ASHA, 2000).

Assessment Assessment is another important role filled by SLPs. When addressing literacy, it is necessary to select appropriate assessments, adapt the tools to the needs and abilities of the clients, interpret the findings, and evaluate the methods used to evaluate skills in reading and writing as well as spelling and spoken language (ASHA, n.d. a, ASHA, 2000). Assessment measures may include a combination of formal and informal measures and may investigate which subsystem a child is having difficulties with (ASHA 2000). Again, SLPs bring a unique perspective to literacy by providing valuable information regarding a student's skills for reading processes (i.e. decoding, comprehending, and paraphrasing) and writing processes, such as spelling words, forming and punctuating sentences, and more complex writing tasks as the student gets older (ASHA, 2000). ASHA (2000) provided distinct guidelines as to which areas should be assessed based on age and development level such as emergent level (i.e. spoken language and phonological awareness), elementary (i.e. rapid naming, phonological memory, and invented spelling or reading), and later elementary students (i.e. curriculum-based language). An SLP may be able to provide a new perspective on the child's reading or writing difficulties through assessment that another professional may not have access to or be qualified to administer. An SLP may also provide more individualized attention to the assessment task than a classroom teacher may be able to provide.

Intervention Once assessment procedures have been completed, the next role is providing intervention. For a successful intervention process, the SLP must collaborate with teachers and parents to plan and share goals for intervention. In the school setting, the SLP needs to work with teachers to incorporate classroom materials into intervention and make modifications to their regular classroom work to help the student keep progressing (ASHA, n.d.). Other factors to consider when designing an

intervention include the evidence-based triangle (clinical expertise, evidence-based practice, and client values). The intervention must meet the needs of the client by being culturally/linguistically and developmentally appropriate and consider the child's environment or curriculum (ASHA, 2000).

Documentation As with any type of intervention, it is important to document outcomes, which is the next role of the SLP. They must create a system for recording the client's progress such that they are able to look at data over time to identify new or reoccurring areas of need. This role is necessary to track outcomes related to the overall intervention goals (ASHA, n.d. a). While working on the intervention goals, the SLP is participating in program development by leading or participating in a team effort to develop school wide strategies for identifying other at-risk children and having intervention plans in place for other children who are struggling in literacy (ASHA, n.d. a).

Advocating A less addressed, but important, role is SLPs advocating for effective literacy practices. Fulfilling this role may mean educating others who plan curriculum about the relationships between reading and writing skills and the benefits of approaching literacy as a collaborative effort (ASHA, n.d. a). Lastly, SLPs must contribute to advancing the knowledge base by conducting research on literacy development as well as staying up to date on the most current research to provide the best practice for literacy intervention (ASHA, n.d. a).

The Need for SLPs on the Literacy Teams

A better understanding of the roles of SLPs in the school setting amongst other professionals has led to greater collaborative efforts. Staskowski and Zagaiski (2003) defined a literacy team as, "the professionals, parents, and administrators concerned with literacy instruction and intervention," (p.200, par 6). The literacy team may focus on a variety of aspects of literacy from how it effects a single student or group of students to the level of a classroom and beyond to the school district (Staskowski & Zagaiski, 2003). These researchers identified the roles of SLPs on a literacy team, what makes the teams successful,

how they can track their level of participation in literacy as well as ways to set new goals to expand their involvement.

As part of a team, the SLPs work with other professionals such as classroom or special education teachers, paraprofessionals, intervention specialists, and parents to provide more well-rounded approach (Thomas & Lance, 2014). An example of four schools with literacy teams demonstrated the differences in those who participated in literacy teams and the roles of each person (Staskowski & Zagaiski, 2003). For instance, one school had 11 team members with six areas of responsibilities that crossed over amongst the professions, while another school only had three members on the team but had descriptive roles for each professional (Staskowski & Zagaiski, 2003). Another area the study looked at was characteristics that made the literacy teams successful. The top three responses were frequent and meaningful conversation, understanding another's expertise, and collaboration with the general education team. In teams that were less successful, SLPs and other professionals stated that they did not feel like they were part of the team or they felt they were left out of meaningful conversations (Staskowski & Zagaiski, 2003). The lack of understanding of how SLPs can contribute to the development of successful reading and writing skills, aside from just being seen as experts in articulation, contributed to the miscommunication between team members (Staskowski & Zagaiski, 2003). When other members had a better understanding of the SLP's role in literacy, communication between team members was not ignored and rather was seen as a natural part of communication and inclusion between members. One way this understanding increased was by the SLP spending more time in the classroom. This allowed the teacher to learn about the SLP's involvement as well as for the SLP to learn from the teacher's strategies (Staskowski & Zagaiski, 2003). Another important aspect of a successful team was having a common intervention plan amongst all members. This is consistent with the recommendations of IDEA that interventions need to be based on school curriculum and relevant to classroom teachings (Staskowski & Zagaiski, 2003).

SLP Involvement on Literacy Teams

As the emphasis on SLP's involvement in literacy through reading and writing interventions continues to grow, SLPs report variations on the familiarity and experience they have with reading and writing. For some SLPs, it is second nature to use reading and writing strategies in their goals and interventions, yet for others it may be very new (Staskowski & Zagaiski, 2003). One of the most valuable reminders for school-based SLPs is that "Certainly, a great starting point for reading and writing is realizing that language therapy in all forms can both prevent reading and writing difficulties and aid the struggling reader and writer," (Staskowski & Zagaiski, p. 207). The researchers divided the amount of participation SLPs had on literacy teams into five areas including, You've Started, You're on Your Way, Shining Star You've Made It Best Practice, Shooting Star WOW!, And Best Practice-Plus. Each category had a list of the roles the SLP was fulfilling at each level. SLPs were encouraged to develop goals focused on increasing their level of involvement to achieve and exceed the various levels (Staskowski & Zagaiski, 2003). With the unique knowledge that SLP's possess, it is crucial to understand the important role that they have, the contribution they can make to a literacy team, and how their role can positively affect learning outcomes for students.

SLP Involvement Outcomes

Thomas and Lance (2014), like Staskowski and Zagaiski (2003), believed SLPs could have the greatest impact on children who are at risk for reading and writing difficulties when a team-based approach was used and the process was looked at with the strategy of Response to Intervention (RTI). However, ASHA's nationwide survey on caseloads for school-based SLPs indicated that 27% of SLPs do not have a role in RTI (ASHA school survey, 2016). For SLPs involved in RTI, conducting screenings was the most common area of involvement at 60% (ASHA school survey, 2016).

Thomas and Lance (2014) investigated the effects of a school-wide, team-based model of intervention. The study involved 409 English-speaking students from kindergarten to third grade

classrooms. The children participated in a literacy assessment administered by trained team members and involved testing of phonemic awareness, alphabetic principle, accuracy, fluency, and reading comprehension. The treatment involved three tiered groups including benchmark, intensive, and strategic that involved 3-5 students per session. Services were provided four times a week for 30 minutes. The intervention included the literacy team participating in meetings and being trained by the SLPs to provide evidence-based practice. They were also trained on strategies to use in the classroom. For students from all grades, there was a 12% increase in assessment measure scores from the beginning of the year to the end of the year, which the researchers believe may not have been possible without this team approach. Children made the most significant gains in the benchmark group. The SLP planned and coordinated initiatives so that they would involve a variety of school members so that they would be successful with the support of the administration and contributed to benefits for the students involved.

Importance of this Topic

In 2000, prior to ASHA's release of their position statement on the role of SLPs in literacy intervention, SLPs were seeking out ways to be more involved. Looking back to an old ASHA Leader article, it is apparent that SLPs had an interest in collaborating with other professionals and taking a more active role in literacy, "Across the profession, SLPs are asking questions about how to make our services relevant to clients' functional communication needs," (Spracher, 2000, para. 4). Now over fifteen years later, SLPs have been able to understand more fully their role. There is a clear need and place for SLPs to be a part of literacy intervention services in schools, but are they effectively supporting students in all of their various roles and are the roles leading to positive outcomes for the students with whom they work?

The goal of a study by Farquharason, Tambyraja, Logan, Justice, and Schmitt (2015) was to investigate specifically which contributing factors from individual SLPs lead to gains in a student's language and literacy skills. They also looked at factors from both the SLP and child that may explain the gains being made. While it has been acknowledged that SLPs' caseloads largely consisted of children

with language impairments with difficulties across multiple domains including literacy, there is insufficient information on how much attention is given to literacy needs alone.

This study was the first of its kind to look at underlying implications of SLPs and their direct impact on student outcomes and the researchers yielded interesting results. While there was evidence to support the need for SLP services in the school system, the researchers were able to solidify the need for SLPs providing language and literacy intervention, "Put another way, the current study indicates that children receiving school-based language intervention demonstrate substantial gain across language and literacy domains, and further, that SLPs may be specifically responsible for this change to some degree," (Farquharason et al., 2015, p. 9). This research concluded that SLPs do support their role and have a positive impact on the outcomes of students with literacy disorders.

Building on Previous Findings

In a previous research project, Kunstleben (2014) conducted a 15-question survey to investigate the role of a school-based SLP in literacy intervention. The participants were SLP members of ASHA's SIGs and 82 completed surveys were analyzed. The findings of this study are pertinent to the expanded goals of the current research. Relevant areas of the survey's findings include length of providing literacy intervention, age of students who receive literacy intervention, education on literacy intervention, resources for gaining knowledge on literacy intervention, if a team-based approach was used or not, and what part of literacy SLPs are involved in. A summary of the survey findings is detailed below.

Findings on education about literacy during undergraduate coursework showed 15% of participants had coursework on literacy while 85% of participants had not had coursework on literacy. This increased slightly in graduate students with 38% having literacy coursework while 62% did not. The most common resources for gaining education on literacy were through continuing education at 91% and learning from literature following with 76% of participants. The results for length of time providing literacy intervention were mixed, with the greatest number of participants practicing for 6-10 years and

close percentages between 2-5 years, more than 15 years, and 11-15 years. For grades with whom literacy intervention was provided, the highest response was for kindergarten with 71% and the lowest was for high school students with 16%. Services for first, second, and third grade remained steady, but began to decrease for grades 3-5 and continued to drop beyond that. In line with the need for SLP involvement on literacy teams, Kunstleben (2014) found the 73% of participants did use a team-based approach while 27% did not. For members of the literacy intervention teams, the most common members were general education teachers and special education teachers. A comparison was given between both parts of literacy, reading and writing. The findings indicated that while 68% worked on both reading and writing, none focused exclusively on writing, and 32% worked just on reading. Also, the research found that 62% of participants provided reading intervention and only 5% work with writing intervention; however, 33% work with both reading and writing intervention frequently. In terms of the role in literacy intervention, it appears that SLPs were involved in prevention, identification, assessment, and had the greatest involvement in intervention.

Summary

In reviewing the literature available regarding the SLP's role in literacy intervention, there were gaps in the information available. There is sufficient information to support SLP's involvement in literacy intervention, but literature is lacking in what roles the SLP is specifically fulfilling. Research reviewed for this project identified the roles of SLPs being involved in literacy as well supported SLPs as being on literacy teams. This research study aims to identify which roles SLPs are most involved in, how SLPs view their roles in literacy intervention, and attitudes toward literacy intervention.

Chapter Three

Methodology

This research project was quantitative in methodology and used a survey design. The data was gathered from the responses to an electronic survey administered to determine how effective school-based SLPs are at meeting all areas of responsibility in literacy intervention, how they view their roles, ways their role is influenced, and their opinions towards literacy intervention.

Participants

The participants in this study were speech-language pathologists from 331 schools in Minnesota (MN), 16 schools in North Dakota (ND), and 32 schools in South Dakota (SD). In order to locate participants, the researcher reviewed the department of education websites for each state and located data spreadsheets for all schools in MN, ND, and SD using the Internet search engine "Google." From each web page, the researcher confirmed the city, state, and district of the school. The researcher then created formulas in the software program, Microsoft Excel, to narrow the data to meet the criteria for inclusion in this study, elementary schools with individual school enrollment of 500 or more students. This inclusion criterion was used to maximize the likelihood that the caseloads of the speech-language pathologists was diversified enough to include literacy clients as well as other client types and to make the sample population more representative.

Once the schools had been selected, the researcher located the contact information for all SLP's employed by each district manually through the publicly available information from the staff directory on each school's website. If an email address was provided, the researcher used that email address to send the survey. In some cases, the researcher was not able to locate any speech clinicians via the school website or staff directory, those schools were not included in the survey distribution. All information was then kept in a secure location and organized in a spreadsheet by each state.

After verifying eligibility, 379 schools met the study criteria. From those schools, 283 SLPs were contacted via email. This number reflects that, of the 379 schools, 53 schools did not have SLPs on staff, 43 schools did not provide any contact information, and there were some schools that had multiple (ranging from 1-4) SLPs onsite. After the first distribution, there were 37 responses, which was a 13% completion rate. A follow-up email was sent four weeks later as a reminder to complete the survey; however, the follow-up email did not yield any new respondents. It is unclear why the completion rate remained this low, but possible explanations will be discussed in more detail in Chapter 5.

Procedure

A survey questionnaire (located in Appendix A) was developed by the researcher. Prior to the distribution of the survey, human subject approval was granted by Minnesota State University – Moorhead's Institutional Review Board. The questionnaire was emailed through a university email server using the online survey platform, Qualtrics. The survey was sent to SLPs in schools that meet the criterion above. The survey included a question to verify that all participants were employed by a school district that met the study inclusionary criterion. In September 2017, SLPs were emailed an invitation to participate in the study, which included a letter of implied consent (Appendix B), an explanation on the purpose of the study, an estimated completion time, the researcher contact information, and a statement informing them that all responses would be anonymous. Participation in the study implied consent. A follow-up invitation was sent in October 2017 to those who had not yet participated in an effort to obtain a larger sample population. At the end of the email, was a link to the survey.

Survey Content

Since the literature is limited on the involvement of SLPs in each of their specific roles addressing literacy assessment and intervention as defined by ASHA, the researcher developed a 23-question survey to explore the SLP's roles in literacy intervention, involvement on literacy teams, attitudes towards literacy intervention, and factors that may be limiting their involvement. Question types

on the survey included 5-point rating scales (i.e. Likert scale), yes/no, mark all that apply, and a few

multiple-choice options ranging from 2-6 choices. Several questions followed a more open-ended format

and provided the option of "other" as a tool to allow for inclusive responses that may have otherwise been

missed. The format for all other questions was closed-ended. A sample of the survey that was sent out to

participants is located in Appendix A.

Data Analysis

The researcher used the descriptive measures included in Qualtrics to analyze data from the

survey. According to Maxwell and Satake (2006), descriptive statistics are "measures such as

percentages, averages, and standard deviations used to summarize, condense, and organize data into a

move convenient form," (p. 510). The authors also considered descriptive statistics to be a straightforward

way to evaluate the data available numerically (Maxwell & Satake, 2006). For this study, the descriptive

statistics used when analyzing responses from the survey were mean, median, and mode. Using these

measures helped the researcher identify trends in the data in order to make conclusions about the study

findings. Additional comments provided by participants on the open-ended questions were analyzed to

identify any recurring themes or ideas. Once the data analysis was completed, results were used to

determine any significant findings.

Chapter Four

Results

When literacy first began to be recognized by ASHA as a role that SLPs could fulfill, it was because the organization recognized that an SLP's skill set of knowledge of language acquisition combined with professional skills in assessment and diagnostics could make a valuable contribution to children and adolescents, especially in the school setting (Spracher, 2000). Now over fifteen years since the release of the position statement from ASHA, their position that "SLPs play a critical and direct role in the development of literacy for children and adolescents with communication disorders," continues to stand true today (ASHA, 2001a). Along with the SLP's role, Staskowski and Zagaiski (2003) discussed aspects of a literacy team, which included parents and any other professionals that have a role in literacy intervention from a group perspective. ASHA's position statement also acknowledged that the SLPs role should be implemented in collaboration with other professionals who have knowledge and experience in literacy (ASHA, 2001a).

Following the guidelines established by ASHA, the goal of this study was to determine the roles SLPs in the school setting are fulfilling in literacy intervention today. The survey used in this study was designed to examine what roles SLPs serve in literacy and how they view their involvement in literacy. The study also reviewed SLP's participation and access to literacy teams as well as what other professionals they may collaborate with on literacy teams. Aside from their involvement, SLPs were also asked to share their educational backgrounds, satisfaction with the knowledge they have, and where they have gained most of their education on literacy. Furthermore, results from the study included additional comments made by SLPs to provide insight into their roles in literacy or factors inhibiting greater involvement.

Hypothesis

The first hypothesis in this study was that school-based SLPs have mixed opinions about how they view their role in literacy intervention and have varied amounts of involvement in their roles. Data from the survey partially supported this hypothesis. The second hypothesis postulated that SLPs are more involved in assessment of reading or writing disorders and less involved with intervention. Data from the survey did not support this hypothesis.

Demographics of Participants

This survey gathered responses from 37 speech language pathologists (SLPs) from Minnesota, North Dakota, and South Dakota. Multiple survey questions were used to obtain background information such as student population at the schools where the SLPs worked and number of years practicing. The format of this survey collected data through standard question types. It also provided questions for participants to add in their own responses, which added a personal perspective to the standard data collected. These 23 survey questions enabled the researcher to gather a large amount of data for analysis and to gain a better understanding on how school-based SLPs view their role in literacy intervention currently.

Student Population

A question addressing the student population was included in each survey to ensure that participants met the inclusionary criteria required to participate in the survey. The majority of participants (78.3%) met the original inclusion criteria of 500 or more students at the school. Data from this question revealed that 2.7% worked at schools with 100-300 students, 18.9% of the SLPs worked at schools with a student population of 300-500, 45.9% at schools with populations ranging from 500-700 students, 24.3% at schools having 800-1000 students, and 8.1% with student populations of more than 1000 students. This question was included based on the premise that SLPs in larger schools would have more diverse caseloads (in terms of client types), which would allow for some specialization.

Number of Years Practicing

The next question asked participants about the number of years they have worked as a SLP in the school setting. This question was designed to determine the level of familiarity SLPs had with this work setting itself prior to any specific questions on literacy intervention. The majority of participants (54%) stated that they had been working in the school setting for over 15 years. This percentage further increased when looking at participants who had been practicing for 6 years or more with 92% of participants meeting that criterion. Of those who participated in the study, only 8% had been practicing for less than 5 years. The mean number of years working as an SLP in the school setting was 4.14 years.

Background Knowledge and Education in Literacy Education

In order to look at the educational background of SLPs in literacy intervention, the survey included questions about the number of courses taken in literacy. The survey also included a question designed to ascertain whether any courses taken were, at the graduate or undergraduate level. Also, in this section were questions querying, the other areas in which the SLPs might have attained literacy knowledge. The questions were designed to gather a better understanding of how much knowledge SLPs have about literacy. Since it is an area within the scope of practice for SLPs, especially in the school setting, it is an ethical responsibility that SLPs have the necessary educational background to provide the most competent service to students with whom they work.

Literacy Courses taken by SLPs In terms of the number of courses taken related to literacy intervention, the average across all participants was 2.41 courses. Most participants (37.8%) had completed either 3-4 courses and 32.4% of participants had completed 1-2 courses. While 10.8% of participants had taken more than 5 courses in literacy intervention, 18.9% of participants had not taken any courses in this area. To gain a better understanding of where knowledge on literacy was provided, a subsequent question addressed more specifically where any education the SLPs had completed had come from (undergraduate coursework, graduate coursework, or continuing education classes). For this

question, participants selected all applicable options and recorded their own responses for the number of courses taken for each group. The responses revealed that the greatest area of education in literacy intervention was through continuing education classes with 45% of participants, followed by 30% taken during graduate coursework, and 25% in undergraduate coursework. For undergraduate coursework, participants responded that they had taken 0-2 courses and for graduate coursework, the responses ranged from 0-3. The greatest variety was found in the area of continuing education, with some participants saying they had taken 0-6 courses, while others reported taking 2 PhD courses, greater than 7 courses, and 10+ courses. This information can be seen below in Table 1.

Table 1: Coursework in Literacy Intervention

#	Answer	%	Count
3	3-4 courses	37.84%	14
2	1-2 courses	32.43%	12
1	None	18.92%	7
4	More than 5 courses	10.81%	4
	Total	100%	37

Additional Ways SLPs Gained Knowledge on Literacy Expanding beyond only educational courses as a means for building literacy knowledge, an additional question was included to address other areas where SLPs may have gained their knowledge. On this question, participants selected all applicable choices and shared additional comments. There were three main areas that stood out as prominent ways SLPs gathered their knowledge about literacy. These areas were continuing education courses at 20%, conferences at 19%, and on the job learning or training at 19%. Another important finding to note was that from this question, 0% of participants responded that they did not have any background in literacy. In the "other" category, participants shared some unique ways in which they have learned about literacy with responses such as "previous undergraduate coursework from a different major", "their own thesis

research", "being a former elementary education teacher", "through homeschooling", and "SLP blogs and having a strong interest in children's literature". Detailed information including other areas where SLPs attained their knowledge can be found below in Table 2.

Table 2: Areas Knowledge of Literacy Intervention was Attained by SLPs

#	Answer	%	Count
1	Undergraduate coursework	4.04%	4
2	Graduate coursework	7.07%	7
3	Continuing education courses	20.20%	20
4	Conferences	19.19%	19
5	Peers	13.13%	13
6	Journal reviews and articles	7.07%	7
7	On the job learning or training	19.19%	19
8	I do not have any background in literacy intervention	0.00%	0
9	Other	10.10%	10
	Total	100%	99

SLP's Satisfaction with Background Knowledge The last question in this section was used to address SLP's background knowledge in literacy focused on their level of satisfaction with the amount of education they had received. This question is important as it illustrates whether SLPs feel they have adequate background knowledge in the area of literacy or if they feel they may have benefited from additional education. Almost half of participants, 45.95%, responded that their feelings towards the amount of education that they had received were neutral. An additional 13.5% who were satisfied with their education and 5.4% reported that they were very satisfied. However, 29.7% reported being unsatisfied and 5.4% who stated they were very unsatisfied.

Caseload and Involvement in Literacy Intervention

      SLP's Caseload Several questions on the survey were designed to gather general background information from the study participants related to the types of clients they work with, the amount of their caseload that is focused on literacy intervention, and the number of years they have been providing literacy intervention. When asked about the diversity of disorder types on their caseload, participants selected all applicable options and recorded their own responses for client types that may not have been included. The most common types identified were speech sound and language disorders. These two areas were identified by 100% of respondents. The next highest disorder type identified was Autism Spectrum Disorders, which was listed by 92% of respondents. The three remaining areas listed on the survey included cognitive communication disorders (84%), Childhood Apraxia of Speech (73%), and reading and writing disorders (62%). Of the six disorder types included in this list, reading and writing disorders was identified by the smallest number of participants as a client disorder type found on their caseload. Responses participants added under the "other" option included voice disorders, fluency disorders, developmental delays, and multiple disorders. Results showing the breakdown of clinician caseloads can be found below in table 3.

Table 3: Client Types on Current Caseload

#	Answer	%	Count
1	Autism Spectrum Disorder (ASD)	17.44%	34
2	Language Disorders	18.97%	37
3	Speech Sound Disorders	18.97%	37
4	Childhood Apraxia of Speech (CAS)	13.85%	27
5	Cognitive Communication Disorders	15.90%	31
6	Reading and Writing Disorders	11.79%	23
7	Other	3.08%	6
	Total	100%	195

Years Practicing Literacy Intervention The next question on the survey was one that had previously been asked by Kunstleben (2014) related to how long each SLP had been providing literacy intervention. This question clarified whether or not the study participants have been providing literacy intervention for as long as they have been practicing speech-language pathology. The largest number of respondents (35%) indicated that they had been providing literacy intervention for one year or less. A further 27% reported that they had been providing these services for 2-5 years. 18.9% of study participants stated that they have been practicing literacy interventions for 15 or more years, 16.2% reported they had been practicing literacy intervention for 6-10 years, and 2.7% had stated practicing for 11-15 years. The average length of time that clinicians in this study have been practicing literacy intervention was 2.43 years. In relation to Kunstleben's findings, research indicated a more even breakdown across the five options ranging in number of years practiced. The other apparent difference was an increase in the current research in the number of participants who had provided literacy intervention for 1 year or less from 9% (Kunstleben, 2014) to 35%.

Grade of Students The survey also contained a question that asked participants to answer a question regarding the grade of the students they work with on literacy intervention. Participants were asked to select all applicable options. The most common age was students in first/ second grade (37.5% of responses) followed by kindergarten and third/fourth grade which both had 22% of responses. Respondents who worked with students in fifth grade and above reported that they worked on literacy skills with 11% of their caseload. SLPs reported the smallest percentage of literacy instruction at the preschool level where only 7% said they addressed this area. When asked previously by Kunstleben (2014), the findings indicated the most common grade level was kindergarteners followed closely by first through third grade students. These findings in the previous study showed an even distribution across kindergarten through third grade, whereas in the current study literacy instruction was almost twice as common in kindergarten as it was in third and fourth grade.

Percentage of Literacy Intervention on Caseload The last question that addressed caseload, participants were asked to report on the percentage of literacy intervention making up their total caseload. The highest response (70%) was in the 0-20% of the caseload category. 16% of respondents said that literacy comprised 25-45% of their caseloads, and 13.5% reported that 5-70% of their caseload addressed literacy. There were no respondents who said that 75-100% of their caseload was literacy based.

Impressions on Literacy Intervention and Literacy Teams

Importance of Literacy Intervention To address the first research question in this study, "What role do SLPs believe they should serve in literacy intervention?" SLPs were asked to rate how important they felt their involvement in literacy involvement was, ranging from not important to very important. On this question, 35% of respondents rated their role as "important" while 32% said their role was "fairly important." Only 2.7% of SLPs who completed the survey rated their involvement in literacy assessment and intervention as "not important." The remaining participants stated they viewed their role as "slightly important" (10.8%) and 18.9% of respondents viewed their role as "very important." These findings are located in table 4.

The next question addressed whether or not the participants thought that SLPs should be a part of a literacy team. In order to answer this question, respondents were asked to rate their agreement on a Likert scale that ranged from strongly disagree to strongly agree. From the responses to this question, it appeared that most SLPs were able to see a varying degree of importance of literacy intervention with only 2% viewing literacy intervention as not important. The largest single ranking (37%) agreed that SLPs should be a part of the literacy team; however, 32% reported being undecided on this matter. An additional 16% strongly agreed that SLPs should provide literacy service while 13.5% either disagreed or strongly disagreed with the statement.

Table 4: How Important SLPs View Their Role in Literacy Intervention

#	Answer	%	Count
1	1- not important	2.70%	1
2	2 - slightly important	10.81%	4
3	3 - fairly important	32.43%	12
4	4 - important	35.14%	13
5	5 - very important	18.92%	7
	Total	100%	37

Literacy Teams The question, "Are you part of a literacy team?" was included to help answer the second research question, "What role do SLPs serve on literacy teams?" A surprisingly high percentage (nearly 80%) of participants in this study responded that they were not a part of literacy teams while only 21% said they were part of a literacy team.

Reasons SLPs Are Not on Literacy Teams Those who responded, "no" to the previous question were asked to share why they were not members of a literacy team. In order to answer this question, participants were asked to select the most appropriate response from a list of options. They also had the option to record their own response under "other." The most common response (51.3% of participants) was that other professionals make up literacy teams. There was a range of additional responses that provided insight on rationale for not being a part of literacy intervention. 13.5% of participants opted for "other" and revealed a range of additional responses that provided insight on rationale for not being a part of literacy intervention These responses included "alternating responsibility of this role with another professional" (special ed teacher), "working in early intervention and not having a team", "indication from director that SLPs should not be involved in reading intervention", "SPED director allowing SLPs to support literacy, but not be a part of it", and scheduling constraints. 10.8% of participants attributed their lack of participation to not having a literacy team at their school and 2.7% of participants reported lack of

educational background in literacy. Additionally, 21.6% of participants shared they were on a literacy team, therefore, they did not contribute to any of the other possible options.

Other Professionals on Literacy Teams SLPs were then asked to select which professionals at their schools served on the literacy intervention teams. The highest response was tied between general education teachers (31.75%) and reading or literacy specialists (31.75%) followed closely by special education teachers at 29.9% of responses. At 2.8%, parents were rated very low in terms of their involvement in literacy teams. 3.7% of participants added in any additional responses under "other." Additional responses included media specialists, administration, paraprofessionals, instructional coaches, Reading Corps, Read Naturally, and response to intervention. These results were similar to Kunstleben (2014), who found general education and special education teachers to be the most common professionals other than SLPs on literacy teams followed by reading specialists.

Role on Literacy Team This question was also designed to investigate the second research question on how SLPs are involved on literacy teams. There are multiple roles that SLPs can play on literacy teams that follow guidelines established by ASHA. Those roles, shown in table 5, were given as options and SLPs selected all applicable options for how they were involved in literacy. Only 43% of participants responded that they were not on a literacy team. Of the areas provided, the greatest response was in collaborating with staff and parents at 22.5%. All other areas showed small percentages of overall involvement including 11.3% of responses for providing intervention and documentation and "other" and 3.7% of responses for both identification of at risk readers/writers and educating other professionals. The lowest areas of involvement for SLPs in literacy were assessment and prevention, both with 1.9% of responses. Again, additional responses were allowed, to expand the available responses of ways SLPs were involved on literacy teams that were outside of the set options available. These additional responses included, "working with a committee to create literacy related materials such as a student thesaurus and family literacy night", "a team that contributes to literacy assessment and development but is not called a

literacy team", "co-teaching low level reading group with literacy specialist using speech and language

approach", and "phonemic awareness testing and intervention".

Table 5: SLP's Role on Literacy Teams

#	Answer	%	Count
1	Assesses reading and writing	1.89%	1
2	Collaborator with staff and parents	22.64%	12
3	Provides intervention and documents outcomes	11.32%	6
4	Prevention	1.89%	1
5	Identifies at risk readers and writings	3.77%	2
6	Teaches/trains other professionals about literacy	3.77%	2
7	Other	11.32%	6
8	I am not part of a literacy team	43.40%	23
	Total	100%	53

Assessment or Intervention Involvement Addressing the researcher's third research question,

"Do SLPs on literacy teams focus more on assessment or intervention (when they are involved)?",

participants were asked whether they were more involved with assessment or intervention when targeting

literacy. The greatest response was that participants worked with neither at 30%, followed by SLPs who

worked with both assessment and intervention at 27%. When looking at only intervention or assessment,

it was more common for SLPs to work with intervention (32%) versus assessment (11%).

Reading, Writing, or Spelling Involvement This question also pertained to the first research

question by addressing how SLPs viewed their involvement in specific areas of literacy. With reading,

writing, and spelling being the primary areas associated with literacy difficulties, this question addressed

which of those areas were being targeted most frequently by SLPs if at all. Results, which can be seen in

table 6, indicated that again the largest group of participants (45.6%) was not involved with any of those

areas. If they were involved with any of those areas, the highest ranked was reading (34.75%), writing

(13%), and spelling (6.5%) being focused on the least frequently.

Table 6: Focus of Literacy Intervention

#	Answer	%	Count
1	Reading	34.78%	16
2	Writing	13.04%	6
3	Spelling	6.52%	3
4	None	45.65%	21
	Total	100%	46

Literacy Assessment Teams Related to the third research question, participants were asked

whether or not the school they worked at had a literacy assessment team. Some schools with strong

literacy teams may also have assessment teams, which specifically work to identify students with reading

and writing difficulties. To determine the percentage of schools with literacy assessment teams, the

participants were asked if they had an assessment team and if so who was involved on the team. The

breakdown on this question was close with 43.25% responding, "Yes, they have a literacy assessment

team" and 35% responding, "No they did not have a literacy assessment team." 21.6% of respondents

who did have a literacy team shared that the literacy assessment teams are comprised of individuals from

a variety of areas. These individuals included a classroom teacher, academic or literacy coach, reading

specialist/interventionist, specific learning disability teacher (SLD), alternate delivery of specialized

instructional services (ADSIS), developmental cognitive disabilities (DCD) teacher, ESL teacher, RTI

"Problem Solving" Team, grade level representatives, principal, SLP, curriculum specialist, and title staff.

Impressions on Involvement in Literacy In order to gain a better understanding of where SLPs

view their own role in literacy intervention aligning with the roles outlined for literacy, a question was

asked to determine how agreeable or disagreeable they were to being involved in certain aspects of

literacy. Participants were first asked, "Should SLPs be more involved with assessment than

intervention." 43.25% of participants were left undecided, however when addressing if they were more

agreeable or less agreeable, 32.4% disagreed and 13.5% agreed with this statement. Of the remaining

participants, 5.4% of respondents strongly agreed and 5.4% strongly disagreed. Therefore, the responses

showed that a greater number of participants did not agree that SLPs should be more involved in

assessment than intervention.

To keep the participation unbiased, the survey also posed the statement in the opposite way by

asking, should SLPs be more involved with intervention than assessment. This time the percentage of

participants who were undecided with this statement was even with the participants that agreed with the

statement at 35% each. 21.6% of participants disagreed with this statement. Of the remaining participants,

5.4% of respondents strongly agreed and 2.7% of respondents strongly disagreed. From these two

questions, it is clear that, for this sample at least, SLPs believe their role should be more involved with

intervention than assessment.

Targeting Reading, Writing, and Spelling Since literacy consists of multiple areas related to

language including reading, writing, and spelling; this survey question was designed to measure if all

areas were being addressed equally or if some areas may be targeted more frequently than others may.

This question asked participants to rate on a scale from "strongly disagree" to "strongly agree" that they

target the three main areas of literacy equally. The responses elicited a fairly even distribution. 38% of

participants agreed with this statement and 30% were undecided, 30% disagreed, and only 2% strongly

agreed.

Influencing Factors for Providing Literacy Intervention Lastly, there are countless factors that

may affect why SLPs are not able to have a more pronounced role in literacy intervention. To gain a

greater understanding on possible influencing factors, participants were asked to select all applicable

answers as to why they are not as involved with literacy and were able to record their own responses. The

top three indicated responses were caseload demands (25.2%), time constraints (23.5%), and service

provided by other professionals (21.75%). The less common influencing factors included a limited

education in literacy for 12% of participants, a view that it was out of the scope of practice (6.9%), and a

lack of confidence (6%). "Other factors" was chosen by 4.3% of respondents. The results can be found in

detail in table 7. Some of the other responses indicated as a possible influence was being considered out

of the scope of practice by the school district or directors.

Table 7: Inhibiting Factors for Providing Literacy Intervention

#	Answer	%	Count
1	Caseload demands	25.22%	29
2	Limited education on literacy	12.17%	14
3	Time constraints	23.48%	27
4	Provided by other professionals	21.74%	25
5	Out of scope practice	6.96%	8
6	Lack of confidence	6.09%	7
7	Other	4.35%	5
	Total	100%	115

In conclusion, these results provided an overview into the research questions addressed in this

study and investigated a further look into more specific questions surrounding literacy intervention. The

following chapter will provide a comprehensive summary of the research findings, relate this information

back to current literature, address the research hypothesis, share any limitations, and expand on possible

suggestions for future research building from this topic.

Chapter Five

Conclusion

The intent of this research study was to determine how involved school-based SLPs are in literacy intervention, what roles they fulfill, and their impressions of that role. It is well documented in the literature that SLP's possess the skills needed to address disorders of reading and writing. Given that premise, the purpose of this study was to determine if SLPs were involved as members on literacy teams. Further, the study hoped to address the reasons were for any lack of involvement. This chapter will be used to interpret the findings and create an understanding into the impressions of school-based SLPs on their role in literacy.

Hypothesis The first hypothesis stated that school-based SLPs have mixed opinions about how they view their role in literacy intervention and have varied amounts of involvement in their roles. Data from the survey partially supported this hypothesis. Most participants in the survey viewed their role in literacy as fairly important to important. While 37% of SLPs agreed they should be involved in literacy, 32% remained undecided.

The second hypothesis stated that SLPs are more involved in assessment of reading or writing disorders and less involved with intervention. Data from the survey did not support this hypothesis. Participants were asked if SLPs should be more involved with assessment or intervention. Results indicated 32% sided with intervention and 11% sided with assessment. In terms of which role they were most involved in, the largest area of participation said intervention, but 27% said both intervention and assessment equally. The remaining 29% of participants worked with neither assessment nor intervention.

Discussion

When examining all three main areas of involvement in literacy intervention, SLPs were most commonly involved with reading, followed by writing, and spelling. The greatest number of participants (45%); however were not involved in any of the areas. It is difficult to understand how SLPs could not be involved with literacy intervention at all because many of the foundational skills of emergent literacy overlap with oral language. For instance, during the earliest stages of reading development, children are building logographic skills (the knowledge of sound-letter relationships) (ASHA, n.d. b.). In written language disorders, writing may involve areas seen in oral language such as morphology, syntax, semantics, and pragmatics, all of which are found in oral language (ASHA, 2000). Spelling work can be used to make connections between letters and the meaning of words (ASHA, 2000). Opinions from participants were varied when asked if all areas should be targeted equally. A slight majority agreed that each area should be involved, but an equal number of participants were either undecided or disagreed.

Multiple questions were used to gather insight on how SLPs were using their time when working with students who had reading, writing, or spelling disorders. Looking initially at all roles including prevention, collaboration, intervention, assessment, identification, and education about literacy, 22% of participants were most involved with collaborating with parents and staff while working on a literacy team. Of these many different roles SLPs can have while involved with literacy, assessment and intervention were identified as two common roles SLPs fulfill. Results from this study suggested that SLPs believe their involvement should be focused more on intervention than assessment. This perception was consistent across 3 questions on the survey. Intervention was seen as a collaborative process between teachers and families to ensure goals and treatment tasks are meeting the student's needs (ASHA, n.d. a.). Therefore, participants viewed and understood their role in literacy intervention as it is outlined by ASHA.

Education and Literacy The survey contained some questions related to the educational background of speech language pathologists. The answers to these questions provided some mixed

findings on the knowledge SLPs have when working with literacy. The first question about background education in literacy revealed that while a majority of SLPs had taken 1-4 courses related to literacy intervention; however, there were 20% who said that had not taken any courses related to literacy. In hindsight, it may have been beneficial to ask participants which specific courses they had taken since courses on childhood language topics may have included a section on literacy.

This section of the survey also included a question on whether a literacy intervention course was taken as a part of a graduate or undergraduate program, a course from another degree type, or as an elective. Many of the participants reported that they had gathered their knowledge from continuing education courses. Due to the high number of continuing education options now offered along with the availability of courses through multiple means such as conferences, online webinars, and through ASHA's website, it is reasonable to see that SLPs are expanding their knowledge of literacy intervention through this venue. It is even more likely that an SLP would seek out education in the area of literacy if it were an area they were involved in, have a special interest in, or an area they are trying to supplement knowledge in if they lacked background from graduate or undergraduate courses. Blood, Mamett, Gordon, and Blood (2010) found that for SLPs seeking further education of written language disorders, the most common source was through on the job training followed by national conventions. While many participants remained neutral, there were a greater number of participants in the present study who felt unsatisfied with their education instead of satisfied. These findings were also similar to findings by Blood et al. (2010), who looked at the satisfaction of SLP's educational coursework in written language disorders. The researchers found that the majority of SLP participants in their study rated their preparedness as limited or unsatisfactory (Blood, Mamett, Gordon, & Blood, 2010).

Years of Experience Nineteen percent of participants had been practicing literacy intervention for 15 years or more, which encompasses the entire time since it became acknowledged within the scope of practice by ASHA. Fifty-four percent had been practicing in the school setting as an SLP for over 15 years. There was only a small group, 2.7% of participants, who had been a practicing clinician for 1 year

or less, but there were 35% who had been providing literacy intervention for 1 year or less. When asking participants about the number of years providing literacy intervention, no data was collected on which specific years in their career literacy intervention was practiced. Therefore, the data from this research study does not allow any conclusions to be drawn on the relationship between years of experience and years of involvement. In the future, it would be an area to explore further to determine if clinicians who have been practicing longer started using literacy intervention more recently or if they provided it early in their careers and have stopped providing literacy intervention.

Caseload Involvement in Literacy In relation to six different client types that could be on an SLP's caseload, reading and writing disorders were the least common group identified by participants with 11.75% who said they worked with that population. In a national school survey looking at SLP caseloads, reading and writing disorders were also amongst the lowest area of involvement (ASHA, 2016). In that survey, 33% of participants worked with students in that area, reading and writing disorders was ranked as eleventh out of fifteen areas of intervention (ASHA, 2016). In the current study, the most common client types, language and speech sound disorders, were only 7.5% above literacy disorders, which is a positive sign because it is a much smaller distribution than the 57% difference from the top ranked area, autism spectrum disorders and literacy disorders on the national survey. The overall distribution of client types was much more evenly dispersed than anticipated, suggesting that clinicians in schools with a student population of 300-500 students do have diverse caseloads.

While literacy is arguably an area that could be addressed with a large range of students, the percentages of caseloads that included literacy intervention was fairly low. Of the participants who stated that they worked with this population, the majority said that 0-20% of their caseload was dedicated to this population. Without having a similar question to compare these findings to a more common area of intervention like speech sound disorders, it is difficult to determine if the distribution would be similar. While there were no SLPs whose caseload consisted of 75-100% of literacy intervention, it is unlikely

that a clinician would ever focus on one area of intervention with all students considering the numerous types of communication or language disorders included in the SLPs scope of practice.

Literacy Teams

A strong majority of participants said they were not a part of a literacy team. The most common reason for not being a part of a literacy team was that other professionals make up the literacy team. Other professionals SLPs may work with on literacy teams include special education teachers, paraprofessionals, intervention specialists, and parents (Thomas & Lance 2014). Participants in the survey identified all of these professionals with general education and literacy specialists as the most common members of literacy teams along with special education teachers and some involvement from parents or caregivers. Since SLPs have a specialized skill set that allows them to be a key professional in identification of reading and writing difficulties as well as building language and literacy skills, it is concerning that not more participants were involved on literacy teams. Staskowski and Zagaiski (2003) identified features of both successful and unsuccessful literacy teams. In order to have successful literacy teams, one of the most important factors was interprofessional practice or the understanding of another's expertise. Factors that lead to unsuccessful teams were if team members felt that they were not a part of the group (Staskowski & Zagaiski, 2003). Based on comments given by participants, SLPs were reporting a lack of understanding about their expertise in language and literacy by other professionals at their schools. When SLPs are capable for providing such a large range of roles and responsibilities as recognized by ASHA, there seems to be a gap in the services they are able to provide due to a misunderstanding of their skills.

Suggestions for Future Research

When considering conducting future research projects targeting literacy intervention, it would be beneficial to include SLPs from other settings such as private practice and early intervention. Although the least common age group for SLPs to target literacy intervention reported in this study was pre-school

aged children, at just 7%, it is possible that the participants who completed the survey worked less with that younger age-group. A survey directed at early intervention might reveal that SLPs in that setting rank literacy intervention as more common on their caseloads because it is the primary population with which they work. Another population that was not included in this survey was SLPs who work in private practices. Due to the necessity for proficient reading and writing for academic success, it is possible that parents are turning to support from clinicians outside of the school setting. It would be interesting to compare if literacy intervention for school-aged children provided by SLPs in private practices is similar to the rates of school-based SLPs or if there would be an increase.

Limitations

There are several limitations to this study. First, based on a comment from one participant, it may have been beneficial to provide a definition for literacy, literacy intervention, and literacy teams at the beginning of the survey. Participants may have been using their own definition and that could have influenced the way they responded to a question. By providing these better working definitions, the responses from participants might have been more valid.

A second limitation was the low completion rate. When the survey was sent out initially, it garnered a 13% completion rate. A follow-up survey sent out 2 weeks later did not result in any additional participants completing the survey. It is unclear as to why the overall completion rate for this study remained low. One possibility is the timing of the school year. The researcher attempted to time the distribution of the survey far enough into the school year that the SLPs had a chance to get familiar with their schedules before requesting their time to participate. For some, they may not have felt that they had enough time at that point to complete the survey. There were, however, several partially completed surveys (data not used). The non-completion of these surveys could also have been related to the aforementioned lack of adequate working definitions. One option for future research studies to garner a greater completion rate might include using a shorter survey; however, that has the downside of limiting the amount of data collected and interpretations that can be made. Another option would be to alter the

sampling method. Instead of sending the survey out by email, it might be beneficial to post the survey to an ASHA Special Interest Group (SIG). A group such as school-based issues or language learning and education would likely both include members who were willing to participate due to their interest in the topic.

Implications

The results of this research study, while limited, did indicate that in relation to other communication disorders, reading and writing disorders are less commonly seen on the SLPs caseload than other client types; however, they are part of SLP's caseloads. Given the relative recently (17 years) that literacy has been a part of the SLP's scope of practice, it may be that our involvement in this area will continue to increase. SLP's are continuing to build their literacy knowledge through multiple means such as through conferences and continuing education courses.

The number of SLPs who reported serving on literacy teams was surprisingly low, but a common hindrance identified was not having a literacy team at their school or that other professionals were fulfilling that role. Based on participant feedback, it appears that there are still misconceptions about an SLPs role in literacy that prevents them from providing those services. One participant stated, "Our director has made it clear that SLPs are not reading teachers and should not be involved in reading instruction." Another participant reported, "Our SPED director will not let us be a part of literacy. That is viewed as the SPED teacher's role. We are able to support the underlying skills of reading, but not involved with directly teaching." These experiences are similar to the "individual inhibitors" as described by Ehren and Ehren (2001), that other professionals may lack an understanding about the knowledge and training SLPs have that could make them a valuable team member.

Aside from variances in how their roles were seen by others, SLPs also faced other inhibitors such as caseload demands and time constraints. The participants in this study reported working with a variety of client types on their caseload. Types of time constraints were not expanded upon, but it seems

likely that caseload demands are associated with time constraints that prevented them from becoming

involved on a literacy team. Time constraints were also a common system inhibitor identified by Ehren

and Ehren (2001) that SLPs face. Although the number of students on caseload was not determined

through this study, it was expressed that it is a common inhibitor. Cirrin et al. (2003) found that caseloads

could average 53 or more students with varying client types as well as ASHA (2016) that found school-

based SLP caseloads to consist of 48 students on average.

Summary

SLPs in the school setting who address literacy intervention, whether it is on a literacy team or not, is

valuable in terms of providing services to students with reading and writing disorders. To increase clinical

competence in literacy, SLPs need to remain up to date on current literature and continue supplementing

their educational backgrounds through additional resources such as attending conferences and taking

continuing education courses on this topic. By better understanding the roles SLPs have from their

personal perspective as well as the how other professionals view their roles and knowing the skills they

can bring to a literacy team, SLPs could have a more pronounced role on literacy teams in the school

setting.

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Appendix A

1. What is the student population of your school?
    a. 1 – 100 Students
    b. 100 – 300 Students
    c. 300 – 500 students
    d. 500 – 700 students
    e. 800 - 1000 students
    f. Greater than 1000 Students

2. How long have you been a speech-language pathologist in the school setting?
    a. 1 year or less
    b. 2-5 years
    c. 6-10 years
    d. 11-15 years
    e. More than 15 years

3. How many courses did you have related to literacy intervention?
    a. None
    b. 1-2 courses
    c. 3-4 courses
    d. More than 5 courses

4. How many courses were taken in each of these settings?
    a. Undergraduate courses: _____
    b. Graduate courses _____
    c. Continuing Education Courses _____

5. Where do you attain your knowledge on literacy intervention?
    a. Undergraduate coursework
    b. Graduate coursework
    c. Continuing education courses
    d. Conferences
    e. Peers
    f. Journal reviews and articles
    g. On the job learning or training
    h. Other _____

6. How satisfied were you with your educational background in literacy?
    a. 1 – very unsatisfied
    b. 2 – unsatisfied
    c. 3 – neutral
    d. 4 - satisfied
    e. 5 – very satisfied

7. What are the client types on your current caseload? (mark all that apply)

      a. Autism Spectrum Disorder (ASD)
      b. Language Disorders
      c. Speech Sound Disorders
      d. Childhood Apraxia of Speech (CAS)
      e. Cognitive Communication Disorders
      f. Reading and Writing Disorders
      g. Other _____

8. How long have you been providing literacy intervention? (Kunstleben, 2014)
      a. 1 year or less
      b. 2-5 years
      c. 6-10 years
      d. 11-15 years
      e. More than 15 years

9. What age group are the students on your caseload who receive literacy intervention? (Kunstleben, 2014)
      a. Preschool
      b. Kindergarten
      c. First and second graders
      d. Third and fourth graders
      e. Fifth grade and above

10. What portion of your work is dedicated to literacy intervention?
      a. 0%-20%
      b. 25%-45%
      c. 50%-70%
      d. 75% - 95%
      e. 100%

11. How important do you view your role as an SLP in regard to literacy intervention with 5 being very important and 1 being not important?
      a. 1 – not important
      b. 2 – slightly important
      c. 3 – fairly important
      d. 4 – important
      e. 5 – very important

12. SLPs should be providing literacy intervention services
      a. 1- Strongly disagree
      b. 2 – Disagree
      c. 3 – Undecided
      d. 4 – Agree
      e. 5 – Strongly agree

13. Are you a part of a literacy team?
      a. Yes

      b. No

14. If no, why are you not a part of a literacy team?
      a. There is not a literacy team at my school
      b. Other professionals make up the literacy team
      c. Lack of educational background in literacy
      d. Other: _____
      e. I am a part of a literacy team

15. Which other professionals in your school participate on literacy teams or provides literacy services? (mark all that apply) (Kunstleben, 2014)
      a. General education teachers
      b. Special education teachers
      c. Reading or literacy specialist
      d. Parents/caregivers
      e. Other: _____

16. What role do you serve on the literacy team? (mark all that apply)
      a. Assesses reading and writing
      b. Collaborator with staff and parents
      c. Provides intervention and documenting outcomes
      d. Prevention
      e. Identifies at risk readers and writers
      f. Teaches/trains other professionals about literacy
      g. Other _____
      h. I am not a part of a literacy team

17. In your role, which are you more involved with?
      a. Intervention
      b. Assessment
      c. Both are equal
      d. Neither

18. In your role, which area of literacy are you responsible for (please mark all that apply)
      a. Reading
      b. Writing
      c. Spelling
      d. None

19. Does your school have a literacy assessment team?
      a. Yes
      b. No
      c. If yes, what other members are on the literacy assessment team?

20. SLPs should be more involved with assessment than intervention

      a.   1- Strongly disagree
      b.   2- Disagree
      c.   3- Undecided
      d.   4- Agree
      e.   5- Strongly agree

21. SLPs should be more involved with intervention than assessment
      a.   1- Strongly disagree
      b.   2- Disagree
      c.   3- Undecided
      d.   4- Agree
      e.   5- Strongly agree

22. Literacy intervention should target reading, writing, and spelling equally
      a.   1- Strongly disagree
      b.   2 – Disagree
      c.   3 – Undecided
      d.   4 – Agree
      e.   5 – Strongly agree

23. What factors impact your ability to provide literacy intervention? (mark all that apply)
      a.   Caseload demands
      b.   Limited education on literacy
      c.   Time constraints
      d.   Provided by other professionals
      e.   Out of scope of practice
      f.   Lack of confidence
      g.   Other: _____

Appendix B

Dear Speech-Language Pathologists,

My name is Ashley Alvarado and a Speech-Language Pathology graduate student at Minnesota State University, Moorhead (MSUM). Please help other SLPs gain a better understanding of literacy intervention by answering questions in this survey. The study is being done to

You are invited to participate in a study of determining SLPs roles on literacy teams, involvement in literacy intervention, as well as barriers and opinions on how they view their roles. I hope to learn through this study how SLPs view their role and factors that may be hindering SLPs from uses literacy intervention as frequently as other intervention types. You were selected as a possible participant in this study because you are a school-based SLP working in Minnesota, North Dakota, or South Dakota and work at a school with a student population of 500 or more students.

If you decide to participate, please use the link below. The survey will take approximately 5 minutes to complete. No benefits accrue to you for answering the survey, however your responses will be beneficial in gaining a better understanding of SLP's involvement and perspectives on literacy intervention. Any discomfort to you derives only from the amount of time taken to complete the survey.

Any information that is obtained in connection with this study and that can be identified with you will   remain confidential and will not be disclosed.

Your decision whether or not to participate will not affect your future relationships with MSUM, ASHA, or the school districts you are employed by. The completion of this survey or clicking "submit" will imply your consent to participate in the study. If you decide to participate, you are free to discontinue participation at any time.

If you have any questions regarding this study, you may contact my advisor, Dr. Kris Vossler, CCC-SLP, principle investigator, by email at kris.vossler@mnstate.edu or myself, co-investigator, by email at alvaradoas@mnstate.edu. Any questions about your rights may be directed to Dr. Lisa I. Karch, Chair of the MSUM Institutional Review Board, at 218-477-2699 or by email at: irb@mnstate.edu.