The role of the Early Childhood Special Educator (ECSE) and Speech Language Pathologist (SLP) in supporting children with Speech or Language Impairment (SLI) in Early Childhood Education.

By

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To

My much-loved husband, parents, grandparents, sisters, brothers, nieces and nephews

...for their unconditional love and support.

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Abstract

Background - Speech or Language Impairment (SLI) is highly prevalent in the preschool years. 5-12% of children aged 2-5 years have an identified SLI. Considering the pivotal role of Speech Language Pathologist (SLP) and Early Childhood Special Educators (ECSE) in diagnostic and interventions procedures, having confidence and a clear understanding how to support young children with SLI is of critical importance.

Aims – The present study examines the confidence and knowledge of early childhood professionals by exploring what role these providers play in supporting children with SLI, and how they perceive their pre- and post - training experiences.

Design and Method- A mixed methods two-phase design was used. Quantitative data was collected during the first phase using online questionnaires (n=22). In the second phase, qualitative data was obtained through semi-structured interviews (n=9).

Results- Many children on ECSEs and SLPs caseloads receive service for both Developmental Delays (DD) and SLI. In general, ECSEs receive little to no training in SLI, during their pre-service programs and SLPs receive little to no training in early childhood DD during their pre-service program. SLPs and ECSEs are offered post-qualification trainings from various sources, covering various topics, suggesting a need for targeted professional development programs. The number of Pre- and Post- training hours did not have an impact on early childhood professional's knowledge in relation to the case studies provided within the present study.

Conclusion- Early Childhood professionals consistently report feeling more confident in supporting young children with SLI or DD when opportunities to collaborate with members of the special education team are made available. SLPs and ECSEs agree that their most effective post-qualification training is time spent collaborating with one another. The results of this study encouraged efforts of collaboration to be viewed as a networking model inspired by the foundations of Bronfenbrenner's ecological theory. Using this model guides further professional development for Early Childhood professionals by exploring how multiple microsystems work together and achieve highly effective teaching and intervening for a young child's development, whilst including collaboration among professionals.

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Commonly Used Abbreviations

- **CPP:** Colorado Preschool Project
- **EAHCA:** Education for all Handicapped Children Act
- **EC:** Early Childhood
- **ECE:** Early Childhood Educator/Education
- **ECSE:** Early Childhood Special Educator/Education
- **EHS:** Early Head Start
- **FAPE:** Free and Appropriate Public Education
- **IDEA**: Individuals with Disabilities Act
- **IEP:** Individualized Education Plan
- **IFSP:** Individualized Family Service Plan
- **LRE:** Least Restrictive Environment
- **SEN:** Special Educational Needs
- **SENCo:** Special Educational Needs Coordinator
- **SLCN:** Speech and Language Communication Needs
- **SLI:** Speech and Language Impairment
- **SLP:** Speech Language Pathologist
- **UK:** United Kingdom
- **USA:** United States of America

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Section 1: Research Journey

The following section introduces my professional and academic accomplishments and the inspiration for the study. The next section will include a brief account of relevant terminology used in reference throughout this document.

1.1 About me

I am an international student at the University of Leeds, originally from the state of Colorado in the United States. My experience as an educator includes eight years of teaching preschool-aged children, both within the state of Colorado and internationally. My experience as an Early Childhood Special Educator (ECSE) provided me with the opportunity to work with young children with various learning abilities. My background included working with children who experienced behaviour difficulties, Autism, Down syndrome, physical disabilities and SLI.

1.2 Inspiration for this Study

Throughout my employment as an ECSE, I was expected to assess, provide specialised services, and report on preschool-aged students who demonstrated cognitive, behavioural and social/emotional developmental delays (DD). I was responsible for providing general education to all students, as well as specialised instruction to those who qualified for special education services. It was typical to have almost half of these students receiving services from a Speech Language Pathologist (SLP). Finally, it was not uncommon for most if not all the children receiving specialised instruction for cognitive, behavioural, or social/emotional DDs, to also be receiving speech services.

Although challenging, I was confident in my ability to provide the necessary support to those children on my caseload as an ECSE. However, I soon found myself confronted with the lack of knowledge, skills and training, that I felt were necessary to meet the needs of my students with speech and language delays. Additionally, I noticed a trend in my students who experienced cognitive and behavioural difficulties; when I was able to support them to communicate effectively; they revealed overall improvements in their ability to function within

an educational setting. From this, I soon discovered a passion for language development and articulation disorders which encouraged me to pursue a bachelor's degree in speech-language pathology.

The rationale behind this study comes partly from my frustrations as an ECSE. Feeling ill-equipped to support a child with speech and language difficulties is unsettling, particularly when I was convinced of the benefits of effective communication. An ECSE is trained to primarily work with children with cognitive and behavioural disabilities, however, as in my own experience, they are continuously faced with challenging speech and language delays, with little to no pre-service training. Through this research, I hope to gain an understanding of ECSE's current knowledge, and perceptions of their training need to support young children with SLI.

The EdD transfer process as well as engaging with the relevant literature, it became an interest of mine to also investigate how SLP's perceive their ability to support the needs of children receiving speech and language services within an early childhood context, working with young children with low cognitive process or challenging behaviours.

Finally, my previous experience was one school with 13 preschool classrooms, meaning all curriculum and training were geared solely towards ECE. Likewise, collaboration efforts were amongst staff members with early childhood students only. This collaboration provided SLP's with the opportunity to suggest strategies and implement programs to create language-rich environments, whilst Special Educators were able to encourage methods and techniques on how to build social, emotional and behavioural skills in all classrooms.

1.3 Introducing key terminology of the thesis

This section will briefly introduce the key terminology used throughout this thesis. Due to the nature of this research conducted in the state of Colorado, this thesis will primarily reflect the terminology used throughout the United States. However, relevant literature will also include terms used in reference to the United Kingdom.

The terms “disability” and “special education” are used interchangeably across contexts including; legal documents, media and daily communication within educational settings (www.bvsd.org (2018); www.cde.state.co.us (2018); www. sites.ed.gov/idea/ (2018) and are associated with various lay terms such as “delay”, “disorder” and “impairment”. According to federal law under the Individuals with Disabilities Act (IDEA) 2004, (discussed further in section 2.3) defines “special education” as:

> “specially designed instruction, at no cost to parents, to meet the unique needs of a child with a disability, including instruction conducted in the classroom, in the home, in hospitals and institutions, and other settings; and instruction in physical education” (www.sites.ed.gov, 2018),

and the term “child with a disability” as:

> A) child with intellectual disabilities, hearing impairments (including deafness), speech or language impairments, visual impairments (including blindness), serious emotional disturbance (referred to in this chapter as “emotional disturbance”), orthopaedic impairments, autism, traumatic brain injury, other health impairments, or specific learning disabilities; and who, by reason thereof, needs special education and related services.
>
> B) child aged 3 through 9 (or any subset of that age range, including ages 3 through 5), may, at the discretion of the State and the local educational agency, include a child experiencing DDs, as defined by the State and as measured by appropriate diagnostic instruments and procedures, in 1 or more of the following areas: physical development; cognitive development; communication development; social or emotional development; or adaptive development; and who, by reason thereof, needs special education and related services (www.sites.ed.gov/idea/statute-shapter-33/subchapter-I/1401, 2018).

The Colorado Department of Education (CDE) defines “developmental delay” as

> “a child three through eight years of age and who are experiencing developmental delays in one or more of the following areas: physical, cognitive, communication, social or

> emotional, or adaptive, which prevents the child from receiving a reasonable educational benefit from general education" (ww.cde.state.co.us, 2018).

We can see from this that the state of Colorado has aligned its definition of "developmental delay" with that of the IDEA (2004). Furthermore, the Centres for Disease Control and Prevention defines "developmental disabilities" as a group of conditions due to an impairment in physical, learning, language, or behaviour areas. These conditions begin during the developmental period, may impact day-to-day functioning, and usually last throughout a person's lifetime (www.cdc.gov, 2018).

One of the thirteen disability categories from the IDEA (2004) for preschool-aged children is; Speech or Language Impairment (SLI). SLI includes a wide range of conditions which ultimately result in challenges in effective communication (Prelock et al., 2008). It includes articulatory, phonological, and motor disorders (McLeod & Harrison, 2009), or may also involve disorders within the components of language (grammar, semantics, pragmatics) (Prelock et al., 2008). Some children may have speech and language delays in which speech and language skills are developed in the typical sequence, but at a slower rate than expected (Siu, 2015). In contrast, some children have speech and language profiles that are qualitatively different from those seen in typical development, and these children are considered to have SLI.

When discussing children with SLI, the words "speech" and "language" are also often used interchangeably or simultaneously throughout the literature (Scarinci et al., 2015; Hall, 2005; Law et al., 2000; Mroz 2006), however, they have different meanings in the context of child development. A child who is unable to produce speech sounds correctly or fluently has a speech disorder, whereas a child who has difficulties understanding others, or sharing thoughts, ideas and feelings using language, has a language disorder (ASHA.org 2017).

In the past, in the United Kingdom, the acronym SLI has also been used in reference to Specific Language Impairment, referring to a language only impairment in the context of otherwise normal development (Bishop, 1997). This term has now been replaced with Developmental Language Disorder (DLD). According to ICan.org, the name has been changed to better reflect the types of difficulties children have (www.ican.org.uk, 2018). A multinational and multidisciplinary consensus compromised of SLP's, Psychologist, Paediatricians, Audiologists,

and Specialist Teachers explored the term DLD further. They agree that causes of a 'language disorder' can be due to biomedical condition in which the disorder occurs as part of a more complex condition, whereas 'Developmental Language Disorder' is proposed to account for cases of language disorders with no known differentiating condition but rather that the disorder emerges in the course of a child or person's development (Bishop et al., 2017).

For this study, the acronym SLI will refer to Speech or Language Impairment, rather than Specific Language Impairment, as it is referred in the UK, since it mostly aligns with the terminology used with the participants of this study and aligns with the legal usage of speech, language and communication disorders referred to in the IDEA (2004). Furthermore, the words "impairment", "disorder", and "disability" are used interchangeably when referencing speech and language. The terms "special education" and "developmental delay" will also be used interchangeably when referencing early childhood. The term "disabilities" may also be used as an umbrella term in reference to speech and language and early childhood.

Finally, throughout this thesis, the term developmental delay (DD) will refer to a child's cognitive, social/emotional or behavioural (adaptive) development. Whilst the term speech or language impairment (SLI) refers to speech sound production, expressive or receptive language skills, and the use of language in a social context.

1.4 The Structure of this Thesis

This thesis is divided into six sections. Sections 1-3 orientate the reader towards the context of the study and the topic under investigation. Section 2 focuses on the research purpose, contributions and questions, with an introduction of the methodology used. Section 3 provides an overview of the educational system, including laws and policies for students receiving special education in the United States. A review of the literature concerning the development, definition, and long-term effects of SLI in young children follows. Finally, this section includes an overview of pre and post qualification training for early childhood professionals. Sections 4 and 5 present the first and second phases of this study. This consists of a summary of the methodology used, sampling procedures, response rates, and findings from each phase. Finally, in Section 6 the findings are discussed in relation to the research questions and existing

literature. Conclusions, future recommendations and future implications are presented in the last section of this thesis.

Section 2: Context and Literature Review

This section begins with an introduction of the educational system and laws leading to inclusive practices for children receiving special education services in the United States. This is followed with a review of the existing literature in relation to young children's speech and language development, possible causes and outcomes for children with SLI, and pre and post training experiences of SLPs and ECSEs.

2.1 The Education System of the United States

The Education system of the United States is primarily divided into four sectors; early childhood, primary, secondary and postsecondary. As shown in Figure 1, these sectors are then divided into subsections.

Figure 1: *The United States Educational Sector*

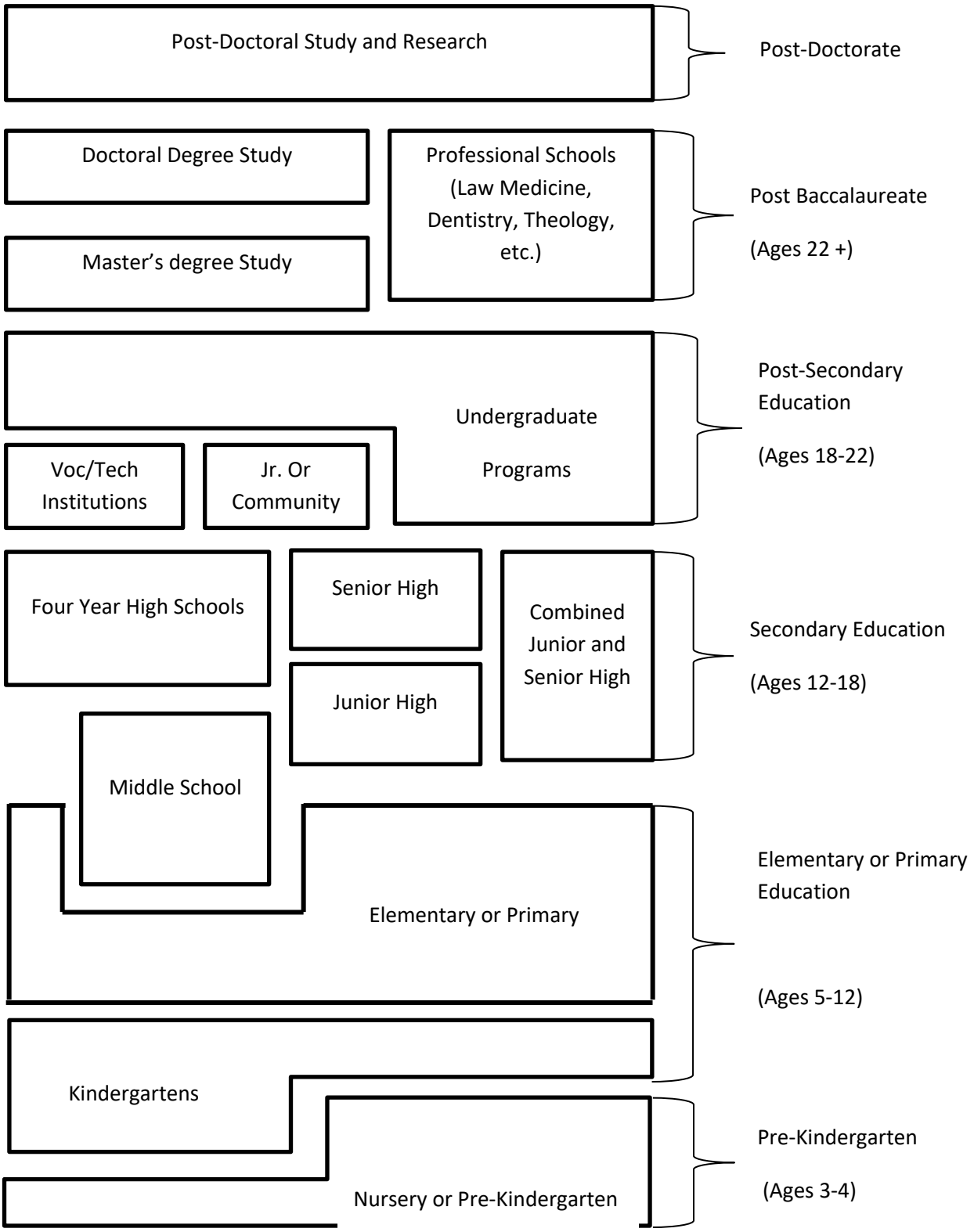


Chart Adapted from U.S Department of Ed., National Centre for Education Statistics 2018

Early Childhood in the United States incorporates children aged from birth-8 years. Children may begin attending ECE programs from the first few months of life, often referred to as Day Care or Early Head Start (EHS). Pre- School (also called Pre-kindergarten, Pre-K or PK) begins around the age of three and is referred to as the first formal academic classroom-based learning environment. However, pre-school in the United States is not required and is not free (Corsi-Bunker 2017). Early education is offered through private (self-funded), public (governmentally funded), in-home, and centre-based programs with options to attend a full day (6 hours), and half day (3 hours).

Within the United States, laws, policies and educational funding come from three sources; federal, state and local governments. Whilst the role of the federal government is authoritative as a nation, its contribution to educational funding is approximately 8 percent. The remaining 92 percent of funds come from state and local sources (Department of Education, US, 2017). Although the present study will include pertinent information regarding federal policy, it will focus primarily on the educational procedures associated with various local authorities throughout the state of Colorado. The U.S. educational system offers multiple routes for children attending primary and secondary education. Nevertheless, the progression from start to finish is continuous, and it begins with ECE. The following section will explain the structure of ECE, and how it is offered to young children.

2.2 Structure of Early Childhood Education in the United States

Through funding from federal, state, and local sources, there are numerous ECE programs offered within the state of Colorado, however, for the purpose of this study, I will focus on four; Head Start, Colorado Preschool Program, Special Education, and Tuition as these are the four most commonly known programs to offer quality early education in the state of Colorado.

2.2.1 Head Start

Head Start is a federally funded ECE program serving children between the ages of 3 and 4 years. Head Start originated in 1965, as President Johnson's "war on poverty" initiative, and is administered by the U.S. Department of Health and Human Services (Irwin et al. 2016). This program serves low-income children and their families, providing them with a comprehensive

early education and support services free of charge. Head Start programs focus on providing a holistic learning experience for young children and their family. This includes; addressing cognitive and social-emotional needs; prenatal care; nutritional services, medical and dental screenings, and mental support for a child and their family (Mohan and Walker 2016). These programs are primarily centre-based offering several program choices to meet the needs of families. This includes 5 days per week, full-day or half-day options, home-based services, or a combination of both centre and home-based programs. Furthermore, due to robust research considering the disparities of a child's cognitive and social development before the age of four, Early Head Start (EHS) was created in 1994 (zerotothree.org 2017). EHS provides educational services to low-income families with infants and toddlers from birth to age 2.

The Department of Health and Human Services (2-10) in the USA, conducted a four-year study, comprised of 23 different states, 383 randomly selected Head Start centres, and a total of 4,667 newly entering children, 3-4 years old. Data collected consisted of direct child assessments, parent interviews and teacher/director surveys. The results revealed that Head Start programs produce modest benefits, yet some long term for young children. Furthermore, this study suggested that having access to Head Start increased the quality of early childhood programs (more resources, highly educated staff), resulting in more positive learning experiences for children 3-4 years old (U.S. Department of Health and Human Services, 2010). Based on classroom observations of both head teachers and assistant teachers, clear evidence was found to support language-rich learning environments in Head start programs including book reading, free-play times and meal times. These settings are said to promote oral language skills, providing solid foundations for young children to become successful readers (Gest et al., 2006).

2.2.2 Colorado Preschool Project

The Colorado Preschool Project (CPP) is similar to Head Start, created to support 3, 4 and 5-year-old children who face risk factors such as poverty, homelessness and DDs (Hudak, 2015). CPP was authorised by the Colorado General Assembly in 1988. At that time, the program aimed to provide early education for more than 2,000 four- and five-year olds in need of language development (Colorado State Dept. of Education 2007). In 1992 the focus of CPP to target children with language development needs expanded to reach out to all children "who lack overall learning readiness due to significant family risk factors" (Colorado State Dept. of

Education 2007:3). As with Head Start, children must apply for a CPP preschool position, referred to as a "slot", to determine eligibility. One significant difference between the two programs is, Head Start offers preschool slots to 3- and 4-year olds, whilst CPP provides slots for 4- and 5-year olds. Finally, CPP does not provide full day slots to children, due to funding sources. As a result, two children are granted the opportunity to attend 3 hours of quality ECE, four days per week.

2.2.3 Special Education

Preschool children with special educational needs are entitled to attend preschool on the first day of their third birthday through reserved special education slots. This is primarily mandated through federal government policies, however, managed by state and local authorities. Further details considering special education are discussed in the following sections (2.3.1, 2.3.2) of this document.

2.2.4 Tuition

Colorado school districts commonly offer tuition programs for 3 and 4-year-old children wanting to attend preschool who may not otherwise qualify under Head Start, CPP or Special Education funding. These programs are offered to families at a reduced monthly rate; however, they are funded at their own expense. Tuition programs are another great option for families wanting to enrol their children into quality early learning environments who do not otherwise qualify through the government-funded options mentioned earlier. Students may be enrolled in tuition programs through private programs or public schools throughout the state.

In summary, preschool programs in the state of Colorado are offered to 3-4-year olds in one of four ways; head start, CPP, Special Education, or Tuition. Generally, preschool programs in Colorado aim to integrate children from all funding sources into one balanced classroom. Access to quality ECE programs for young children has become a priority in the state of Colorado and throughout the United States.

Although quality early childhood programs that are inclusive of all young children have made considerable progress, access to these programs remains intangible to many children with

disabilities in the United States (Barton and Smith, 2015). For example, CPP is serving only 15,869 out of 27,072 of the 4-year-olds estimated to be eligible (Hudak, 2015). The next section of this document summarizes some of this progress and historical events which helped to shape current special education policies and practices used today.

2.3 Laws leading to Special Education Reform

This section aims to address the history of special education and the reformation of laws related to how special education is address in the public-school systems today.

Compulsory education within the United States was mandated in 1918; however, despite these laws' children with disabilities were excluded from public schools (Yell, Rodgers & Rodgers (1998). It was not until the late 1960's, and early 1970's that most states had passed laws requiring schools to allow students with disabilities to attend. This shift in state and government legislation is preceded by the Civil Rights Movement in a landmark case, *Brown v. Board of Education (1954),* in which minorities were granted equal opportunities in society. What started as a racial movement, eventually supported persons with disabilities (Bicehouse & Faieta 2017). Sixteen years later, the Pennsylvania Association for Retarded Children (PARC) brought a class action suit against the Commonwealth of the state of Pennsylvania (*PARC v. Pennsylvania)* resolving in consent for all children with mental retardation between the ages of 6 and 21 years must be given free public education in a program most like those provided for their nondisabled peers (Yell, Rodgers & Rodgers, 1998). Soon after, a class action suit was again filed in the District of Columbia; *Mills v. Board of Education,* resulted in free public school for all children with disabilities, as well as a court order to provide due process safeguards. These two court cases created a pressure felt by the government and forever changed the practices for children and their families with disabilities.

It is unclear when the first federal movements for children with disabilities began. Gurlanick and Bruder (2016) address The Handicapped Children's Early Education Act of 1968 (HCEEP; Pub. L. No. 90-538), as the first ever federally funded practice to support the movement of inclusion, which provided grants to develop intervention programs for infants and young children with disabilities and their families. However, Bicehouse & Faieta (2017) describe congresses first steps under the Bureau for Education of the Handicapped under Title VI of the Elementary and Secondary Schools Act (ESEA).

Reformation of policies in 1975 by President Gerald Ford enacted The Education for all Handicapped Children Act, Public Law 94-142 (EAHCA) in which all school-aged children with disabilities were provided with free appropriate public education (FAPE), in the least restrictive environment (LRE) (Hernandez 2013; Gurlanick & Bruder 2016; Bicehouse & Faieta 2017). This meant the act of inclusion moved from, segregated classrooms and separate schooling, to integrated learning environments. Heward (2013, p.71) describes LRE as students with special needs will be educated in "settings as close to the regular education classroom as possible in which an appropriate program can be provided, and the child can make satisfactory educational progress". Significant to my study, FAPE mandates were not a requirement for preschool-aged children (3-5 years) until the amendments of the EAHCA in 1986 (Gurlanick and Bruder 2016).

The EAHCA was reauthorised and renamed, on June 4 1997, when President Clinton signed into law, what is now known as the Individuals with Disabilities Act (IDEA) (Department of Education, US, 2017). Since 1975, the IDEA has seen subsequent amendments resulting in access to the general education curriculum for more than 6.5 million students with disabilities and improving educational outcomes for children birth to 21 years of age (Department of Education, US, 2017).

2.3.1 Special Education Processes under the IDEA

The IDEA has four distinct sections; referred to as Part A, B, C, and D. Part A lays the foundation for the rest of the act, defines the terms and creates the Office of Special Education Programs, responsible for administering the terms (American Psychological Association 2017). Part B guides mandated special education services and processes for school-aged children 3-21 years of age (Martin, Martin & Terman 1996). Part C recognises the need for early identification and support for very young children between the ages of birth - 2 years. Finally, Part D manages national efforts to support and improve the education of children with disabilities. Furthermore, mention of Individualised Education Plans (IEP), under Part B, and Individual Family Service Plan (IFSP), Under part C, refers to legal documents created by the special education team to determine the supports, modifications, and services a child needs to support their development.

For the purpose of this document, I will refer to Part B of the IDEA, as my research will coincide with young children 3-5 years of age attending preschool.

2.3.2 Part B of IDEA

Briefly summarised, the process for a child to receive special education services under Part B of the IDEA is as follows;

1. Parental permission or consent to administer an evaluation of the child;
2. If found eligible under one or more of the 13 categories for special education services, parents and staff meet to develop an Individualized Education Plan (IEP);
3. Students are placed in appropriate classrooms with accommodations and service providers, in an LRE;
4. Annual review of a child's IEP is conducted, as well as triennial assessment and meeting to re-determine eligibility (U.S. Department of Education, 2017).

This study is most relevant to the third step of the special education process; specialised services. Specialised services are those related to speech and language therapy, occupational therapy, physical therapy, mental health, as well as, behavioural and cognitive therapy. In my experience, where a child receives special education services, how they are provided and by whom, is often referred to as a Service Delivery Model. Zigmond (2003) relates service delivery models in various contexts including; inside/outside the general classroom, combination of pull-out services and in-class instruction, and co-teaching as a service-delivery model.

2.4 Speech and Language in Young Children

This section will review how typical speech and language development is defined, followed by an overview of the characteristics a child with SLI might demonstrate. This section also explores the prevalence of SLI in young children, with a brief introduction into research regarding the causes of SLI and its impacts on development.

2.4.1 Speech and Language Defined

According to ASHA (2018), language refers to the words we use and how we use them. Hauser et al., (2002) explains that language has highly divergent meanings in different disciplines and contexts. For example, in its informal usage, language is understood as a culturally specific communication system (English, Spanish, etc.). Alternately, Hauser's et al., (2002) work refers to language as an internal component of the mind/brain.

Speech is how we say sounds and words. This includes articulation; how we use our mouth lips and tongue to make speech sounds, voice; how we use our vocal folds and breathe to make sounds and fluency; is the rhythm of our speech (asha.org 2018). Speech is often studied at the phonological level (Doupe and Kuhl 1999) referring to phonetic units, or phonemes which are described by Doupe and Kuhl (1999) as the smallest elements that alter the meaning of a word in any language. An example of this is the difference between /s/ and /c/ in the words "sat" and "cat" in American English.

2.4.2 The Development of Speech and Language in Young Children

The development of speech production requires a child to master a broad range of skills (Moore, 2004) and is said to be a complex motor skill that progresses over time (Murdoch et al., 2011). Human potential for language is based in human biology (Hoff 2006). Innate capacities of the human species make language acquisition both possible and virtually inevitable (Hoff 2006). A consistent description from Basit et al., (2014) describes language development as a product of both nature and nurture; that language is developed through a child's biological make-up (nature) as well as impacted by the environment (nurture). Development of communication skills begins at birth (asha.org 2018). This includes pre-linguistic or nonverbal behaviours such as gestures and joint attention (Wallace et al., 2015).

Hayiou-Thomas et al., (2014) describes the pace of early language as highly variable with most children saying their first word between 10 to 16 months. Similarly, individual differences in the speed with which children acquire a functional vocabulary and begin to comprehend and produce complex sentences may arouse parents' concerns within the first two years of life. These children are often referred to as late talkers; however, many make up for their slow start.

This spontaneous recovery means that it is very difficult to make predictions about the likelihood of language difficulties based on two-year-old language skills (Dale et al., 2003). However, after the age of four years, it is generally assumed that there will be more stability within a child's language, resulting in the persistence of language difficulties (Hayiou-Thomas et al., 2014).

2.4.3 Definition of Speech and Language Impairment

The American Speech-Language Hearing Association (ASHA) guidelines describe a *speech* disorder as an impairment of the articulation of speech sounds, fluency, or voice and a language disorder as impaired comprehension or use of spoken written or other symbol systems (asha.org/policy2018). Wallace et al., (2015) continues to explain a *language* disorder as involving the form of language, (phonology, morphology, and syntax) the content of language (semantics) or the function of language (pragmatics).

As with any special education service, there are diagnostic criteria and common presenting features of SLI. One similarity between the USA and the UK diagnostic and/or characteristics of an SLI in that children are considered to have an SLI/DLD when the problem(s) is not associated with a biomedical condition such as a brain injury, genetic condition or chromosome disorder. Likewise, both SLI and DLD consider all areas of speech and language development. The most significant difference can be seen in the diagnosis criteria in each country. In the UK, a child must score in the lower 10% of a standardised test, whilst in the USA, a student is recommended for services when falling within the 7th percentile.

2.4.4 Prevalence of SLI in Young Children

"Owing to the prevalence of language delay, it is likely that all foundation stage teachers will be working with children who have speech, language and communication difficulties at some point in their career" (Mroz, 200, pg11).

There is a body of evidence to suggest that SLI is one of the most common learning difficulties affecting preschool aged children (Law, 2000; McLeod & Harrison, 2009; Robertson & Ohi, 2016). Paediatric speech and language therapists describe speech impairment as their most

common received diagnosis (Broomfield & Dodd, 2004; Mullen & Schooling, 2010). From 1976-2005, contributing to an increase percentage of students being identified as needing special education services, the total percent of school enrolment that represents children (ages 3 to 21 years old) served in federally supported special education programs increased from 8.3% to 13.8% (www. nces.ed.gov, 2017). Furthermore, in 2013-2014, based on the total enrolment in public schools, pre-k through 12th grade, SLI was the second most identified impairment at 2.7%, following Specific Learning disability at 4.5% (www. nces.ed.gov, 2017).

According to ASHA's medical review guidelines, a resource which provides an overview of the profession of speech-language pathology, it was found that speech sound disorders affect 10% of children, language difficulties between 2-19%, and specific language impairment affects 7% of children (Siu, 2015).

The high prevalence of SLI in young children does not only exist in the United States. Data gathered from the *Cost to the Nation of Children's Poor Communication* report (2006), produced by I CAN, a children's communication charity in the UK, highlighted growing evidence of poor fundamental communication skills in children starting school. Reinforcing how up to 80% of children in some areas of the UK were starting school without basic oral language skills (McLeod, 2011). The prevalence from two large scale Canadian and American studies (Beitchman et al., 1986; Tomblin et al., 1996) worked to a national prevalence of 13% in speech and language delay for young children (Klee et al., 2000). Finally, it was reported that up to 25% of Australian children aged four to five years old experience a form of speech or language impairments (Hay & Fielding-Barnsley, 2009; McLeod & Harrison, 2009).

2.4.5 Factors which may influence the development of speech and language skills in young children

Factors such as inadequate parenting, subtle brain damage acquired around the time of birth, or recurrent ear disease in early childhood have all been assumed causes for SLI in young children for many years (Bishop, 2014). However, most children with a SLI have 'no known cause or origin for their difficulties' (Campbell et al., 2003).

Consistent evidence on the social economic status (SES) of a child's parent is believed to be a risk factor for poor language skills in young children (Reilly et al., 2010; Fernald et al., 2012; Letts et al., 2013; Basit et al., 2014). Hoff (2003a), found SES-related differences in children's vocabulary size, whilst Vasilyeva et al., (2008) found that children from better-educated families start to produce complex sentences earlier and use them more often. Research from Locke et al., (2002) reports that the pattern of language disorder is not uniform, suggesting that higher levels of language delay and disorder are found in children from lower SES groups. Furthermore, Roulstone et al., (2011) argue that there is a strong association between a child's environment, such as more books, toys, and activities, and less television, with early language development. Consistent with Roulstone et al.'s argument Siraj-Blatchford's (2010) argues the quality of home learning environment as the most significant factor in predicting children's learning outcomes from the Effective Provision of Pre-School Education (EPPE) research project which provides, both a large scale, longitudinal, mixed-method research design. This study followed the progress of over 3000 children, aged 3–11 years in 141 pre-schools and 800 primary schools across England Blatchford, 2010, pg 463). SES is commonly measured based on information relating to several domains, (e.g., income, employment, health, education, crime, access to services and living environment) (Basit et al., 2014). However, establishing a direct link between SES and lower language development proves to be complicated, and continues to be researched. Letts et al., (2013), discuss various studies that have failed to find a consistent link between SES and specific aspects of language development (Black et al., 2008 and Pruitt and Oetting, 2009).

Ethnicity covaries with SES and language development for young children (Hoff 2006). An increasing multicultural society in the USA means that for some children, English is not their first language. Student's in which English is not their first language, are typically referred to EAL learners (Mahon and Crutchley, 2015; Dockrell and Marshall, 2014). These children might be asked to speak English at school, but at home may represent different cultures and languages. However, Basit et al. (2015) suggest that the effects on the first language does not depend on being in a specific ethnic group. Whilst this study represented a smaller sample size and cannot be generalised, it is worth considering the links between ethnicity and language development. In the same vein, children who are EAL learners, are often overrepresenting SLP caseloads for SLI. When it is dialectical variations such as African American English, which are then considered to be "wrong" (Dockrell and Marshall, 2014). There is evidence to suggest the

assessment of SLI can be challenging for young children that English is their second language, as it is recommended children are assessed in both their native and second language. However, these assessment tools are not always available in the child's native language. Furthermore, bilingual professionals who can perform formal and informal assessments in various languages are in short supply (Mahon and Crutchley, 2006).

Finally, the idea that there may be a "gene for language" continues to be researched as a strong influence in determining which children will develop a SLI (Bishop, 2006). Bishop's (1995) statistical analysis from 155 twin pairs suggests, whilst a person's genetic makeup exerts a significant effect in terms of SLI diagnosis, the environment shared by twins also has some influence on the causation of SLI. However, twin studies are not conclusive on their own (Bishop, 2006). Also, the proportion of pairs where both twins are affected by SLI, being significantly higher in Monozygotic twins (identical), than Dizygotic twins (fraternal) (Bishop, 2002; Lewis and Thompson, 1992; Rodgers et al., 2015; Tomblin and Buckwalter, 1998).

2.4.6 Potential short- and long-term impacts of SLI

> *"Language is vital during early childhood, as it provides the most powerful means of communication, and helps to enhance the formation of articulate, reflective and imaginative personalities" (Pugh, 1996 P. 11).*

Research in the last two decades has produced a substantial amount of studies reporting on the effects of early language problems in relation to other areas of development in young children. Speech and language are central to all areas of development (Robertson & Ohi, 2016), with difficulties in social and emotional development frequently targeted as an increased risk of SLI in young children (Lees and Urwin, 1997; Teverovsky et al., 2009; McCormick et al., 2011; Robertson & Ohi, 2016). Further research reports that children with SLI find it difficult to follow directions, communicate their needs, regulate their emotions (Porter, 2016) or demonstrated problematic behaviours such as aggression (Daal et al., 2007). Educators strongly believe that common social/emotional delays associated with SLI included; children withdrawn from social situations, poor self-esteem, and aggression (Robertson & Ohi, 2016).

The literature has also established an impact of communication disorders on a child's ability to read a write (Raitano et al., 2004) when they reach school age (Bashir & Scavuzzo, 1992), suggesting students may even be at risk in developing a literacy disability (Peterson et al., 2009; Wallace et al., 2015). It is suggested that children with SLI have difficulty with decoding and word recognition, which can have detrimental effects on reading fluency, ultimately resulting in lower comprehension (Puranick et al., 2008). However, language skills, rather than articulation skills, are related to lower reading abilities of children at school age (Slices et al., 2007). Additionally, Whitehead (2010) describes speaking and listening as the bedrocks to learning how to read and write and are predominately used throughout life. In general, it is suggested that improved communication skills lead to improved behaviour, greater confidence and better learning (Sage, 2005).

Longitudinal investigations have found that language impairments (various types) tend to persist into adolescence (Aram, Ekelman, & Nation, 1984; Stothard, Snowling, Bishop, Chipchase, & Kaplan, 1998) and early adult life (Hall & Tomblin, 1978; Mawhood, Howlin, & Rutter, 2000; Tomblin, Freese, & Records, 1992). Furthermore, adults who had speech and language disabilities as children are at risk to hold lower-skilled jobs, or even experience unemployment, behaviour problems and impaired psychosocial adjustment (Wallace et al., 2015). Beitchman et al., (2001) and Maggio et al., (2014) report higher levels of anxiety and diagnoses for anxiety disorders for young adults with language disorders, more frequently than typically developing peers. Finally, young children with language difficulties can be considered a significant risk factor for dyslexia, specifically around the time of school entry (5 years) (Thompson et al., 2015).

2.5 Roles of SLPs and ECSE in US and UK Contexts

Using the 38 learning objectives from a commonly used curriculum and assessment tool in the state of Colorado, Table 1 (on pg 22) highlights the areas of development that ECSE's and SLP's typically support within their roles in preschool classrooms. This table is used to help demonstrate roles and responsibilities of ECSE's as found in the literature. These are in reference to personal experience as an ECSE, job descriptions (www.bvsd.org), and SLPs scope of practice (ASHA, 2018).

The roles and responsibilities of SLPs remain consistent within an international context (asha.org, 2018; rcslt.org, 2018). However, between the USA and the UK, there are slight differences regarding professionals working as the general education or special education teacher. The term Early Years Teacher is used throughout the UK representing a general education teacher for preschool-aged children, whilst in the USA, the term Early Childhood Educator (ECE) is used. In the same vein, teachers who are qualified to teach and support preschool-aged children with special educational needs are referred to as Early Childhood Special Educators (ECSE) in the USA, and Early Years Special Education Needs Coordinators (SENDCo) in the UK. Table 2 (on pg. 22) compares the roles of each profession and illustrates the similarities and differences between Early Childhood professionals between the UK and USA.

Table 1*: ECSE/SLP Roles Regarding Preschool Children's Development*

ECSE	SLP	OTHER (PT, OT)
Social-Emotional • Regulating emotions and behaviours • Establishing and sustaining relationships • Participates cooperatively and constructively in group situations.	Language • Listens to and understands complex language • Uses language to express thoughts and needs • Uses appropriate conversational and other communication skills	Physical • Traveling skills • Balancing skills • Gross motor skills • Fine Motor Skills
Cognitive • Demonstrates positive approaches to learning • Remembers and connects experiences • Uses classification skills • Uses symbols and Images to represent something not present.	Speech • Saying one sound for another (wabbit for rabbit) • Omitting a sound in a word (i-cream for ice cream) • Distorting a sound (thee for see)	
Literacy • Demonstrates phonological awareness, phonics skills and words recognition • Demonstrates knowledge of alphabet • Demonstrates knowledge of print • Comprehends and responds to books and other text • Demonstrates writing skills	Fluency/Stuttering • Interruptions in flow or rhythm	
Mathematics • Uses number concepts and operations • Explores and describes spatial relationships and shapes • Compares and Measures • Demonstrates knowledge of patterns	Voice Disorders • Speech that is too high, low, or monotonous in pitch • Interrupted by breaks • Too loud or too soft • Harsh, hoarse, breathy, or nasal	

(*www.teachingstrategies.com, 2018, www.asha.com, 2018)*

Table 2:*Comparison of USA and UK Roles*

	USA	***UK***
Early Childhood Educator/ Early Years Educator	• Supporting a child's Growth, development and learning • Providing effective family and community partnerships • Knowledge of Health, Safety and Nutrition regulations • Program planning and development • Child observation and assessment • Providing positive interactions and relationships with individual children • Communicating with other adults • Reflective and continuous professional development *(www.cde.state.co.us, 2018)*	• Supporting children's development and learning through planned play, activities and tasks to build up their language, literacy and numeracy skills • Encouraging co-operation and good behaviour • Making sure the children are always safe • plan and prepare activities and materials • set out activities before classes and tidy up afterwards • speak to parents and carers about their children's development • monitor children's progress, and identify and deal with any issues • attend meetings and training courses *(nationalcareersservice.direct.gov.uk, 2018)*
Early Childhood Special Educator/ Early years SENCo	• Appropriately work with children and their families across a range of abilities and cultural experiences • Effectively collaborate with general educators and related services professionals • Provide evidence-based assessment intervention practices *(www.unco.edu, 2018)*	• Ensuring all practitioners in the setting understand their responsibilities to children with SEN and the setting's approach to identifying and meeting SEN • Advising and supporting colleagues • Ensuring parents are closely involved throughout and that their insights inform action taken by the setting • Liaising with professionals or agencies beyond the setting *(www.foundationyears.org.uk, 2018)*

2.6 Benefits of Early Intervention for Young Children with SLI

As discussed in Section 2.5, SLPs and ECSEs work with children from birth. Given their involvement in supporting young children's developmental needs, understanding the benefits of early intervention will be of value to the present study. The Centres for Disease Control (CDC) describes Early Intervention as the following;

- Services and supports that are available to babies and young children with DDs and disabilities and their families.
- May include speech therapy, physical therapy, and other types of services based on the needs of the child and family.
- Can have a significant impact on a child's ability to learn new skills and overcome challenges and can increase success in school and life.
- Programs are available in every state and territory. These publicly funded programs provide services for free or at a reduced cost for any eligible child. (www.cdc.gov, 2018)

Early Intervention programs in the state of Colorado are constituted as programs that "provide supports and services to children with DDs or disabilities and their families from birth until the child's third birthday" (http://coloradoofficeofearlychildhood.force.com, 2019). However, the rise in concerned educators who do not have access to the resources needed to provide quality education following evolving standards continues to grow across America and internationally. This includes the implementation of early intervention programs for our youngest children (Choi, 2004; Kirp, 2009; OECD, 2006; Hudak, 2015).

There is recent evidence to suggest the cost of not intervening may be much higher than the cost of providing early intervention (Aos et al., 2004). A report from the U.S. Secretary of Education, Arne Duncan (2015), reveals that when young children participate in quality early learning programs, they can boost their educational attainment and earnings later in life (Yoshikawa et al., 2013); are less likely to use special education services; graduate from high school; continue to college; and are successful in their career (Center for Public Education, 2008).

Early intervention programs differ tremendously. Private Childcare, preschools, Head Start, and state pre-k's are all options for children to receive early intervention services (Barnett, 2008). Likewise, ECE can also vary from site to site, state to state and across countries. Preschool programs may focus on several different aspects of a child's development and may take place in a formal, or informal settings, and may have options to be centre based, community-based or home based (Nores & Barnett, 2009). Although there is a body of evidence to suggest that preschool programs or early intervention programs have been shown to produce positive effects on children's learning (Barnett, 2008; Blau & Currie, 2005; Fricke et al., 2013; Heckman & Masterov, 2007), subject to the type of program, these effects may vary in size and persistence (Barnett, 2008).

Barnett's (2008) comprehensive assessment yields the following conclusions regarding the lasting effects of preschool education;

- preschool education produces an average immediate impact on cognitive development (Gorey, 2001; Nelson et al., 2003)
- preschool education has lasting effects on school progress (grade repetition, special education placements and graduation), and social behaviour (Asos et al., 2004)
- long-term effect sizes are smaller, but still present (Barnett, 2008)
- evidence suggests that children from low SES families reap long-term benefits from preschool (Consortium for Longitudinal Studies (Eds.), 1983)

More specific to children with oral language difficulties, research throughout the UK also supports the effectiveness of early intervention (Carroll et al., 2011: Haley et al., 2017). For example, after a 30-week oral language intervention (3 sessions per week starting in preschool, continuing with daily sessions in Reception class), 180 children with a median age of 4 years demonstrated significantly higher performances in oral language and phonological awareness Fricke et al., (2013).

It is evident that early intervention programs for young children are beneficial to their cognitive, social and emotional development, and that the effects can be long-lasting. Relevant to the present study is the growing body of information concerning the benefits of early intervention to a child's speech and language development. Given a reasonable number of intervention hours, Gallagher and Chiat, (2009) found that early intervention can be successful in supporting early

language comprehension difficulties. Referring to the adverse effects SLI can have on a child's academic, social and emotional skills from section 3.4.6, Nathan et al., (2004) and Porter (2016) advocate that it is vital for children to receive early intervention support before they enter school.

2.7 Teacher Preparedness in the Context of Early Years

A review of the literature concerning teacher training, often reveals the complex phenomenon of teacher preparedness. Teacher Preparedness appears to be challenging to define and measure accurately or consistently (Ord, 2010). Newly qualified teachers often equate 'being prepared' as 'being knowledgeable', however, the framing of 'preparation' in teaching has a long history in the schooling sector and has often resulted in teacher education being referred to as "teacher preparation" with the outcome of a 'well prepared' teacher (Ord, 2010).

The results of a literature search regarding teacher preparedness were consistent with Ord's (2010) statement that most work concerning teacher preparedness is often associated with primary or secondary teachers, presenting a gap for early childhood educators' sense of preparedness. Early Childhood research has begun to gain prominence in the last 15 years or so (Genishi et al., 2001; Wood, 2004), however, it should be reflected that most research in early childhood has been focused on children and their learning rather than teachers and their learning. This is supported by claims of Ryan and Goffin (2008), from their themed edition on teaching in early childhood, that they were "disappointed by the lack of well-formed studies on the preparation of pre-service and in-service teachers" (pg 387.) However, some research has been developed with key questions summed up by Darling-Hammond et al., (2002) as; " Does teacher education influence what teachers feel prepared to do when they enter the classroom", " Are there differences in teachers' experiences of classroom teaching when they enter through different pathways", and " Do these differences matter?" (p. 286) Darling-Hammond et al., (2002) conducted their research using a survey which asked new teachers (age group of students unknown) to rate their preparedness to teach across 39 dimensions of teaching including; readiness, ability to provide useful subject matter, and to diagnose and meet the needs of their students. Their survey resulted in 2,956 beginning teachers (fewer than four years of teaching experience) in the city of New York. Teachers pathways were highly varied with 74% holding a regular teaching certificate, of which 66% had obtained certification through a university-based program with the remaining 34% obtaining certification through transcript review (or

taking courses whilst teaching). Studies such as Darling-Hammond et al., (2002), have established that teacher education does make a difference in graduates' sense of preparedness and their ability to teach effectively.

Teacher preparedness is measured and defined differently across studies. Some merely ask "in which areas did I feel the School of Education has prepared me well, and areas they could have prepared me better" (Lang 1996, Mahmood, 1996). Whilst other studies use predefined scales by which the researcher(s) consider specific items that exemplify preparedness (Ord, 2010). Although the present study does not target newly qualified teachers or their training paths, it does explore how early childhood professionals present their preparedness to work with children with SLI or DD. However, this information is presented more broadly through the investigation of overall knowledge (from both pre-service training and post-qualification training), and levels of confidence. Cater, and Cowan (2013) conducted similar research in which they questioned, "How do teachers rate their preparedness to assume a teaching position, and do these ratings reflect the confidence levels of the teacher?" (p. 49). Findings from their survey of 144 student teachers (age group unknown) declared that increased attention to management would most certainly impact the confidence levels of teachers, as management skills were the primary area of weakness for the beginning teacher.

The discussion of teacher preparedness often begins with an investigation of teacher training programs, and the various paths professionals take in obtaining their teaching qualifications. The next two sections of this thesis explore the roles and responsibilities of ECSEs and SLPs, with a primary curricular focus considered for each discipline.

2.8 Defining Confidence in Early Childhood Professionals

For this study, the connotation of 'confidence' will be explained using Bandura's (1997) theory of self-efficacy, which is described as the belief that one can execute needed steps to achieve a goal (Bandura, 1997). According to his theory, the terms self-confidence, confidence and self-efficacy are used interchangeably (Leigh, 2008). The theory introduces the idea of 'self-efficacy' as being influenced by four factors;

- Mastery Experience- prior success at having accomplished something that is similar to the new behaviour,

- Vicarious Experience- Learning by watching someone similar to self be successful,
- Verbal Persuasion- encouragement by others,
- Somatic and Emotional States- the physical and emotional states caused by thinking about undertaking the new behaviour (Brown, Malouff and Schutte, 2013, pg 14.)

I chose to reference Bandura's theory of self-efficacy to measure confidence as it relates to how teachers interact and perform within a classroom. For example, ECE teachers often start by observing activities used to encourage speech and language development from their classroom SLP, once they have successfully accomplished teaching these skills independently, they might be verbally encouraged by their SLP, ultimately resulting in a positive emotional state from undertaking the new behaviour. Furthermore, this theory is related to motivation or the drive to perform. As an ECSE, motivation was what had the most significant influence on my ability to support young children. Motivation to become more knowledgeable and experienced, creating more chances for my students to be successful in their learning. There is evidence to suggest teacher's motivation to be important to teacher behaviour, or professional identity (Kelchtermans, 2009). Professional identity is described as how teachers see themselves as teacher based on 'self-understanding' (Kelchtermans, 2005; 2009). One of five components that is used to describe this self-understanding is job motivation. (Kelchtermans, 2009). Self-efficacy is frequently related to behavioural changes, often through its effect on motivation. Therefore, it is believed that a teacher's self-efficacy is said to contribute to changes in a teacher's level of motivation (Schepers et al., 2005).

2.9 Preservice Training for Early Childhood Special Educators

> "One of the most significant factors in providing quality care and education for our youngest children is the appropriateness of the training received by the adults responsible for them" (Abbot and Rodger, 1994 p.13)

Preservice training that ECSE's receive is separate to that of an ECE. ECSE's typically need a master's level degree, whilst ECE's can obtain qualification through a bachelor's degree or in some cases, field-based programs (also known as site-based). Additionally, the curriculum covered in each program varies. Odom and McEvoy (1990) pointed out that ECSE's are often

trained with little focus on normal child development, whilst ECE's usually do not receive instruction on assessment and teaching children with special needs. However, as more children with disabilities are served in inclusive early childhood settings (Chiasson et al., 2006) recent trends to blend the two programs have materialised (Chiasson et al., 2006; Miller & Losardo, 2002; Stayton & McCollum, 2002).

Conversely, there is a concern of the pedagogic quality of these programs compared to traditional licensure routes (Gelfer et al., 2014). O'Connor et al. 's, (2011) survey of 68 graduate students, attending a public college in NYC, revealed concern amongst College of Education chairs. They described the unification of general and special education teaching programs as a potential constraint on the ability of each program to achieve its objectives. From my experience as an ECSE, I believe I approach most of my students in a therapeutic manner, resulting in more teacher-led activities. However, general educators typically approach their teaching using child-directed play. In my opinion unifying general education and special education teaching programs could negatively impact the overall development of young children, as they may be limited to how they learn or express themselves within a therapeutic environment. For example, if a child is asked to participate in structured activities rather than have the opportunity for free play, they could be missing out on building social skills with peers or using expressive vocabulary during imaginative play.

Through the last two decades, special education reform has encouraged society to consider how schools and classrooms are staffed and trained to support the needs of children with disabilities. One impacting change has been due to the implementation of both the Americans with Disabilities Act of 1990 and the IDEA of 1997 (Chiasson et al., 2006). These two acts encouraged and mandated inclusion of students with disabilities into general education classrooms. Furthermore, the No Child Left Behind Act (2001) made significant changes for teachers and students in kindergarten through grade 12 education, by requiring schools in the United States to describe their success through student attainment scores (Hyun, 2003). This movement directly impacted educators who worked with children before they entered kindergarten, with some states developing standards for preschool or pre-kindergarten level (Hyun, 2003).

Federal movements of inclusion have encouraged the development of Early Childhood Special Educators (ECSE) as a separate profession to that of general Early Childhood Educators (ECE's). However, this profession has also experienced changes over the recent decades, in coordination with special education laws and policies. The role of the ECSE is described by Lava et al. (2004) as educators who work with children with an array of disabilities. They typically work with children from birth to 8 years of age, resulting in working in various settings (home, school, communities). Dinnebeil et al., (2006) described the role of ECSE's as; assessors/monitors, consultants to other adults, direct service providers to children, lifelong learners, and service coordinators/team members. ECSE's are usually the professional frequently called upon as the primary contact person for families and other professionals, resulting in the coordination of multiple services for the child (Lava et al., 2004).

The position of an ECSE can take many forms (Nelson et al., 2011), one of which is working in an itinerant position, whereas they travel from site to site, providing services which address a child's IEP goals and objectives (Dinnebeil et al., 2006). However, Klein and Harris (2004) suggest this shift from segregated classrooms to inclusive environments, is a result of ECSE's doing a job that may be disappearing; teaching a small group of children with disabilities in a segregated classroom. This notion was followed by the idea that the profession of ECSE's was moving in the direction of a more consultative service. Odom et al., (1999) were among the first to describe the itinerant position as two types; those in which their work revolved around direct services with children, and those in which the teacher provides indirect or consultation services. Dinnebeil & McInerey (2000) and Wesley & Buysse (2004) suggest the role shift from direct service provider to indirect provider, may result in ECSE's inadequately prepared for their role as a consultant, upon completion of their pre-service program.

The restructuring of recommended ECE practices has influenced the roles and skills necessary for effective teaching in programs serving young children with disabilities (Giovaccao-Johnson, 2005). Children requiring multiples services, and practitioners using a family centred approach requires educators to have the competencies and skills needed to work collaboratively (Barrera, 2000; Greene, 1999; Taylor & Baglin, 2000; Harrison et al., 2001).

Significant to the present study, there is research which advocates for an agreed understanding of the necessity for skilled educators to support children's communication development

(McLeod, 2001; Sylva et al., 2003). Historically, the importance of communication development, specifically for children from disadvantaged backgrounds, has been addressed through the introduction of programs such as Head Start in the United States (discussed in section 3.2.1) and Sure Start in the United Kingdom (Bain et al., 2015). Sure Start was established in 2004 with the intention to deliver a wide variety of services which are designed to support children's learning skills, health and well-being, and social and emotional development (Education, 2018) Similar to Heads Start, it is targeted towards parents and children under the age of 4 years old from disadvantaged backgrounds. The development of such programs has proven to benefit the development of young children from underprivileged backgrounds (Strauss, 2013; U.S. Department of Health and Human Services, 2010; House of Commons, Education Committee, 2013-14). However, evidence suggests that ECEs perceive their initial training in speech and language development to be brief or non-existent (Mroz et al., 2002; Letts and Hall, 2003; Mroz, 2006; Scarinci et al., 2015). The Bercow report (2008) highlighted the importance of effective communication for young people aged 0-19 in the UK, emphasising that speech-language and communication are essential life skills for all children and young people, and reinforce the achievement of all five of the governments' program's Every Child Matters outcomes. Through commissioned research by leading academics, visits to Children's centres and data collection of over 2,000 questionnaires, the Bercow report (2008) identified five key themes or issues that needed to be addressed;

- Communication is crucial;
- Early identification and intervention are essential;
- A continuum of services designed around the family is necessary;
- Joint working is critical;
- The current system is characterised by high variability and a lack of equity, (Bercow, 2008).

According to Bercow: Ten Years On (2018), many recommendations from the original Bercow (2008) report were made regarding supporting young people with SLI. However, Mroz (2012) advises that some of the suggestions made from Bercow (2008) have not been implemented in the UK. Figure 2 summarises critical changes to how young people with DLD are supported in the UK with reference to the original Bercow report of 2008.

Figure 2: *Key Changes since the Bercow Report (2008)*

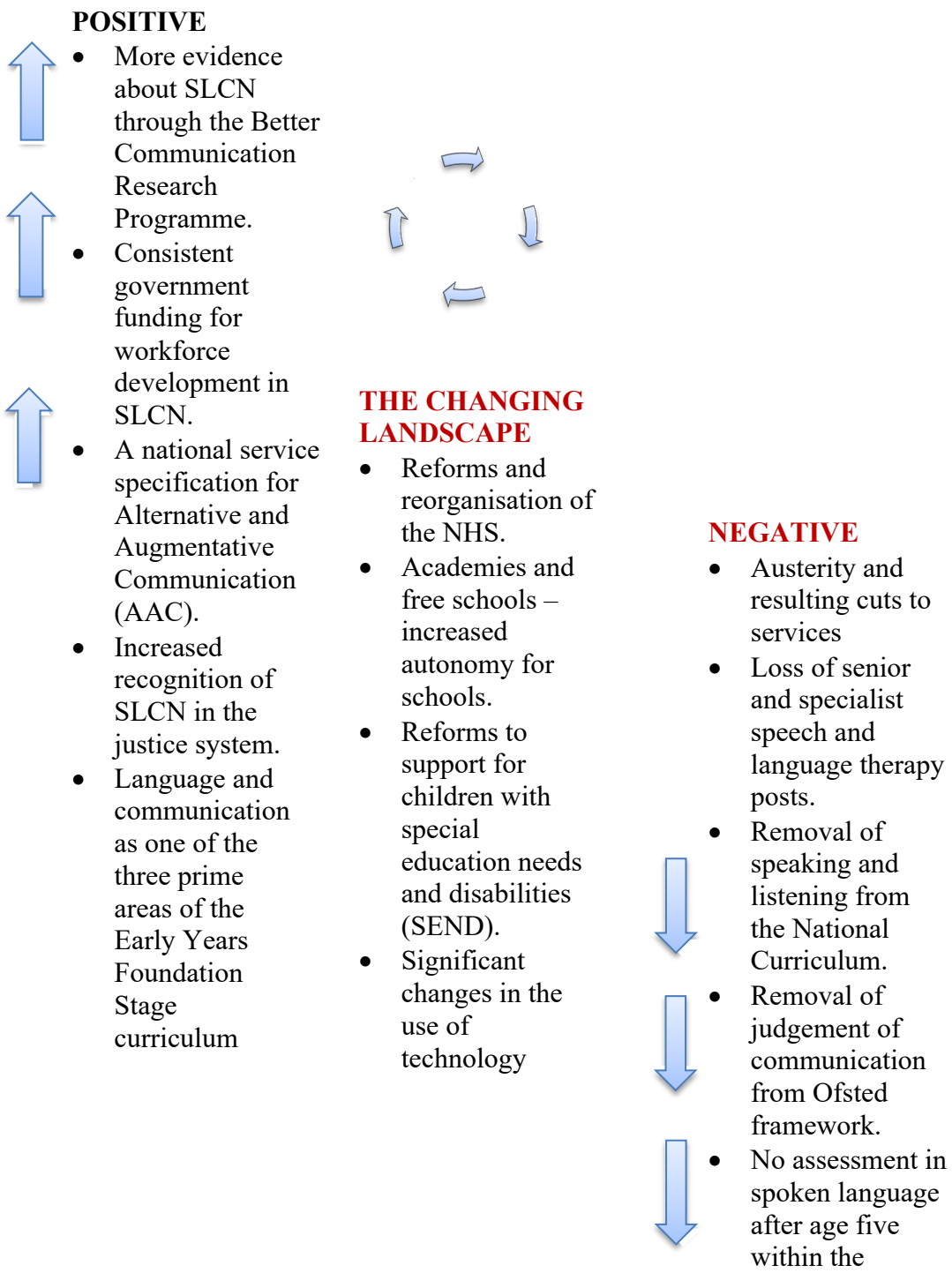


Figure Adapted from I CAN and Royal College of Speech and Language Therapist (2018); Bercow 10 Years On.

2.10 Preservice Training for SLPs

SLP's study and work with clients across the lifespan (Campbell et al., 2009), and are trained as generalists to work across various disabilities and environments (Barton et al., 2012). It is common practice for SLP's to obtain a Master's degree from an accredited university and complete their certification with a passing of the national examination (ASHA, 2016). According to ASHA (2016), an SLP's scope of practice is comprised of five professional practice domains (advocacy and outreach; supervision; education; administration/leadership; research) and 8 service delivery domains (Collaboration; Counselling; Prevention and Wellness; Screening; Assessment; Treatment; Modalities, Technology, and Instrumentation; Population and Systems).

Similar to ECSEs, SLPs are also faced with challenges related to inclusion policies and providing services in the least restrictive environment (IDEA, 2004). SLPs may provide services to young children directly; direct contact with their student, either in a one on one or in a small group setting or indirectly; or by consulting with other teachers, parents or individuals who work with the student (www.asha.org, 2018). Furthermore, SLPs are often faced with unique challenges of service delivery models. These vary from school to school are often defined by the school districts and/or school administration (Zurawski, 2014). Traditionally, school-based SLPs use the "pull-out" model, in which students receive speech and language services outside the general education classroom (Zurawski, 2014), or in treatment rooms (ASHA, 2018). However, Cirrin et al., (2010) found that in many instances' classroom-based services, also referred to as "push-in" services, were as useful if not more effective in helping students meet their speech and language goals.

According to the American Speech-Language-Hearing Association (ASHA) Ad Hoc Committee, the role of an SLP working in early intervention should participate in:

> (a) prevention; (b) screening, evaluation and assessment; (c) planning, implementing and monitoring intervention; (d) consultation and education for team members, including families and other professionals; (e) service coordination; (f) transition planning; (g) advocacy; and (h) advancing the knowledge base in early intervention (ASHA, 2008, p.9).

However, the quality of training an SLP might receive in early intervention, and early childhood special education has been questioned (Campbell et al., 2009; Barton et al., 2012). This may be due to the nature of SLP programs producing a more generalist practitioner. It appears that the majority of SLP's frequently report low levels of competency when working with young children and providing early intervention services (Barton et al., 2012). Along with special instruction (e.g. ECSEs) speech therapist, physical therapist and occupational therapist are the most frequently listed service providers on a child's IFSP (Campbell et al., 2009). Furthermore, Bruder and Dunst (2005) advise that SLPs receive limited to no coursework or practicum experiences relating to early intervention.

2.11 Post-qualification training for ECSEs and SLPs

In many states across the US, the Colorado Department of Education requires all licensed staff to renew their license every five years. One of the mandatory requirements for renewal is evidence to support that the candidate has attended 90 hours of professional development (www.cde.state.co.us, 2018) Likewise, speech-language pathologist are required by ASHA to renew their licence every three years, with evidence to support completion of 30 hours of professional development (www.asha.org, 2018).

There is debate regarding the effectiveness of highly qualified teachers on raising student achievement. As discussed in Bayar's (2014) work, a considerable amount of research indicates a positive link between teacher quality and student achievement (Abbate-Vaughn & Paugh, 2009; Ascher & Fruchter, 2001; Borman & Kimball, 2005; Boyle et al., 2004; Collinson & Cook, 2000; Hodge & Krumm, 2009; Guskey, 2002; Mahon, 2003; Okoye et al., 2008; Parlardy & Rumberger, 2008; Pedder et al., 2005; Peske & Haycock, 2006; Rockoff, 2004; Vogt & Rogalla, 2009; Mesiter, 2010; Opfer & Pedder, 2001, cited in Bayar, 2014), whilst Early et al., (2007) argue that the link between the level of education early childhood practitioners have and child outcomes is not as strong as previously thought. This leads to further questioning of the efficacy of teacher preparation programs. Research has suggested that pre-service teacher training programs often prove inadequate in preparing highly qualified teachers as they enter the workforce (Bayar, 2014). As a continued result of the change in standards and accountability for all educators, the last several years have witnessed a renewed interest in continued professional development (CPD) (Buysse et al., 2009). Ongoing research conducted

internationally has shown professional development for ECEs to positively affect their quality of teaching (Easton, 2008; Jonson, 2002; McCaughtry et al., 2006; McLaughlin & Talbert, 2006). Starkey et al., (2009) emphasised the importance of CPD by saying "in-service teacher education is also often viewed as an extension of pre-service teacher education in ensuring teachers- whether new or experienced- have up to date snapshots of the knowledge needed to be effective" (p. 186). Furthermore, Buysee et al., (2009) bring into discussion the realisation that there is no agreed-upon definition or shared understanding of the term professional development in education. Maxwell et al., (2005) describe the absence of a shared belief or interpretation of CPD as one of the challenges of continued research on the topic.

The National Professional Development Center on Inclusion (NPDCI) developed a definition for professional development to guide and plan high-quality training to support the inclusion of young children with disabilities and their families (Buysee et al., 2009). Figure 3 represents three key components that build their conceptual framework to help guide professional development across several states in the US;

1. the characteristics and contexts of the adult learners and the children and families they serve (the "who" of professional development);
2. the content (the "what" of professional development; what professionals should know and be able to do); and
3. the organisation and facilitation of learning experiences (the "how" of professional development) (Winton et al., 2008).

This framework was included due to its targeted, yet flexible approach to professional development. This framework could be described as having multiple 'over-lapping lenses'. For example, we can see how "resources" or "policies" etc., can directly or indirectly influence "how" or "what" etc., training is offered. Furthermore, these can also influence "who" receives the training, and what "resources" or "evaluations" are being used. As we can see from previous sections (2.3 and 2.5), education involves various stakeholders and is constantly changing and developing. Therefore, it is necessary to adopt such a framework which embraces these multiple influences and can be viewed from multiple angles.

Figure 3: *NPDCI Conceptual Framework for Professional Development*

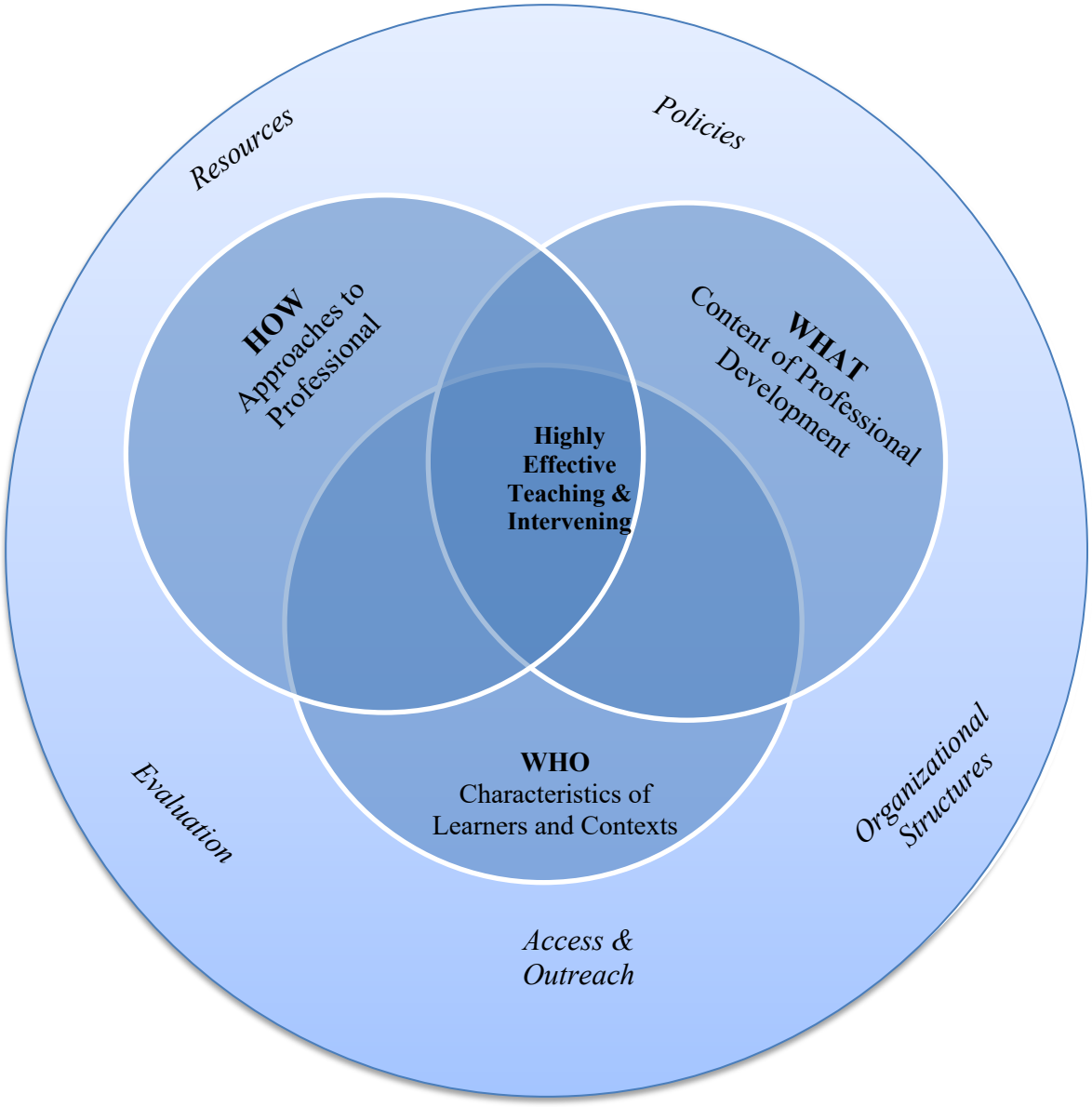


Figure from Winton et al., 2008

I believe this framework offers stability in the creation, implementation and evaluation of professional development for professionals working within the field of education. However, referring to Lava et al., (2004) and Barton et al., (2012), in which they described ECSEs and SLPs as working across various environments (e.g. classrooms, hospitals, clinics), it would be beneficial for this framework to include the "where" for professional development. Where would the training take place, and where would professionals learn about new training opportunities? If early childhood professionals are anticipated to work in various settings, there

is a need for systems to be in place to account for them accessing further training in their post-qualification positions.

For this study, it should be noted that the state of Colorado has not yet adopted the NPDCI framework for CPD. However, Colorado does implement the Educator Effectiveness System as part of their state evaluation model in response to Senate Bill 10-191 (2013), reflecting changes in the way teachers, administrators and support staff are evaluated (www.cde.state.co.us, 2018). Within this system, the Colorado Department of Education provides regular professional development on a range of topics and allocates funding for these training (www.cde.state.co.us, 2018).

There appears to be a vicious circle of what and where improvements need to be made to improve student outcomes. Pre-service teacher training programs are said to be falling short of preparing educators for their first year(s) in the workforce, yet constant changes in school standards and service delivery models may result in challenges for higher education faculties to provide comprehensive training programs. Therefore, it is difficult to argue the importance and benefit of continued professional development for all educators.

In connection with the present study, there is some research highlighting the importance of continued professional development for early childhood teachers, specifically relating to speech and language development. Ahsam et al. (2006) suggest that professional development training does not always directly influence the targeted skill but may have an impact on other areas of teaching. An SLP attended childhood settings, modelling language activities for 12 weeks. Whilst there was not a statistically significant difference between pre and post data, the ECSEs showed differences in their ability to draw children into an activity and encourage discussions between child and adult. Additionally, specific language-stimulating training programs, developed and implemented as continued professional development for early childhood educators, have been found to be successful in facilitating the development of language skills (Learning Language and Loving It (LLLI), The Hanen Centre, 2011; Every Child a Talker (ECaT), The Department for Children School and Families, 2008). LLLI and ECaT are similar programs designed to provide ECEs with strategies to support and build language and social skills for all children in the classroom (www.hanen.org, 2016; www.foundationyears.org.uk,

2009), in addition to creating awareness of the importance of speech-language and communication development (McLeod, 2011). Whilst LLLI aims to support all children regardless of what their individuals needs are, Johanson et al. 's., (2015) findings from 25 ECE teachers supporting 247 preschool-aged children, suggest that preschool language-focused interventions, such as LLLI, may primarily benefit children with higher skill levels rather than for children with relatively low language skills during preschool. However, ECaT has seen dramatic results in improved practitioner knowledge and confidence specifically in the UK province of Worcestershire. ECaT- supported staff, from 143 Early Years settings, who felt they understood the levels of typically developing speech increased from 17% at the beginning of the program to 90% after completion of a two-day training (Languageforlearning.co.uk, 2018). These Early Years programs also have seen an increase in practitioner's ability to use strategies to support speech and language development (30% to 95%), and a significant decrease, 47% to 21%, of children 'at risk' for language delay (Languageforlearning.co.uk, 2018).

2.12 Conclusions from the Literature Review

SLI is the most common learning difficulty affecting pre-school aged children, with both long and short-term implications for their cognitive, social and emotional development. Whilst an exact measurement of the benefit received from early intervention for students with SLI is still under debate; early diagnosis and intervention increases a child's ability to communicate effectively.

The Individuals with Disabilities Act (2004) mandated inclusion of students with special educational needs into general education classrooms, resulting in a change of roles for both ECSEs and SLPs working in early childhood environments. SLP's have moved from providing services outside the classroom to supporting children inside the school, exposing them to a variety of other, sometimes challenging, developmental disorders or delays. As they are trained as generalists to work across the life-span, various disabilities and environments, very little of their pre-service coursework is solely connected to early childhood DDs. Likewise, programs such as Head Start in the U.S., have been developed to support a child's communication

development. However, ECSE's are limited to the amount of training they receive in speech and language development.

Section 3: Research Purpose, Contribution, Questions and Methodology

The following section considers the rationale for the present study and its proposed contributions to the field of early childhood special education. This is followed with the suggested research questions, and the methodology used to explore these ideas.

3.1 Research Purpose

The purpose of the present study is to explore the knowledge and confidence of ECSE's and SLP's concerning young children's speech and language development. The overall aim is to examine what role these providers play in supporting children with speech or language impairments, and by what means they provide this support. Forty-one percent of pre-school aged children in the U.S. receiving special education services are categorised as having a speech or language impairment (www.ed.gov2017). Given the high prevalence of children attending early education programs with speech or language impairments, the likelihood of these two professions having to support these children is high.

The present study aims to contribute to the field of ECE, more specifically within the context of speech and language. Various studies have explored the profession of early years or early childhood general educators concerning speech and language (Mroz et al., 2002; McAllister et al., 2011; Bain et al., 2015; Seager & Abbot-Smith, 2016; Robertson & Ohi, 2016). Other studies consider bridging the gap between ECE and ECSE teacher preparation programs (Miller and Stayton 1998; Chiasson, Yearwood & Olsen, 2006; Stayton & McCollum, 2002). However, there is a gap in the literature regarding ECSEs and their role in supporting students with speech or language impairments. Furthermore, Lava et al., (2004) argue that the little research which has considered special educators is generally not specific to the context of early childhood.

Barton et al., (2012) discusses the shortage of highly qualified SLP's with specialised training in early intervention and early childhood special education, through their report on the implementation of a federally funded SLP personnel preparation project: Teaching Early Advanced Master's Specialists (TEAMS). Campbell et al., (2009) reports on the limitations to what higher institutions and professional development trainings that are offering SLP's in early

intervention services, through an analysis of two higher education surveys consisting of 147 speech-language pathology programs identified. The present study offers a personal encounter of SLP's knowledge and confidence when working within early childhood special education environments.

Freiburg (1999) points out that much can be learned from the literature addressing K- grade 12 special education support. However, due to the array of early childhood settings (for example; public schools, community-based centres, head start programs and after-school programs), as well as the variety of disciplines that are involved with young children with disabilities, there is a demand to identify knowledge and expertise related to ECSE services.

Finally, the field of early childhood special education has experienced significant changes in the way in which services are provided to young children (Giovacco-Johnson, 2009; Dinnebeil et al.,., 2006; Wesley & Buysee 2004; Klein and Harris 2004), primarily in response to serving children with special needs in a least restrictive, or natural environment under the reauthorization of the IDEA (1997).

The results from this study aim to offer special education providers reliable and relevant material which can be presented to policymakers, should participants suggest a need for further training opportunities or modifications to pre-training curriculums.

3.2 Interprofessional or Transdisciplinary Practice

This section aims to investigate the literature concerning collaboration efforts between educators and SLPs. By doing so, this section explores the ideas of integrated services, interprofessional practice and multidisciplinary, interdisciplinary and transdisciplinary models.

There is evidence to suggest that collaborative practices between educators and speech pathologists is essential in improving language support for young children (Robertson & Ohi 2016). For example; Overby et al., (2007) discusses a need for increased interactions between SLP's and teachers regarding the needs of students with SLI, as some children were referred

for speech therapy because of teacher expectations and not because of student performance. This study asked teachers to listen to recordings of second-grade students speaking (n=6) and indicate if they felt the student had typically developing speech and language or need to be referred for assessment. From this, their study revealed teacher's academic, social, and behavioural expectations for students with moderate intelligible speech were significantly lower than their expectations for their peers with normal or typically developing intelligibility of speech. Furthermore, an Australian study by McIntosh, Crosbie, Harrison and McAllister (2007) consisting of 97 preschool child participants who undertook a 10-week program developed to increase phonological awareness and language skills. The results from this study suggested that implementing programs which are developed collaboratively between educators and speech therapists, may lead to a significant improvement in young children's speech and language skills.

Another term that is widely used throughout the literature, referring to a range of professionals who work together in teams, is integrated services. Policies to support integrated services within early childhood settings have emerged internationally (Wong et al., 2012). A core feature of integrated services is interprofessional work, which involves collaboration, and cooperation by professionals from different disciplinary backgrounds (Press et al., 2010). The concepts and ideas of interprofessional practice are commonly incorporated in the professional practices within the health industry (WHO, 2010). Interprofessional work is said to encompass the meaning of multidisciplinary, interdisciplinary and transdisciplinary service delivery models (Malin and Marrow, 2008).

Multidisciplinary models are described as individuals assuming a permanent role based on their discipline. Interdisciplinary models expect that roles overlap enabling the blur of disciplines. In transdisciplinary models, the roles of each discipline may dissolve, resulting in one discipline performing the role of another (Hillier et al., 2010).

Transdisciplinary approaches were initially conceived for professionals to share valuable information and skills with primary caregivers of children with disabilities (Hutchinson, 1978). More recently this approach is referred to as the primary provider model, requiring team members from different disciplines to address, coordinate, and implement developmental

domains from all disciplines. Therefore, interventions are delivered primarily by one service provider, who then receives consultation from others (Bruder, 2010) King et al., (2009) describe a transdisciplinary model as having three essential operational features. The first is where professionals for multiple disciplines assess the child simultaneously. The second is intensive ongoing interaction among team members from different disciplines. And the third is 'roll release', when members give up or release intervention strategies from their discipline and under the supervision and support of team members, "let go" of one's specific role when necessary. Bruder (2000) and Gurlanick (2001) have acknowledged transdisciplinary models as the best practice for early intervention.

The present study aims to fill a gap in the literature concerning this very complex phenomenon of interprofessional or transdisciplinary practice within an early childhood context. Preceding literature discusses the limited understanding of the complexity of relationships between professionals (in the health services), who throughout their education are socialised to adopt a discipline-based vision of the services they offer (D'Amour et al., 2005). Bucci and Reitzammer (1992) bring into question whether any undergraduate teacher or allied health training program formally offers experience in multidisciplinary or interdisciplinary practice? The results from Hillier et al.'s., (2010, pg 9) review of literature confirm that the skills and attitudes necessary for effective teamwork in the educator and health professionals should be introduced at the undergraduate level.

There is growing evidence to suggest an overwhelmingly positive reaction to interprofessional working between early childhood practitioners (Wong et al., 2012). Furthermore, interviews from 115 multi-agencies concluded that although professionals thought highly of various sectors (health and education) working together and being able to provide a more efficient service to their families, there was concern that the overall impact of multi-agency working with disabled children may be limited (Abbot, 2005). Hillier et al., (2010) suggest this may reflect their relatively isolated training. Abbot's (2005), study also revealed the willingness of professionals to expand their role may be contingent on how secure of confident they feel in their own roles. The present study aims to explore if a professional's confidence may have a direct influence on; or be directly influenced by interprofessional collaboration. The concept of collaboration between education and health provided services for children has been supported

by policy but remains rare in practice (Aspery & Nash, 2006). Restrictions to this can be due to limited training for teachers and difficulties scheduling time for collaborative planning (Hillier et al., 2010). Finally, there is evidence to suggest a gap between the notion of knowing what we should be doing, and what we are doing in early childhood intervention programs (Dunst & Trivette, 2009a; Odom, 2009).

3.3 Theoretical frameworks

The present study aims to contribute to existing theories of collaboration or systems within education. The following two theories have been considered. Educational theorist and linguist, Bela H. Bathany (1992) discusses the collaboration between teachers and speech therapists using a systems approach in his three-level model. The first level of the Bathany's model, 'systems-environment', discusses the inter-dependent relations between the system being studied and the individual or other systems with which it encounters. He describes this level as a "birds-eye view" of the landscape in which the system is sited (McCartney, 1999). The second level is described as a "moving-picture model" or 'process' which examines what a system does across a period of time. This often includes the process of children's engagement with the system to achieve their learning objectives (McCartney, 1999). The third level of Bathany's model is concerned with educational goals (features), organising the learning environment (functions) and the subsystems of teaching and administration (components) of a system. This level is referred to as the "functions/structures" or 'still-picture' which takes snapshots of the features, functions and components of a system, acting as a point of reference to examine the past and future (McCartney, 1999). In summary, the systems model offers four aspects to consider when investigating collaboration between teachers and SLPs; functions level (the goals of the system); structures level, (the formal decision-making mechanisms); processes, (how a system behaves) and systems environments, (how a system fits into its community) (McCartney, 1999).

Psychologist Urie Bronfenbrenner, developed what is widely known as the bioecological systems theory, initially termed an ecological model or approach (1979) more recently known as the Process-Person-Context-Time (PPCT) model (1998). Bronfenbrenner's theory offers a framework of six environmental systems that influence a child's development; biosystem,

microsystem, mesosystem, exosystem, macrosystem, and the chronosystem. These systems can be viewed as concentric circles that can affect human development (Yamauchi et al., 2017), as seen in Figure 4. Factors at each level of Bronfenbrenner's system are understood to influence and be influenced by the other levels of the system (Odom et al., 2004).

Figure 4*:* Bronfenbrenner's Ecological Theory of Development

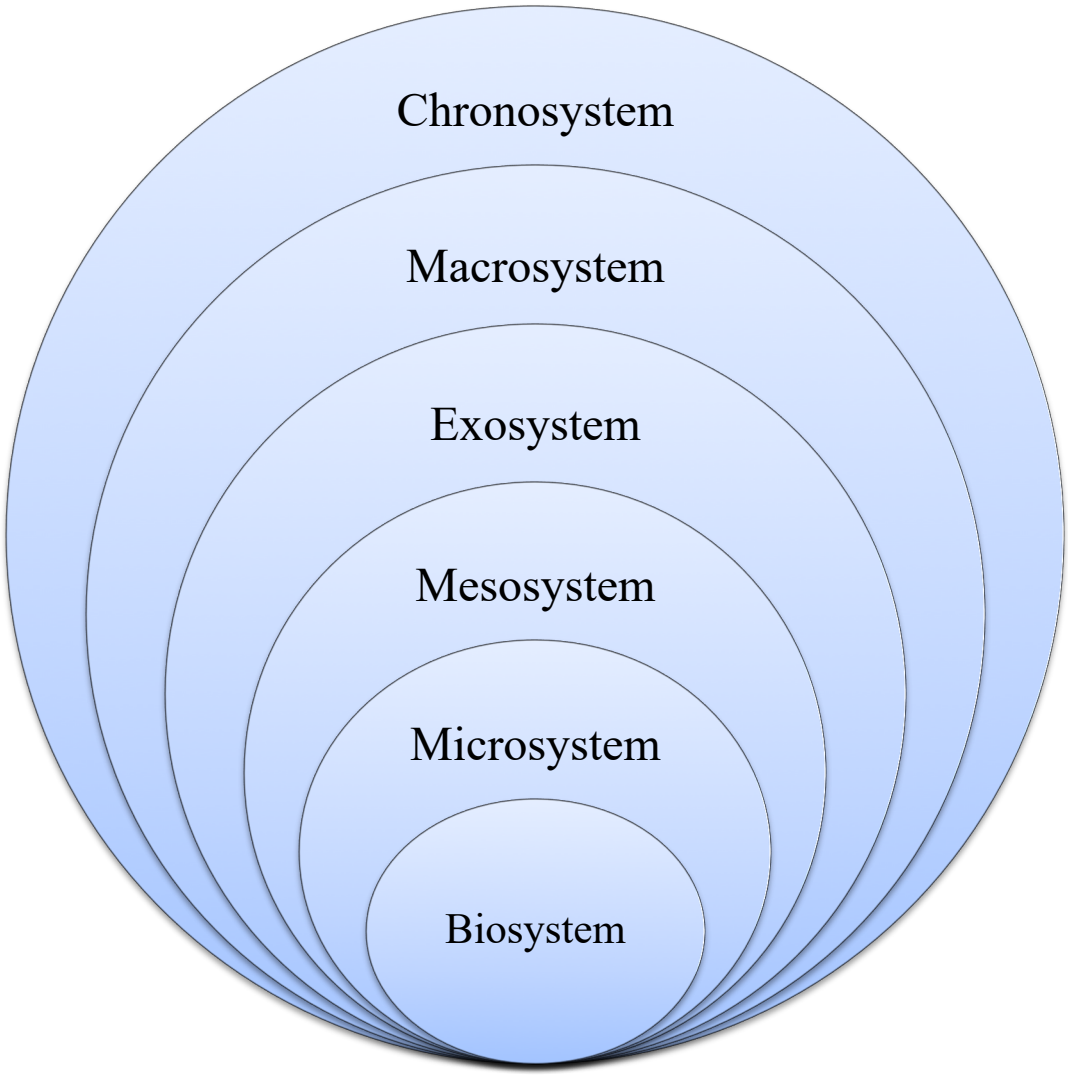


Figure adapted from HQ, 2018

An example of how this theory has been used in previous research is described in the work of Odom et al., (2004), in which a review of multiple research articles (number not known), using

Bronfenbrenner's bioecological model was compiled, exploring preschool inclusion in the United States. The articles included those dated between 1990 and 2002 and was limited to research on 3- to 5- years-old children with disabilities, and typically developing children who attended inclusive preschool programs. Below is an outline of how Odem et al., (2004) have used and explained Bronfenbrenner's model throughout their review;

Biosystem Variables: characteristics of children.

- Types of disability;
- Severity of disability.

Microsystem Variables: immediate setting in which the child participates;

- Forms of inclusive programs;
- Quality of classroom environments;
- Environmental arrangements;
- Instructional practices;
- Children's participation and engagement;
- Social relationships with peers;
- Interventions;
- Teacher behaviours and beliefs;
- Collaboration among professionals.

Mesosystem: when participants in other microsystems interact.

- Family and inclusion;
- Family and perceptions of inclusions;
- Factors that influence parental perceptions of inclusion
- Transitions across programs;
- Community participation.

Exosystem: influences or events that influence the Microsystem, but that occur in settings that do not include the members of the Microsystem.

- Social policy;

- Decisions made by key administrators;
- Agreements occurring across agencies.

Macrosystem: variables that influence the children's development directly, or that may have secondary influences on other levels of the ecological system.

- Cultural and linguistic diversity;
- Program demographic characteristics.

Chronosystem: influences across time.

- Nature of intervention changing over time;
- Change in roles or type of service provided;
- Parents attitudes;
- Maintenance or discontinuation of programs across time.

Significant to the present study, it was found through Odem et al's., (2004) review that even though researchers frequently used the generic term "Developmental Disability" (DD), several studies specifically identified the following four disabilities; hearing impairment, visual impairment, Down Syndrome and Autism. For the purpose of this study, I have considered and outlined how I foresee supporting a child with SLI might fit into Bronfenbrenner's bioecological model;

Biosystem Variables: characteristics of children.

- Types of disability (articulation, semantics, vocabulary, language, receptive, expressive);
- Severity of disability.

Microsystem Variables: immediate setting in which the child participates;

- Service delivery models (itinerant, interdisciplinary)
- Interventions; (small group, large group, 1:1, teacher/student led, SLI, DD, OT, PT)
- Teacher behaviours and beliefs; (confidence and knowledge, roles and responsibilities)

Mesosystem: when participants in other microsystems interact.

- Post-Qualification or Professional Development (where, how, what, who);
- Factors that influence confidence and knowledge of Early Childhood professionals
- Collaboration among professionals.

Exosystem: influences or events that influence the Microsystem, but that occur in settings that do not include the members of the Microsystem.

- Social policy (Early Childhood standards and laws, licensing procedures);
- Decisions made by key administrators (determining eligibility, accommodations, modifications);
- Agreements occurring across agencies;
- Pre-service training

Macrosystem: variables that influence the children's development directly, or that may have secondary influences on other levels of the ecological system.

- Program demographic characteristics (location, public, private)
- Cultural Diversity

Chronosystem: influences across time.

- Nature of intervention changing over time;
- Change in roles or type of service provided;
- Maintenance or discontinuation of training programs across time.

When considering Bathany's and Bronfenbrenner's models, it appears that they share various similarities (systems, time, supporting young children). However, Bathany's model focuses on the functions of a system and how several aspects of a system are working together to support young children, whilst Bronfenbrenner's work focuses on what systems or connections have an impact on a young child's development. Due to the nature of this study focusing on the various developmental areas of young children (speech and language, social, emotional, behavioural),

the present study will be using Bronfenbrenner's Ecological theory of Development, to theorize how young children are best supported in early childhood.

3.4 Research Questions

The research questions and design for the present study have evolved from the work of Mroz et al., (2002). Their work examines ECE's knowledge concerning young children speech-language development and impairments. The first phase of their study used a questionnaire to explore the extent to which ECE's training enabled them to promote language skills and identify those children with potential problems. This phase involved 829 early years professionals in the North East of England. In response to key themes from the questionnaire, the second phase of this study included 50 individual interviews from a cohort of 181 volunteers (27.6% of the total number of questionnaire respondents). These interviews explored how early years professionals perceived their roles and responsibilities in identifying and supporting children with SLIs. The findings from this study revealed that 72.3% of questionnaire respondents received no input on language delay or disorders in initial training, resulting in the majority (does not give an exact number in the study) of participants expressing the need for further training in speech and language development.

Whilst this research included an extensive group of early years professionals, the overall aim and findings align with the present study. The participation of 829 ECE's provided a decent representation of early years professionals; however, it was the relevance of the research questions used during the interview phase which reinforced my ideas for this research proposal.

1. How robust is the knowledge and confidence of ECSE's in the area of young children's speech and language development?

This question is made up of the following sub-questions:

a) How do ECSE's perceive their own confidence in speech and language development?
b) How do ECSE's perceive their role and responsibilities in supporting children with SLIs?
c) How do ECSE's perceive their training needs in the area of children's speech and language development?

2. How robust is the knowledge and confidence of SLP's in the area of early childhood special education?

This question is made up of the following sub-questions:

a) How do SLP's perceive their own confidence in early childhood special education?
b) How do SLP's perceive their role and responsibilities in supporting children within early childhood special education?
c) How do SLP's perceive their training needs in the area of early childhood special education?

3.5 Focus of Research Questions

The first research question aims to identify how ECSE's perceive their knowledge and confidence of SLI, and the relevant training they have had. This question also addresses training needs in the area of children's speech and language development, with the intention of exploiting opportunities for further research.

The second research question aims to identify SLP's knowledge and confidence of ECSE services. From my own experience, the roles of special education teachers and speech pathologists in ECE often overlap. Barton et al., (2012) also argues that the training for SLP's includes little to no content related to young children with special needs and their families, resulting in SLP's feeling unprepared to work in early intervention and preschool settings.

3.6 Research Design and Paradigm: Mixed Methods

The present study follows a mixed-methods approach. Leech and Onwuegbuzie (2009:265) suggest that conducting mixed methods research involves 'collecting, analysing, and interpreting quantitative and qualitative data in a single study'. Denscombe (2008) explores some potential benefits of using mixed-methods research including; providing a complete picture of the phenomenon under study, enabling the researcher to build on original data, and aiding sampling. He uses an example of where a questionnaire might be useful to screen potential participants who might then be approached for an interview, a procedure which was

used in the present study. Creswell & Plano Clark (2011), suggest using a mixed methods approach when a need exists to explain initial results (e.g., general explanations from questionnaire results), or to generalise exploratory findings (e.g., using quantitative data to generate interview schedule).

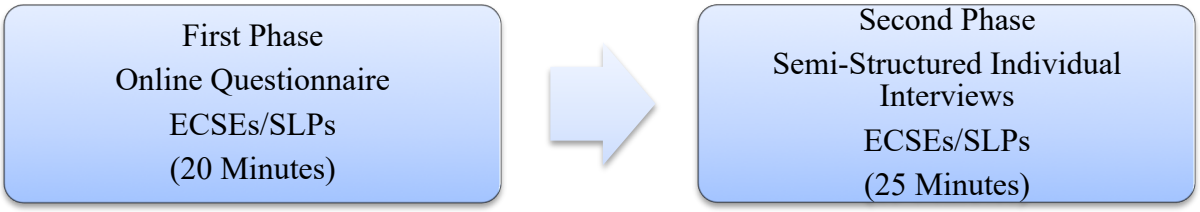
Johnson and Onwuegbuzie (2004) describe mixed methods research as the third research paradigm, following qualitative (interpretivism) and quantitative (positivism). During the 1980s, the debate between quantitative and qualitative advocates was intense (Johnson and Christensen, 2004). Over the years, the importance of both paradigms has been acknowledged, with arguments against the polarisation of research into either quantitative or qualitative approaches (Ercikan and Roth, 2006), leading to the development of mixed methods research.

Pragmatism is typically associated with mixed method research (Creswell & Clark, 2011) or as a third set of beliefs; the pragmatic paradigm (Armitage, 2007). This allows researchers to address questions using a "what works" tactic within "practitioner-based" research (Armitage, 2007) Pragmatism is further described as the world relating to an "existential reality" (Dewey, 1925, p.40) with different elements, some subjective, some objective and some a mixture of the two (Yvonne Feilzer 2010). The interpretation of roles, responsibilities and knowledge of individuals within education should, in my view, be approached pragmatically, since there are many stakeholders involved who will have different work, training and personal experiences.

3.7 Data Collection Procedures

A two-phase data collection procedure was used in the present study (see Figure 5). Sections 4 (questionnaire) and 5 (individual interviews) discuss each phase in further detail. This includes the methods used, sampling size, ethical considerations, distribution, analysis and conclusions.

Figure 5: Data Collection Procedures



Section 4: The Questionnaire Phase

This section discusses the design, purpose, methodology and findings from both the ECSE and SLP questionnaires on behalf of the present study. Ethical considerations are also addressed to ensure appropriate measures were taken during the data collection process.

The first phase of this study involved the use of online questionnaires (see Appendix 1 for ECSE and Appendix 2 for SLP), using the Online Survey tool (formally known as Bristol Online Survey). The questionnaires were designed specifically for this EdD study and consisted of five sections. They contained highly structured questions with pre-defined response categories, and some open-ended questions allowing participants to expand on previous answers using their own words.

The questionnaires were designed with two main purposes;

1. Collect information about ECSE/SLP professionals regarding;
    a) years of experience, training routes, and working environments;
    b) roles and responsibilities (direct/indirect services, working with families, working with other professionals, and administrative responsibilities).

2. Connect ECSE's knowledge of children's speech and language development and SLP's knowledge of cognitive and social/emotional development with:
    a) their initial and post-qualification training;
    b) their experience of working with children with disabilities;
    c) their expressed need for training.

4.1 Design of the ECSE Questionnaire

The first section of the questionnaire generated demographic information about participants, including school district of employment, qualification, training institution, service delivery model, number of children on caseload, and number of these children receiving both ECSE and

speech or language services. Participants were invited to answer these questions by either placing a check in one the pre-defined responses or by writing in the "other" space provided.

The second section asked participants to answer questions concerning their roles and responsibilities as an ECSE. Participants were invited to describe their role within five sub-categories; consultant to other adults, assessor/monitor, team member; and direct service provider. They were encouraged to answer these questions by placing a check next to all pre-defined responses that applied to them. These questions were adapted from the categories used in a study by Dinnebeil et al., (2016) which was aimed at understanding the roles and responsibilities of itinerant ECSE teachers. From personal experiences of working as a member of special education team within preschool settings, the categories from the Dinnebeil et al., (2016) study were judged to be relevant to employer job descriptions, day to day tasks and the overall role of an ECSE's. This was followed by two questions asking participants to re-direct their thinking and consider their role in supporting children with speech and language needs, rather than children with early childhood special education related disorders. They were encouraged to answer this by describing experiences related to four areas of speech and language development as "not at all", "a little", "quite a lot" or "I'm not sure". Articulation/speech sounds, expressive language, receptive language, and use of language in a social content, were the four areas of speech and language development, adapted from Mroz et al., (2002).

The third section of this questionnaire asked questions concerning pre and post qualification training that participants received in relation to speech or language impairments. They were reminded of the difficulty to remember exact details of training that happened several years ago and were encouraged to complete the questions to the best of their recollection. The items within this section invited participants to indicate the amount (hours) of pre and post-qualification training they received, and by whom delivered it. This was followed with a table-form question asking participants to indicate the level of coverage they received in the four areas of speech and language development (articulation, expressive, receptive and social), by checking either "not at all", "briefly", "in depth" or "n/a". Participants were then invited to answer questions concerning how they perceive their training needs in the area of speech or language impairments using a five-point Likert scale (Strongly Disagree to Strongly Agree). Finally, participants were

asked to describe their level of confidence in supporting children with speech or language impairments by placing a check next to “confident”, “quite confident”, “not at all confident” or “I am not familiar with this term”. These questions were generated in reference the questions included in the Mroz et al., (2002) questionnaire (see Appendix 3). I felt confident in using the areas of development from this study, as the researching team included a qualified speech and language therapist, Dr Carolyn Letts, and lecturer in Primary Education (Early Years), Joan Santer. As seen in Appendix 3, adaptations were made to the present study to include fewer areas of development to better reflect the aspects of language and child development that I was familiar with when training to become an ECSE and working within a preschool classroom.

The fourth section of this questionnaire was designed to collect baseline information regarding the ECSE’s knowledge of speech or language impairments. This section included five examples of children who may display characteristics of speech and language delays with five pre-defined answers; articulation delay, expressive delay, receptive delay, social language delay or developmentally appropriate. Participants were probed to imagine that these children had just joined their setting and they had made observations over a few weeks. They were encouraged to answer these questions based on their knowledge of early development in young children. These examples were generated by referencing case studies from various sources (www.pearsonclinical.com, 2018 and www.thecommunicationtrust.org.uk, 2010).

The final section of the questionnaire was designed to provide an opportunity for participants to express their interest in volunteering for the second phase of the study; individual interviews. This section asks for the name, contact telephone and email address for all those willing to participate in phase two.

4.2 Design of the SLP Questionnaire

The first section of the questionnaire generated demographic information about participants, including school district of employment, qualification, training institution, service delivery model, number of children on caseload, and number of these children receiving both speech and early childhood special education services. Participants were invited to answer these

questions by either placing a check in one the pre-defined responses or by writing in the "other" space provided.

The second section asked participants to answer questions concerning their roles and responsibilities as an SLP. Participants were invited to describe their role as an SLP within the five sub-categories; consultant to other adults, assessor/monitor, team member; and direct service provider. They were encouraged to answer these questions by placing a check next to all pre-defined responses that applied to them. This was followed by two questions asking participants to re-direct their thinking and consider their role in supporting children with early childhood special educational needs, rather than children with only speech and language-related disorders. They were encouraged to answer this by describing these experiences as "not at all", "a little", "quite a lot" or "I'm not sure". These questions were adapted from the categories used in a study by Dinnebeil et al., (2016) which was aimed at understanding the roles and responsibilities of itinerant ECSE teachers. These were then compared to ASHA's document; "scope of practice" for SLP's, (www.asha.org, 2016) to ensure cohesion between the two professions. From personal experiences of working as a member of special education team with SLPs, the categories from the Dinnebeil et al., (2016) study were judged to be relevant to employer job descriptions, day to day tasks and the overall role of an ECSE's and SLP's.

The third section of this questionnaire asked questions concerning pre and post qualification training the participants had received in relation to early childhood DDs. They were reminded of the difficulty to remember exact details of training that happened several years ago and were encouraged to complete the questions to the best of their recollection. The items within this section invited participants to indicate the amount (hours) of pre and post-qualification training they received, and by whom delivered it. This was followed with a table-form question asking participants to indicate the level of coverage they received for the following three subcategories of early childhood DDs; social/emotional development, cognitive development and adaptive/coping skills development, by checking either "not at all", "briefly", "in depth" or "n/a". Participants were then invited to answer questions concerning how they perceive their training needs in the area of early childhood DDs using a five-point Likert scale (Strongly Disagree to Strongly Agree). Finally, participants are asked to describe their level of confidence in supporting children with early childhood DDs by placing a check next to "confident", "quite

confident", "not at all confident" or "I am not familiar with this term". These questions were generated from material found on an assessment tool commonly used throughout the state of Colorado, Teaching Strategies Gold (teachingstrategies.com, 2018). Whilst this assessment covers all areas of child development; the present study chooses to focus on those most relevant to the practice of ECSE's.

The fourth section of this questionnaire was designed to collect baseline information regarding the SLP's knowledge of early childhood DDs. This section included five examples of children who may display characteristics of early childhood developmental disabilities with four pre-defined answers; social/emotional delay, cognitive delay, adaptive/coping skills delay or developmentally appropriate. Participants were probed to imagine that these children had just joined their setting and they had made observations over a few weeks. They were encouraged to answer these questions based on their knowledge of early development in young children. These examples were generated by referencing various preschool screening, and assessment tools (DIAL-4, 2001 and Ages and Stages, 2018) used to identify and diagnose children with DDs. The DIAL-4 (2001) and Ages and Stages (2018) are both screening tools used to asses a large group of students, quickly and efficiently. I have personally used the Ages and Stages as a screening tool for children during the preschool enrolment process. The Ages and Stages tool was designed as a screening tool to be completed by a child's parent, whilst the DIAL-4 is administered by educational staff. Both the DIAL-4 and Ages and Stages screeners include various questions in different categories of early childhood. This includes skills in motor, cognition, social/emotional, communication, and self-help (www.pearsonclincal.com, 2018; www.agesandstages.com, 2018). Once completed, a calculated score is used to aid in the identification process of young children "at risk" for DDs.

The final section of the questionnaire was designed to provide an opportunity for participants to express their interest in volunteering for the second phase of the study; individual interviews. This section asks for the name, contact telephone and email address for all those willing to participate in phase two.

Participants for this study were qualified Early Childhood Special Educators (ECSE) and SLP's working within a public preschool, in the state of Colorado. Preschools were chosen based on

two main principals; publicly funded and operated through local and federal agencies, and who provide special education services to children between the ages of 3 and 5 years.

According to the Colorado Department of Education (www.cde.state.co.us, 2018), the state of Colorado has a total of 179 public school districts. However, smaller school districts are often combined into what is known as Boards of Cooperative Educational Services (BOCES), in which special education staff (ECSE's and SLP's) provide services to several school districts. Twenty-two BOCES are serving a total of 138 school districts, leaving the remaining 41 school districts that provide special education services internally (www.coloradoboces.org, 2017). From personal working experience, each school district or BOCES's employs on average 3 ECSE's and two early childhood SLP's. Therefore, 63 school districts/BOCES would provide approximately 190 ECSE's and 125 SLP's working in Colorado preschools.

4.3 Pilot Questionnaire Results

A pilot questionnaire was sent to one ECSE and one SLP that the researcher had previously worked with. The aim of the pilot was to receive feedback concerning any grammatical errors, clarification of questions or main points that perhaps did not address the research questions of the present study. The small sample size of the pilot questionnaire was a result of timing limitations for the scope of an EdD.

The piloted questionnaire resulted in minimal changes to the original questionnaire, most of which were grammatic suggestions made by the participants. However, positive feedback regarding the content of the questionnaire offered awareness of rigour to the present study.

4.4 Distribution of Questionnaire and Response Rate

Questionnaires for the present study were first distributed through gateway personnel (supervisors, directors, managers), on 09/02/18. Using the current directory (see Appendix 4 and 5) of Colorado school districts/BOCES (www.cde.state.co.us, 2018) a search was conducted in pursuit of contact information for early childhood or special education directors,

supervisors or managerial staff. Of the 64 school districts/BOCES in Colorado, an email was sent on 09/02/18 to 51 members of staff over 48 districts/BOCES (see Appendix 6). In some instances, schools that were listed initially did not include early childhood programs, and in others, contact information was unavailable.

The email sent to these individuals included a brief introduction of the researcher, followed with a suggested information sheet attached (see Appendix 7). Finally, encouragement to pass along this information and survey to all ECSEs or SLPs working within preschool classrooms, with a clearly stated questionnaire deadline was included.

On 02/03/18 a follow-up email was sent (see Appendix 8) as a reminder of the approaching deadline for both questionnaires. The questionnaire was open and available for a total of four weeks. Unfortunately, both the SLP and ECSE questionnaire resulted in zero responses.

A new search was conducted using the same school districts and BOCES in pursuit of contact information for ECSE's and SLP's directly. The process for this can be seen in Figure 6. Corresponding emails were slightly altered (see Appendix 9) to accommodate the newly targeted audience and questionnaire deadline of two weeks. On 19/03/18, these were sent to 327 early childhood, special education or speech and language staff across 17 school districts/BOCES (see Table 3). As a result of time constraints and thinking forward to phase two of the present study, these districts were chosen based on size and the proximity of the researcher. On 28/03/18, a reminder email was sent with the approaching deadline to complete the questionnaire. From a total of 8 responses from ECSE's and 7 from SLP's were generated.

Figure 6: *Sampling and Recruitment Process*

On 06/04/2018 a third email was sent (see Appendix 10) to the same 327 early childhood staff as in the second round, as well as an additional 145 from school districts located slightly further from the researcher. The third email was accompanied with a short three-minute long video

briefly introducing myself and my research (see Appendix 11 for transcription). This led to an additional 5 ECSE responses and 2 SLP responses. A compiled total from all three questionnaire attempts resulted in an estimated 4.2% response rate. Please see Table 3 for a detailed description of the participant recruitment process for the present study.

Table 3:*Questionnaire Contact/Responses Overview*

	First Round 09.02.18	**Second Round 19.03.18**	**Third Round 09.04.18**	**Total Number**
Number of School Districts/BOCES Contacted	48	16	19	83
Number of Schools within Districts/BOCES Contacted	Unknown	147	259	Unknown
Number of Emails Sent to ECSE's SLP's and/or Directors	51	327	472	850
Number of ECSE surveys in Progress	3	11	14	28
Number of ECSE Responses	0	8	5	13
Number of SLP surveys in Progress	7	31	7	45
Number of SLP Responses	0	7	2	9

4.5 Addressing Ethical Issues

The ethical issues considered and successfully addressed in the first phase were relating to:

- Obtaining informed consent for both questionnaires
- Confidentiality of data
- Anonymity of participants
- Treatment of participants

4.5.1 Obtaining Informed Consent

The emails sent to both gatekeepers and early childhood staff included an attached information sheet (see Appendix 7) in which they were encouraged to read before taking part in the online questionnaire. The information sheet had a purpose of ensuring participants had a clear understanding of the purpose of the research, why they had been chosen, what they would be asked to do, and what measures of confidentiality would be used. Finally, both questionnaires offered the following opening paragraph;

> *"The purpose of this research study is to collect information regarding the roles, knowledge, training needs, and confidence [in the area of early childhood special education for SLP's] or [in the area of children's speech or language impairments or delays of ECSEs]. Your participation in this study is entirely voluntary, and you can withdraw at any time, up until the data has been analysed and written in the final thesis (approximate date 30/09/2018). All responses to this questionnaire will be treated as strictly confidential. Your answers will not be used in any way which could identify you or your setting. By submitting your answers, you are providing your consent to participate in this study."*

4.5.2 Confidentiality of Data

The data collected through the online surveys was kept confidential using the Online Survey Tool, which required a username and password, that only the researcher and supervisors had access. According to the Data Protection Act 1998, personal data "must be obtained and processed fairly and lawfully", it "must be adequate, relevant and not excessive for those purposes" and "be kept safe from unauthorised access, accidental loss or destruction" (www.leeds.ac.uk, 2010). Therefore, participants were merely asked for their name, email and telephone number as a means of contact, which was stored using the Online Survey Tool. Hard copies of any data or documentation used for the present study were kept locked in a secure cabinet in universities premises.

4.5.3 Anonymity of Participants

Anonymity was ensured by using pseudonyms of the names of all participants and organisations. This research did not ask questions about the participant's workplace. Furthermore, the researcher did not have a personal or dependent relationship with any of the participants. Any direct quotes were used without the identification of any participant or school.

4.5.4 Treatment of Participants

Participants were not subject to any deception, coercion or distress. The present study did not critique the participant's job description, roles or training experiences. The research was conducted during working hours and within the premises of the participants. Participants were given verbal and written assurance of their decision to refuse to answer any question or withdraw from the study at any time up until the data had been written in the final thesis, without any explanation needed.

4.6 Analysing the questionnaire

The questionnaire data was analysed using the Online Survey Tool as well as independent analysis from the researcher. Descriptive statistics such as frequency distributions, and tables and graphs were used to present data in a variety of ways. Inferential statistics were also applied using cross tabulation to investigate the relationship between variables. Due to the number of responses received, further tests such as t-tests, correlation analysis or ANOVA could not be used to help summarise the data. However, personal and in-depth analysis from the researcher was made possible as a result of fewer participants.

The ECSE questionnaires and SLP questionnaires were interrogated individually to provide tailored and useful data in response to both professions. However, a summary of conclusions as a cohort has been offered in the final section of this thesis.

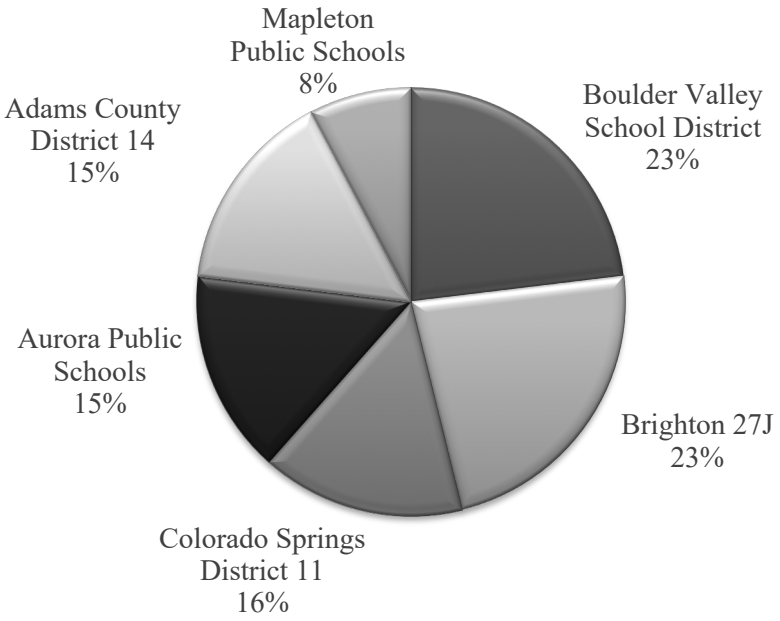
4.7 ECSE Questionnaire Results

This section aims to explore the findings from the ECSE questionnaire. The first section will address the setting and service delivery models for ECSE's. This is followed with an overview of the roles and responsibilities ECSE's share (Research Question 1b; Section 3.4). The quantity and subject matter of ECSE's pre- and post-qualification training is explored next (Research Question 1c; Section 3.4). Finally, case study responses are analysed to inquire about ECSE's knowledge and confidence of SLI in young children (Research Question 1a; Section 3.4). Section headings, figures and tables are in correlation to question numbers from the questionnaire (Appendix 1), as seen in brackets.

4.7.1 Setting, Experience and Student Population of Respondents *(Questions 1-7)*

For the purpose of the present study, all respondents lived and worked in Colorado, USA. The thirteen respondents resulted in representing a total of six school districts across Colorado. The questionnaire sample resulted in an even representation of school districts amongst participants as illustrated in Figure 7 below.

Figure 7: *Percentage of ECSE Participants by School District (Questions 1)*



Fifteen percent (n=2) of respondents best described their position as an itinerant ECSE, who travels between schools or classrooms providing only special education services to preschool students. From experience, this type of service delivery model is more commonly used within smaller school districts that are associated with an outside agency, such as a BOCES which provides their special education services. However, these six school districts are larger and provide all special education services internally. The remaining 85% (n=11) of participants best describe their position as an interdisciplinary ECSE, who stay in one classroom, assuming the role as both the general educator and special educator for preschool students. The type of service delivery model that an ECSE is delivering may have impacted the results of their questionnaire. An itinerant ECSE's may spend more time working with students with both DDs and SLI, whereas, interdisciplinary ECSE's are potentially exposed to working with children with SLI only within the preschool classroom on a day to day basis.

With five participants indicating to have 7-10 years' experience as an ECSE, three with 10 or more years, a further three with 4-6 years, and only one has worked just 0-3 years, and the sample represented a cohort of experienced ECSE staff. Almost all respondents (84%) have a Masters qualification in either Special Education (n=1) or Early Childhood Special Education (n=10). One respondent has a Bachelor's degree in ECE, and one respondent has a Master's in speech and hearing sciences. The respondents represented a total of eight universities across the United States with many institutions (69%) within the state of Colorado.

Seven of the thirteen respondents specified to have a caseload of 6-10 students. Five respondents with 11 or more students, and just one respondent working with a smaller caseload of 0-5 students. Table 4 demonstrates caseloads by service model but also contributes to a consistency of ECSE's working with students not only with DD but also SLI.

Table 4: ECSE Caseloads by Service Delivery Model *(Questions 6 and7)*

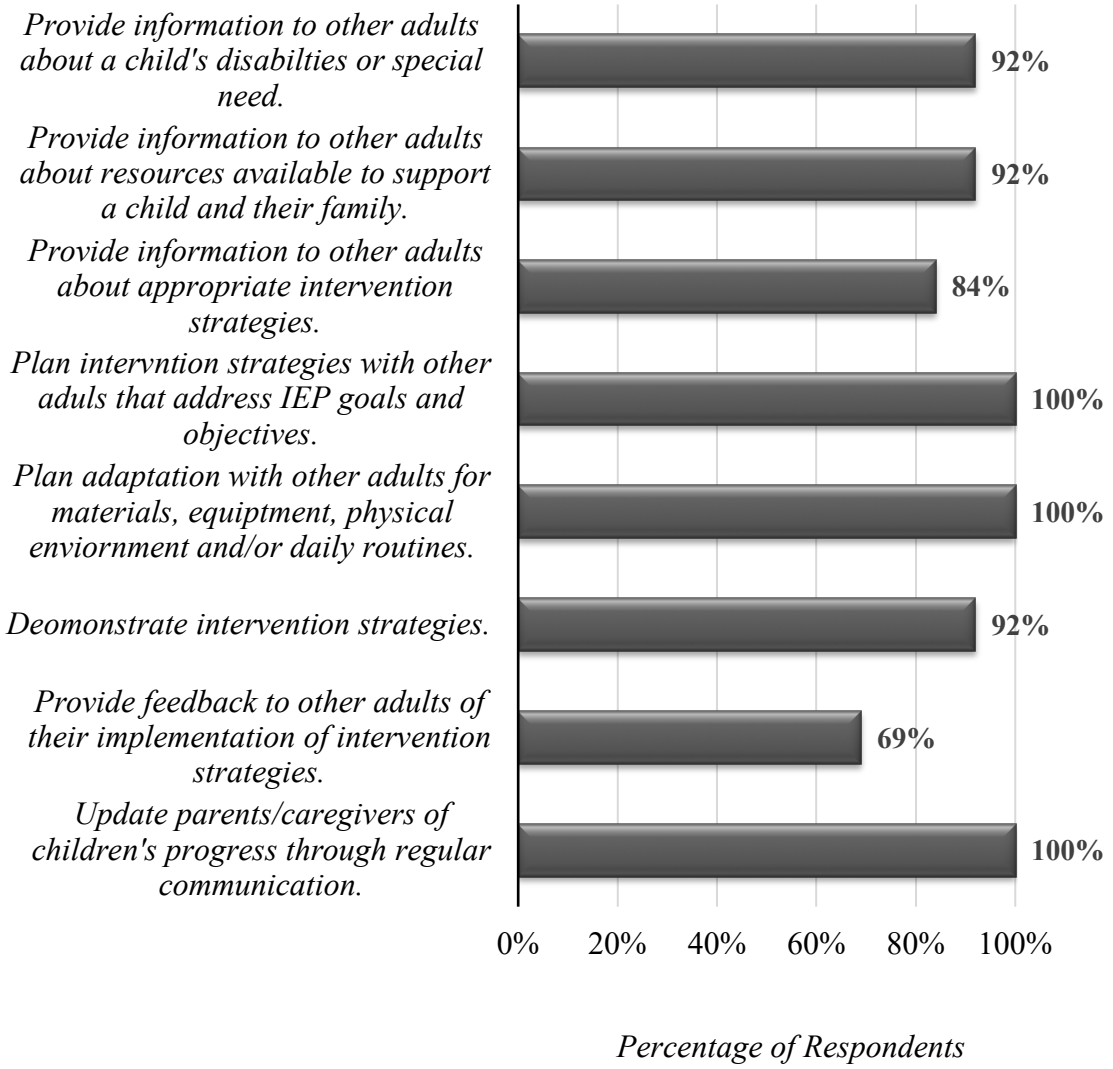
Service Delivery Model	***Number of Students on Caseload***	***Number of students who receive both ECSE and SLP services***
Interdisciplinary	0-5	0-5
Interdisciplinary	6-10	6-10
Interdisciplinary	6-10	6-10
Interdisciplinary	6-10	6-10
Interdisciplinary	6-10	6-10
Interdisciplinary	6-10	6-10
Interdisciplinary	6-10	6-10
Interdisciplinary	6-10	11+
Interdisciplinary	11+	0-5
Interdisciplinary	11+	11+
Interdisciplinary	11+	11+
Itinerant	11+	11+
Itinerant	11+	11+

From the five respondents who have indicated to have a caseload of 11 or more students, three of them work within an interdisciplinary service delivery model. Both service delivery models are represented equally from the four participants who have 11 or more students receiving early childhood services and speech services.

4.7.2 Roles and Responsibilities as an ECSE *(Questions 8-11)*

The following figures (Figures 8 - 11) represent the respondent's roles and responsibilities as an ECSE. The tasks represented in the questionnaire are not specific to the roles and responsibilities of supporting children with SLI or DD, but rather as an overall understanding of the day to day responsibilities of and ECSE. These tasks were divided into four categories; Consultant to other adults, Assessor/Monitor, Team Member and Direct Service Provider.

Figure 8: ECSE-Consultant to other Adults *(Question 8)*



As seen in Figure 8, all thirteen respondents reported that their daily tasks involve planning intervention strategies and adaptations. Additionally, many respondents indicated their role as one who provides information to other adults about a child's disability (92%), resources available (92%), whilst 100% of respondents indicated that it is their responsibility to update parents/caregivers of children's progress. Nine respondents (69%) reported that providing feedback to others about their implementation of intervention strategies as part of their role as an ECSE, whilst eleven respondents (84%) suggested their role included providing information to other adults about appropriate intervention strategies.

Figure 9: ECSE- Assessor/Monitor *(Question 9)*

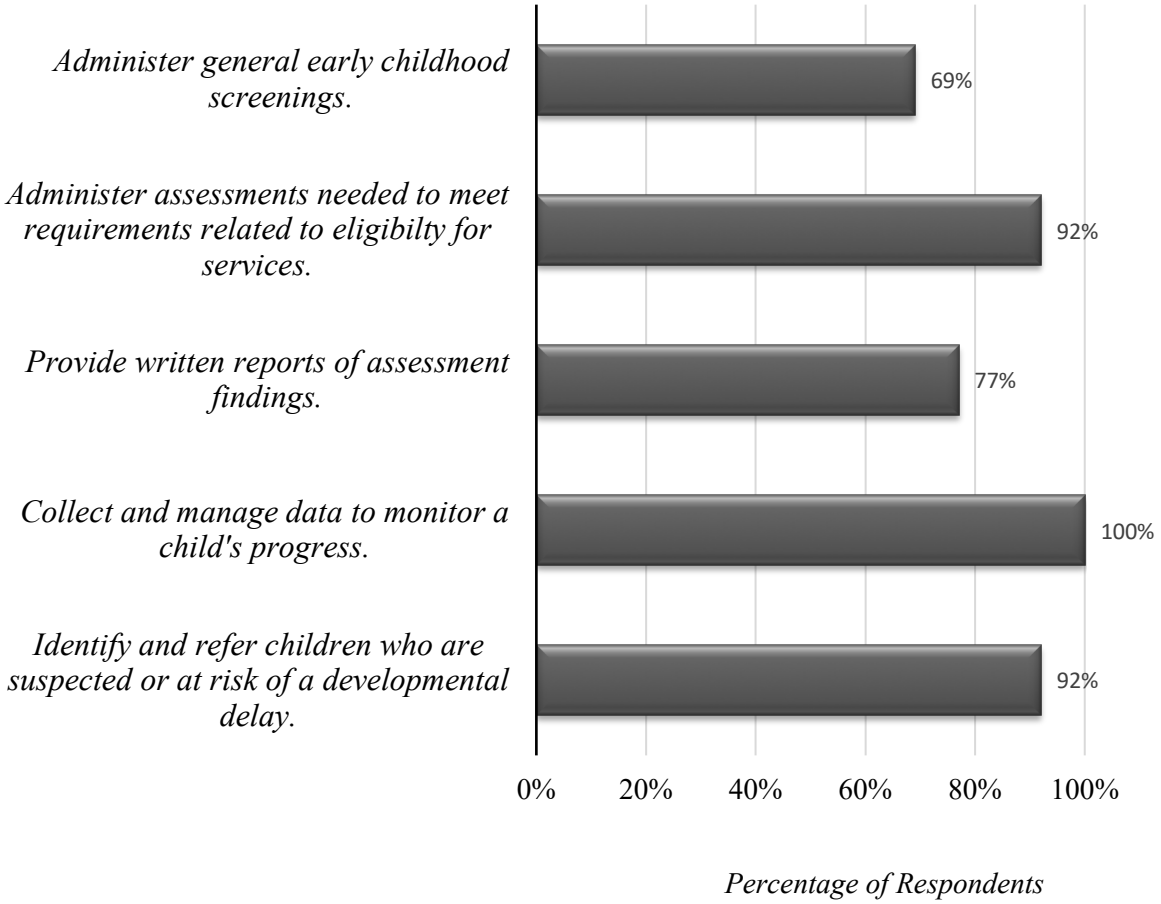


Figure 9 provides information about the roles ECSE's play in assessment and monitoring for their students. Many respondents (92%) refer children for and administer assessments needed to determine eligibility for special education services with 77% of respondents providing written reports of their assessment findings. However, 69% of respondents are involved in the administration of general early childhood screenings. This may be due to different service delivery models, as itinerant positions may solely focus on assessment to determine eligibility for special education services, whilst interdisciplinary ECSE's may be involved in the screening of all children enrolled in their early childhood program. All thirteen respondents indicated their roles to include collecting and managing data on student progress.

Figure 10: ECSE - Team Member *(Question 10)*

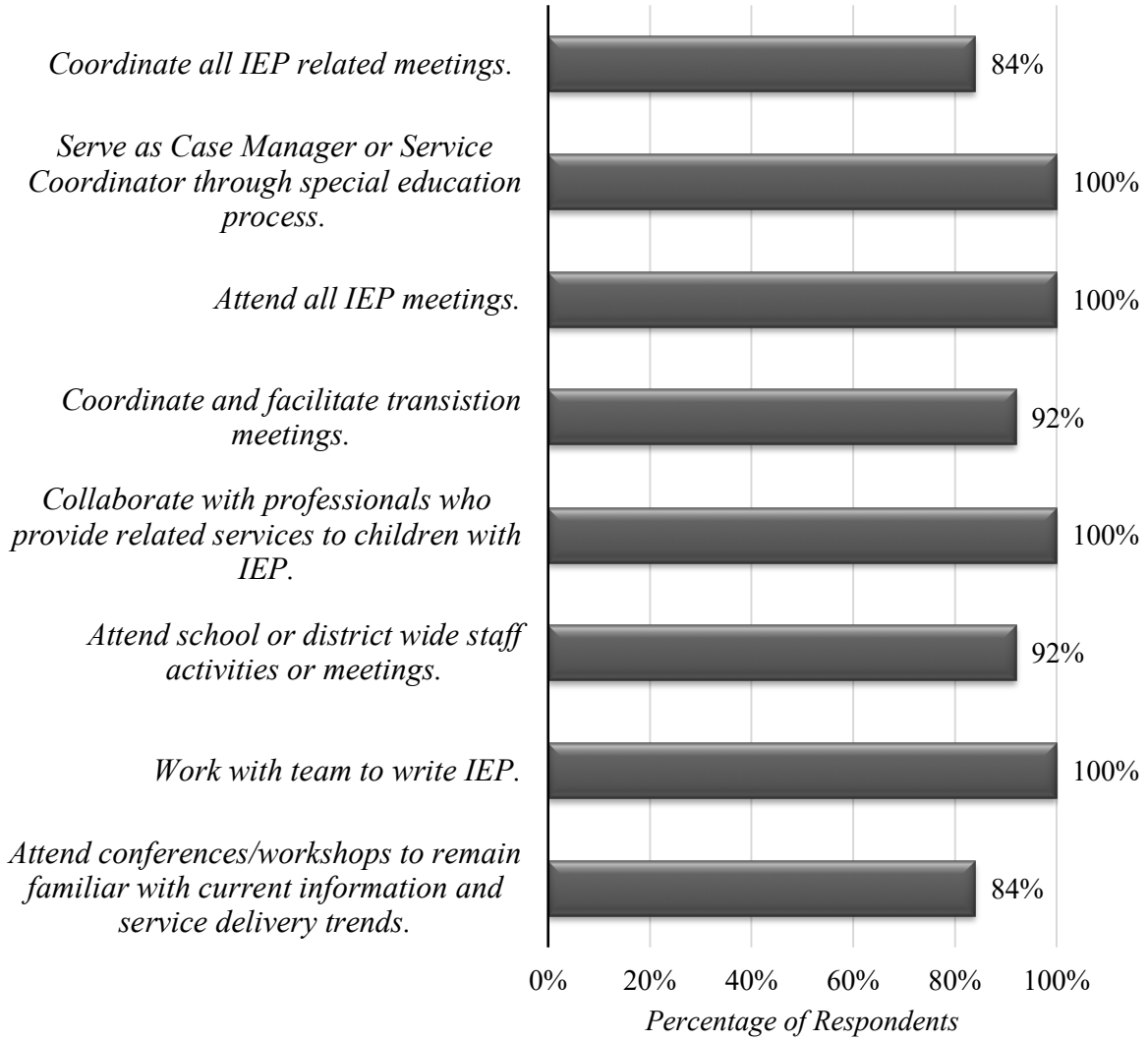


Figure 10 indicates that most ECSE's are consistent with one another and share the same roles and responsibilities as a member of the early childhood team. All thirteen respondents specified their role as Case Manager/Service Coordinator who attends all IEP meetings and collaborates with other professionals providing related service, working together to write IEP's, with 84% (n=11) of respondents indicating their involvement in coordinating all IEP associated meetings. All but one respondent (92%) suggested they play a role in coordinating transition meetings (Part C to Part B when entering preschool). Twelve respondents (92%) attend school or district-wide staff meetings, whilst 84% attend conferences and workshops, keeping familiar with current service delivery trends.

Figure 11: ECSE- Direct Service Provider *(Question 11)*

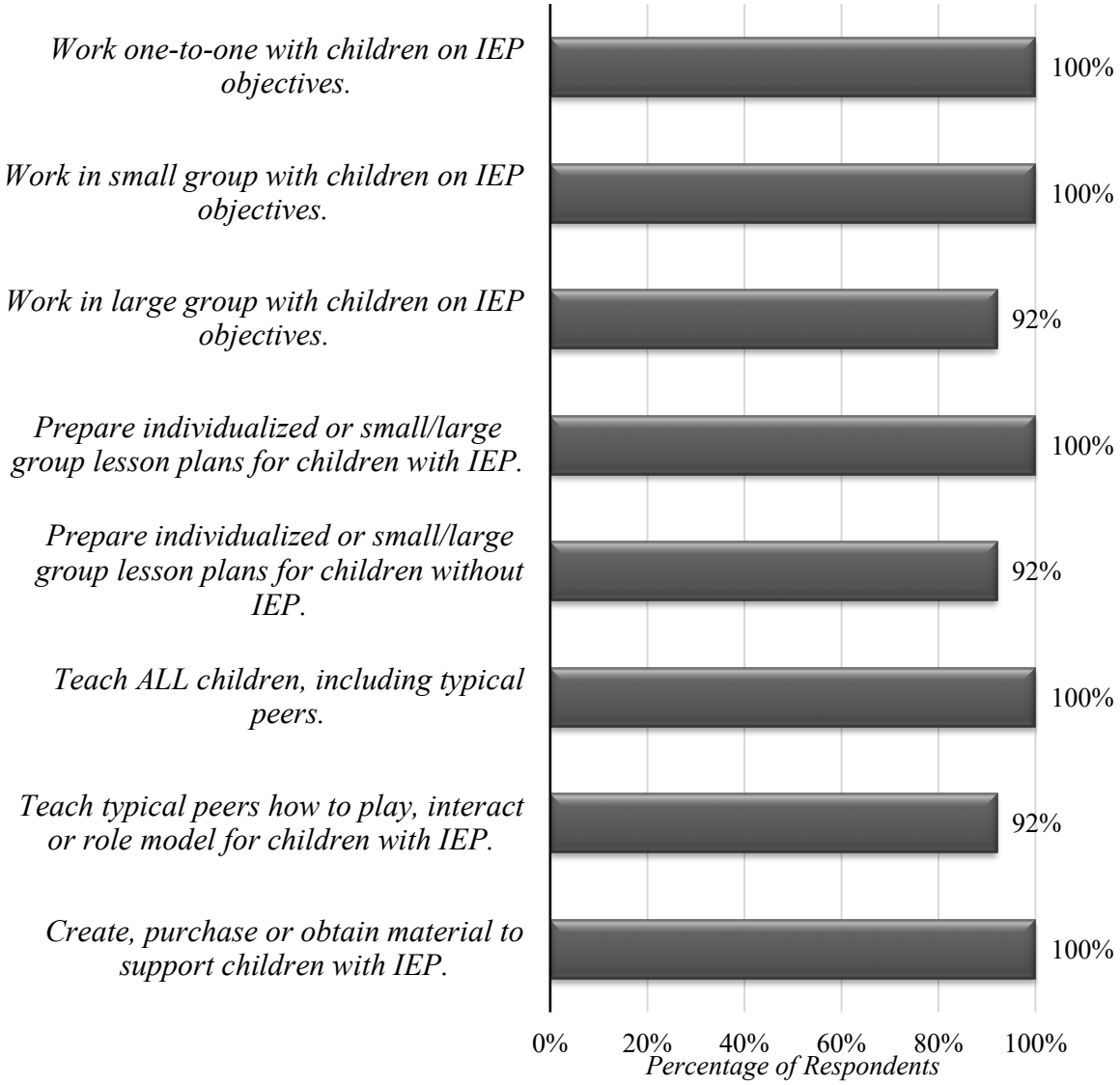


Figure 11 represents ECSE's roles and responsibilities as a direct service provider within the classroom. All thirteen respondents have reported on their involvement of working with students one-to-one, or in a small group to address IEP objectives. Twelve respondents work in large group settings to address their IEP objectives. Respondents also suggest that their involvement with students does not only include children with an IEP but also those who are typically developing. Overall, these responses indicated a steady pattern of ECSE's daily tasks to involve planning, preparing and teaching activities directly to young children.

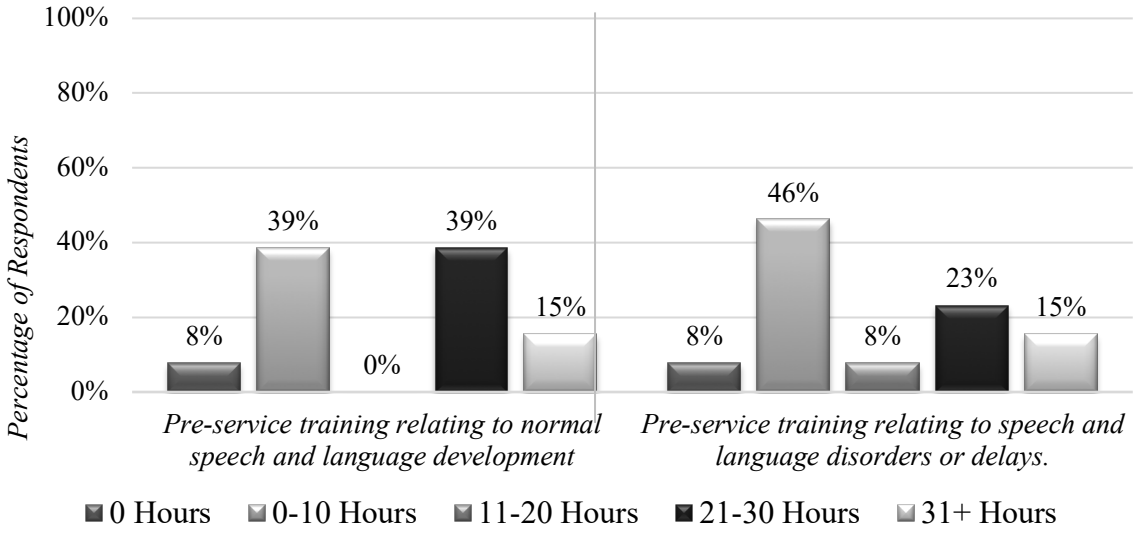
4.7.3 Role in supporting students with SLIs *(Questions 12 and13)*

All respondents indicated to have had experience supporting children with speech or language impairment. 69% (n=9) suggested having "quite a lot" experience working with articulation/speech sound disorders, whilst 100% (n=13) have had "quite a lot" experience working with students with receptive and expressive language disorders. Furthermore, 85% (n=11) of respondents indicated as having "quite a lot" experience working with students on the use of language a social context, whilst 15% (n=2) indicated having "a little" or none. These experiences were described by participants as; identification of children with speech or language impairments (31%), assessing to determine eligibility for children with SLI (23%), direct one-to-one services for children with SLI (69%), planning activities to support children with SLI (85%), collecting data and reporting on progress in relation to children with SLI (69%), and incorporating strategies taught to them by SLP in natural environment (8%).

4.6.4 Pre-Qualification Training

Figure 12 demonstrates that all but one of the respondents (n=12) reported to have at least one hour of pre-service training in both normal speech and language development and speech or language impairments or delays. Seven (54%) of the respondents had 20 or more pre-service training hours in normal speech and language development compared to the five (38%) respondents who have had 20 or more hours in speech or language impairments or delays. Additionally, 47% (n=6) of respondents have received 20 or less training hours in normal speech and language development, compared to 69% (n=9) receiving 20 or fewer hours in speech or language impairments or delays. Overall, ECSE's appear to be earning more training in normal speech and language development in their initial training than they are in speech or language impairments or delays.

Figure 12: *Hours of Preservice Training for ECSEs* (*Questions 14 and16)*



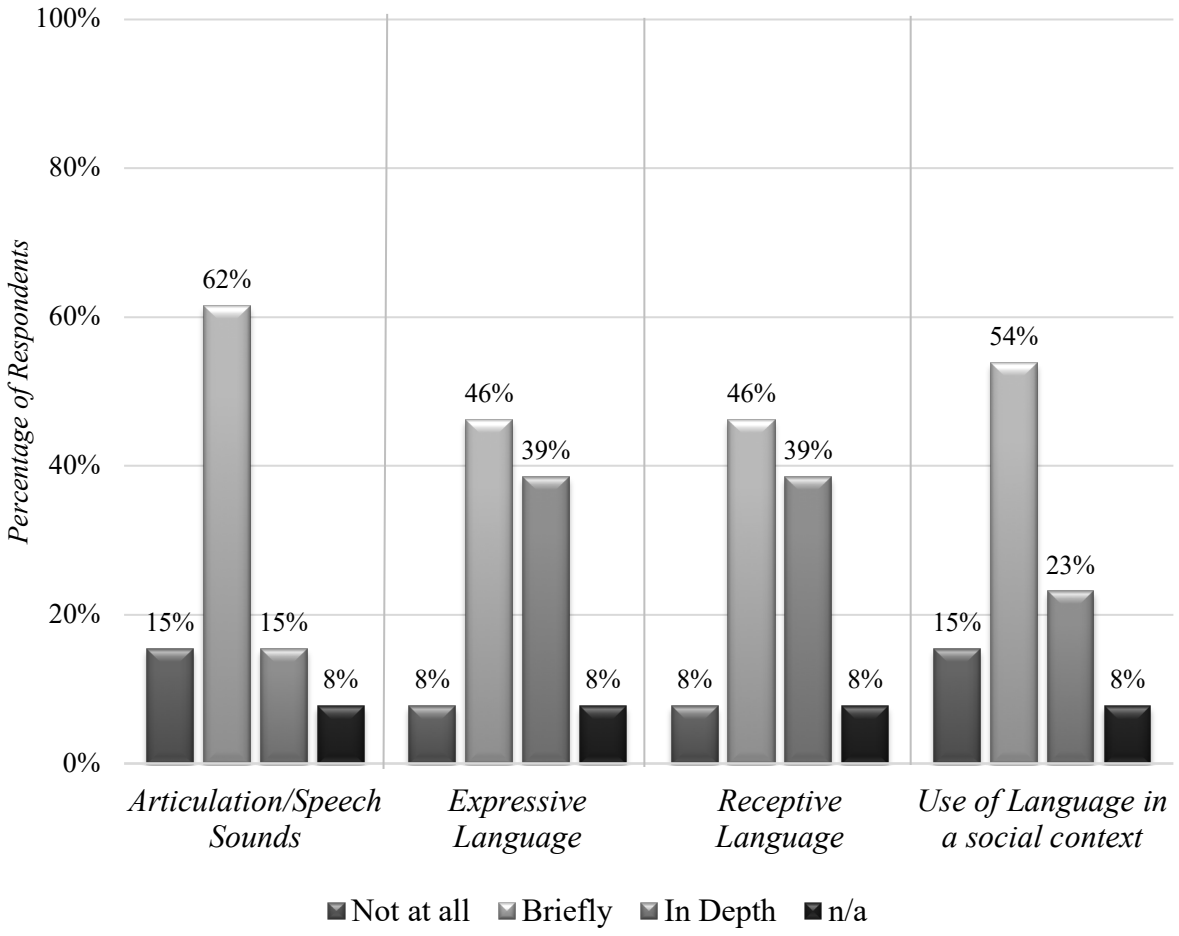
Respondents reported that their training was delivered primarily by either the general course lecturer, special education lecturer, speech and language therapist, or a combination of all three. As seen in Table 5, most of the training relating to normal speech and language development as well as speech or language impairments was delivered by a speech-language therapist.

Table 5: *Delivery of Training for ECSE's (Questions 15 and 17)*

	General Course Lecturer	***Special Education Lecturer***	***Speech Language Therapist***	***Missing***
Training relating to normal speech and language development.	31%	38%	46%	7.7%
Training relating to speech or language impairments or delays.	31%	31%	69%	7.7%

Respondents followed this by describing what aspects of speech and language development were covered in training they had received within the areas of; Articulation/Speech Sounds, Expressive Language, Receptive Language, and the Use of Language in a Social Context. As seen in Figure 13, most (39%) of the in-depth training received was in receptive and expressive language development, followed by (23%) in the use of language in a social context, with only two (15%) respondents receiving in-depth training in articulation/speech sound development. However, eight participants (62%) received training in articulation/speech sound development 'briefly'. Those who indicated "n/a" accounted for respondents who had not received any preservice training in speech and language development, meaning two of the respondents (15%) received no pre-service training in articulation, and the use of language in a social context, whilst one (8%) receive no training in expressive and receptive language.

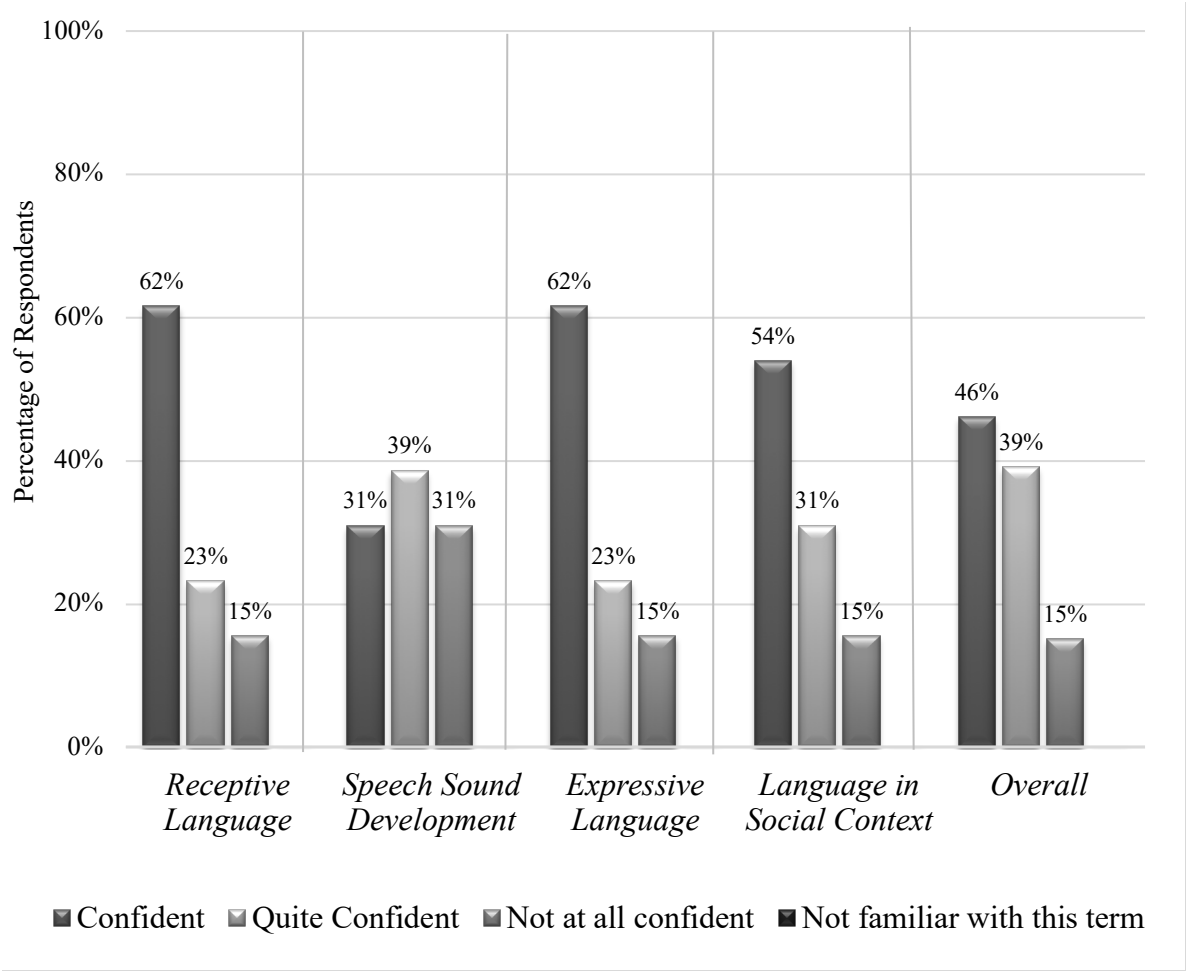
Figure 13: *Areas of Speech and Language covered in preservice training (Question 18)*



4.7.5 Initial Training and Confidence (Question 22)

For each element of speech and language development (Receptive, Expressive, Articulation, Social Context), respondents could choose ‘confident’, ‘quite confident’, ‘not at all confident’ or ‘I’m not familiar with this term’. Respondents felt most confident about expressive and receptive language which draws back to their reports about the level of coverage in their initial training as well as the number of hours related to normal speech and language development (see Figure 14). Respondents indicated to have lower levels of confidence in the areas of speech sound development, which could suggest an association with fewer hours and coverage of the topic in their initial training. None of the respondents were unfamiliar with any of the areas of speech/language development, which may suggest higher levels of knowledge.

Figure 14: *ECSEs Initial Training Confidence Levels (Question 22)*



Under half (46%) of respondents reported feeling overall 'confident' about supporting children with speech or language impairments, with 39% (n=5) feeling quite confident. Two respondents (15%) reported having no confidence at all. Of these two, one respondent had received 0 hours of training in both normal speech development and speech or language impairments, whilst the other only received 0-10 hours in overall speech and language training.

Figures 15 and 16 on the next page explore the relationship between pre-service training and overall confidence in supporting children with SLI. From this, we can see one respondent who did not receive any pre-service training was not confident at all. However, four respondents who received 1-10 hours of training were either confident or quite confident. From Figure 15 we can see that over half (n=7) of the participants felt more confident and have more hours of pre-service training in normal speech and language development. Figure 16 illustrates that participants with 20 hours or less of pre-service training in speech or language impairments remained confident in their ability to support young children with SLI

Figure 15: *Pre service training (normal language development) and Confidence (Question 14 and 22)*

How many hours of pre-service training relating to normal speech and language development did you receive? (based on 1 college credit hour = 10 hours)	*Overall ability to support children with speech or language impairments*		
	Confident	**Quite Confident**	**Not at all Confident**
0 hours	0	0	1
0-10 hours	1	3	1
11-20 hours	0	0	0
21-30 hours	4	1	0
31+ hours	1	1	0
Other	0	0	0

Figure 16: *Pre-Service Training (Speech or language impairments) and Confidence (Question 16 and 22)*

How many hours of pre-service training relating to speech or language impairments or delays did you receive? (based on 1 college credit hour = 10 hours)	*Overall ability to support children with speech or language impairments*		
	Confident	**Quite Confident**	**Not at all Confident**
0 hours	0	0	1
1-10 hours	2	3	1
11-20 hours	0	1	0
21-30 hours	3	0	0
31+ hours	1	1	0
Other	0	0	0

4.7.6 Post-Qualification Training (Question 19 and 20)

From the thirteen respondents, seven (54%) indicated that they had not received any post-qualification training in speech and language development or disorders. The remaining six respondents (46%) were asked to describe the training they received including; how many hours, who delivered the training, and the content as it relates to speech and language development or disorders. Below are the respondent's replies.

1. *"18 credits in Speech/Language development at the Uniersity of South Florida. Prerequisites needed for a masters in Speech or language impairments."*
2. *"Course: Motor speech disorders; 3 Credits; PhD SLP; Motor speech disorders related to brain development, assessment, causes and treatments."*
3. *"I chose to attend 2-3 trainings on this at conferences. 1-6 hours."*
4. *"Communication Matrix, Every Move Counts, LETTRS, Communication device training."*
5. *"I have received indirect training through my attendance in Clinical Fellowship meetings and our district wide Speech-Language Pathologist meetings that are held every month. Generally these meetings have covered district procedures and expectations (e.g., writing IEP goals, tracking student progress, etc.) and specific strategies or tools related to therapy implementation (e.g., evidence based practice in articulation therapy, tools for pragmatic/social language development and therapy, etc.)"*
6. *"Speech Path development training."*

4.7.7 Training Needs (Question 21)

In this section, respondents were asked to indicate if they felt they received adequate training regarding children's speech and language development in their pre-service program and post qualification. The following tables (Tables 6-10) outline the relationship between respondent's satisfaction of training in association with how many hours of training they have received.

From Table 6, we can see that respondents who have had fewer hours of pre-service training were not as satisfied as those with more hours. However, only two respondents (15%) felt a strong satisfaction about the training they received, which accounted for 21-30 hours. Contrary to respondents feeling more confident with fewer hours of training in normal speech and language development, Table 7 proposes a higher level of satisfaction regarding the training received in speech or language impairments or delays, even when respondents had received fewer hours.

Table 6: *ECSEs Pre Service Hours and Satisfaction of Training: Typical Language Development (Question 14 and 21)*

Question: How many hours of pre-service training relating to normal speech and language development did you receive?	*Question: I received adequate training regarding children's speech and language typical development in my pre service program.*				
	Strongly Disagree	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**
0 hours	**1**	0	0	0	0
0-10 hours	**1**	**1**	0	**3**	0
11-20 hours	0	0	0	0	0
21-30 hours	0	0	**1**	**2**	**2**
31+ hours	0	0	0	**2**	0
Other	0	0	0	0	0

Table 7: *ECSE Pre Service Hours and Satisfaction of Training: Speech/Language Disorders (Question16 and 21)*

Question: How many hours of pre-service training relating to speech or language impairments or delays did you receive?	*Question: I received adequate training regarding children's speech or language impairments/delays in my pre service program.*				
	Strongly Disagree	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**
0 hours	**1**	0	0	0	0
1-10 hours	**1**	**1**	0	**3**	**1**
11-20 hours	0	0	0	0	**1**
21-30 hours	0	0	**2**	**1**	0
31+ hours	0	0	0	**2**	0
Other	0	0	0	0	0

Many respondents (83%) who indicated as having had some post-qualification training in speech and language development or disorders agree that they have received adequate training. What is interesting about Tables 8 and 9 is of the seven respondents who have not had any post-qualification training, two (29%) agree or strongly agree that they are satisfied with their post-qualification training in regards to both typical speech and language development and speech or language impairments or delays. Furthermore, as Table 10 on page 81 suggests, these respondents who have had no post-qualification training, and have expressed their satisfaction with this training, have also indicated to have had ‘quite a lot’ experience working with students.

Table 8: *ECSE Post-Qualification Satisfaction of Training: Typical Language Development (Question19 and 21)*

Question: Have you had any post-qualification training in speech and language development or disorders?	*Question: I received adequate training regarding children's speech and language typical development in post qualification.*				
	Strongly Disagree	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**
Yes	0	**1**	0	**5**	0
No	**2**	**2**	**1**	**1**	**1**

Table 9: *ECSE Post-Qualification Satisfaction of Training: Speech/Language Disorders (Question19 and 21)*

Question: Have you had any post-qualification training in speech and language development or disorders?	*Question: I received adequate training regarding children's speech or language impairments/delays in post qualification.*				
	Strongly Disagree	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**
Yes	0	**1**	0	**4**	**1**
No	**2**	**2**	**1**	**1**	**1**

Table 10: ECSEs Individual Post-Qualification Training and Experience (Questions, 18, 19 and 21)

	Respondent 1	***Respondent 2***
Question: Have you had any post-qualification training in speech and language development or disorders?	No	No
Question: I received adequate training in regards to children's speech or language impairments/delays in post qualification.	Strongly Agree	Agree
Question: Can you please describe any experience you may have had where you have supported children with speech or language impairments by specifying 'not at all', 'a little', 'quite a lot', or 'I'm not sure' for the following categories;		
Articulation/Speech Sound Development	Quite a lot	Quite a lot
Expressive Language Development	Quite a lot	Quite a lot
Receptive Language Development	Quite a lot	Quite a lot
Use of Language in a Social Context	Quite a lot	Quite a lot

4.7.8 ECSE's Knowledge of Speech and Language Development (Question 23)

This was the final question from the questionnaire:

> *This section will consist of examples of children who may display characteristics of speech and language disabilities. I don't expect you to make a diagnosis, just imagine that this child had just joined your setting and you have made these observations over a few weeks. Please answer these based on your knowledge of speech and language development in young children. For each child, please indicate whether you feel the child has 'articulation delays', 'expressive language delays', 'receptive language delays', 'social language delays', or 'developmentally appropriate'.*

Six case studies of children were used to assess the knowledge of the respondent's identification skills of speech and language development. The first child was 4 years of age with difficulties

producing speech sounds. The second child was also 4 years of age who demonstrated developmentally appropriate speech and language skills. This child was described as a shy child in large groups, but attentive and follows directions, as well as mixing up some speech sounds and has trouble pronouncing longer words but is stimulable to correct his errors. The third child was 5 years of age with a deficient vocabulary. The fourth child was 3 years of age who also demonstrated developmentally appropriate skills with a large vocabulary, quickly understood and followed 1-2 step directions. The fifth child was 4 years of age who demonstrated receptive language delays with difficulty following directions or answering questions. The final child was 5 years of age with a social language delay, who uses 5+ word sentences and is understood by most, but who does not have many friends and finds it difficult to share (see Appendix 1 for full case studies). All respondents correctly identified Child 1 and Child 5, whilst all but one respondent (92%) recognised Child 6 correctly (see Table 11). However, almost half of respondents (46%) identified Child 2 incorrectly, with an even number of incorrect answers between 'expressive language delay' and 'social language delay.

Table 11: *ECSEs Case Study Scores as Cohort (Question 23))*

	Correct	**Incorrect**
Child 1: Articulation Delay	100%	0%
Child 2: Developmentally Appropriate	54%	46%
Child 3: Expressive Language Delay	85%	15%
Child 4: Developmentally Appropriate	85%	15%
Child 5: Receptive Language Delay	100%	0%
Child 6: Social Language Delay	92%	8%

Six of the thirteen respondents (46%) correctly identified all six children. Three respondents answered less than 70% correct (see Figure17). According to the data presented in Figure 17, the number of initial training hours received concerning speech or language impairments did not impact the respondent's ability to answer correctly. Five (39%) respondents who only had 1-10 hours of training scored above 80% on the case studies. The one respondent who had 31

or more hours scored 100%, and two out the three respondents who had 21-30 hours also scored 100%.

Interestingly, the one respondent who did not have any hours of training was not the lowest scoring in the case studies. Additionally, five of the six respondents who answered all case study questions correctly had specified that they had received post-qualification training in speech and language development or disorders. All three respondents who answered less than 70% of case study questions correctly, specified that they had not received any post-qualification training. Of the four respondents who scored 83% on the case study questions, just one had received post-qualification training.

Figure 17: *ECSE's Individual Case Study Scores (Question 16, 19 and 23)*

	Hours of Pre-Service training relating to Speech or language impairments	***Post-Qualification training***	***Individual Case study scores***
Respondent 7	1-10	No	50%
Respondent 4	0	No	67%
Respondent 9	21-30	No	67%
Respondent 6	1-10	No	83%
Respondent 8	1-10	No	83%
Respondent 13	1-10	Yes	83%
Respondent 5	11-20	No	83%
Respondent 3	1-10	Yes	100%
Respondent 10	1-10	Yes	100%
Respondent 11	21-30	No	100%
Respondent 12	21-30	Yes	100%
Respondent 1	31+	Yes	100%
Respondent 2	31+	Yes	100%

4.7.9 How do these factors inter-relate?

This section explores the relationship between factors such as caseload and confidence (see Table 12), confidence and test scores, service delivery models and confidence or the expressed need for training and test scores (see Table 13 on pg. 85).

Table 12: *Caseload in Relation to Overall Confidence (Question 7 and 22)*

Number of students on your ECSE case load who also receive speech and language services?	*Overall ability to support children with speech or language impairments*			
	Confident	**Quite Confident**	**Not at all Confident**	**I'm not familiar with this term**
0-5	**2**	0	0	0
6-10	**3**	**2**	**1**	0
11+	**1**	**3**	**1**	0
No answer	0	0	0	0

The two respondents who indicated to feel 'not at all confident' worked with over six children who had received both ECSE and SLP services. Additionally, the two respondents who had under five students receiving both services indicated to feel overall confident in their ability to support a student with SLI.

Table 14 on page 86, lists the level of overall confidence, service delivery model, and the satisfaction of pre and post qualification training and individual test scores. From the six respondents who scored 100% on the case studies; all of them felt confident or quite confident in supporting children with SLI overall, four of them worked within an interdisciplinary service delivery model, 2 of them were undecided or unsatisfied with their pre-service training, and all but one of them felt and overall satisfaction with their post-qualification training. The three respondents who scored the lowest on the case studies all worked within an interdisciplinary service delivery model. There was an overall indication that these ECSE's were not as happy

with the training they received both pre-service and post-qualification. Two of the three felt overall confident in supporting young children's speech and language development, whilst one felt not at all confident.

Table 13: *Test Scores in Relation to Confidence, Service Delivery Model and Training Needs (Question 5, and 21-23)*

	Overall ability to support children with SLI	Service Delivery Model	I received adequate training regarding SLI in my preservice program.	I received adequate training regarding SLI post qualification.	Individual Case study scores
Respondent 7	Confident	Interdisciplinary	Agree	Disagree	50%
Respondent 4	Not at all Confident	Interdisciplinary	Strongly Disagree	Strongly Disagree	67%
Respondent 9	Confident	Interdisciplinary	Undecided	Disagree	67%
Respondent 6	Quite Confident	Interdisciplinary	Agree	Strongly Disagree	83%
Respondent 8	Quite Confident	Interdisciplinary	Agree	Agree	83%
Respondent 13	Not at all Confident	Interdisciplinary	Disagree	Disagree	83%
Respondent 5	Quite Confident	Itinerant	Strongly Agree	Strongly Agree	83%
Respondent 3	Confident	Interdisciplinary	Strongly Agree	Agree	100%
Respondent 10	Quite Confident	Interdisciplinary	Strongly Disagree	Strongly Agree	100%
Respondent 11	Confident	Interdisciplinary	Undecided	Undecided	100%
Respondent 12	Confident	Itinerant	Agree	Agree	100%
Respondent 1	Confident	Interdisciplinary	Agree	Agree	100%
Respondent 2	Quite Confident	Interdisciplinary	Agree	Agree	100%

4.7.10 Conclusions from ECSE Questionnaire

- The majority of ECSE's work within an interdisciplinary service delivery model and average 6-10 children on their caseloads.
- The majority of ECSE's have a Masters qualification, and over seven years of experience.
- Many students, who receive services from an ECSE under DD, also receive speech services under SLI.
- ECSE's support all students including typically developing students, those with DD and those with SLI.
- ECSE's support students with SLI primarily by planning activities and providing direct one-to-one services, as well as collecting and reporting on any progress made by their students.
- ECSE's receive more pre-service training in normal speech and language development than they do speech or language impairments and delays.
- The majority of ECSE's receive brief training in the area of Articulation, whilst the majority of in-depth training is in the area of Expressive and Receptive language, which are the two areas of language development that ECSE's also felt the most confident in supporting.
- The training needs are strongly linked with the amount of pre and post-qualification training and the overall confidence of ECSE's supporting young children with SLIs.

4.8 SLP Questionnaire Results

This section aims to explore the findings from the SLP questionnaire. The first section will address the setting and service delivery models for SLP's. This is followed with an overview of the roles and responsibilities SLP share (Research Question 2b, Section 3.4). The quantity and subject matter of SLP's pre- and post-qualification training is explored next (Research Question 2c, Section 3.4). Finally, case study responses are analysed to inquire about SLP's knowledge of DD in young children (Research Question 2a, Section 3.4). Section headings,

figures and tables are aligned with the question numbers from the questionnaire (Appendix 2), as seen in brackets.

4.8.1 Setting, Experience and Student Population of SLP's (Question 1-7)

Respondents from this questionnaire accounted for a total of nine speech and language therapist working with preschool aged students within a public school. The nine respondents resulted in representing a total of seven schools districts across the state of Colorado (see Table 14), with one respondent's information missing.

Table 14: *SLP Respondents by School District (Question 1)*

	Number of Respondents
Aurora Public Schools	2
Denver Public Schools	1
Cherry Creek Schools	1
Colorado Springs School District 11	1
Kiowa School District	1
Westminster School District	1
Douglas County School District	1
Missing	1

89% (n=8) of respondents had a Masters level qualification in speech and language communication disorders, with one respondent having a clinical doctorate in speech and language pathology. This was not a surprise as ASHA, requires the completion of a masters level degree programs to become a qualified speech and language therapist (www.asha.org). The respondent's qualifications were obtained across the United States accounting for seven identified universities, three of which were in the state of Colorado, with a remaining two missing responses. Additionally, 56% (n=5) of respondents indicating to have 10 or more years' experience working as an SLP, 22% (n=2) with 7-10 years, 11% (n=1) with 4-6 and 11% (n=1) with 0-3 years, the sample represented a cohort of experienced Speech and language therapists.

There was a mixture of settings indicated from the nine SLP respondents. Four of the respondents are working as an itinerant SLP in which they travel between schools or classrooms providing speech and language services to all ages of students, including preschool. Two are working as an itinerant SLP who moves between schools or classes providing services to only preschool aged students. Whilst the remaining three indicated as 'other' in which they described as "being employed full-time in one classroom", "School-Based Preschool SLP (do not travel)" and "Instructional Coach in ECE". From these responses, it is suggested that over half (55%) of the respondents work with preschool aged students only.

From Table 15, we can see that SLP's have larger caseloads in terms of initial students to whom they provide speech and language services too, with 89% serving 11 or more children and 11% serving just 0-5 students. It is unknown what the percentage of preschool-aged students could be accounted for within the caseloads of SLP's serving all ages of students. However, two of these SLP's serving all ages of students, have indicated to be serving the same number of students with SLI only as they are students with both SLI and ECSE services, which may suggest most of their students are in preschool receiving early childhood services. It is something of interest that 100% of respondents working with preschool aged students only, specified as having the same number of students receiving speech services, as those receiving both speech and ECSE services. Although these represent a range of students rather than an exact number, this information suggests that many students receiving speech services are also receiving ECSE services for DD or similar.

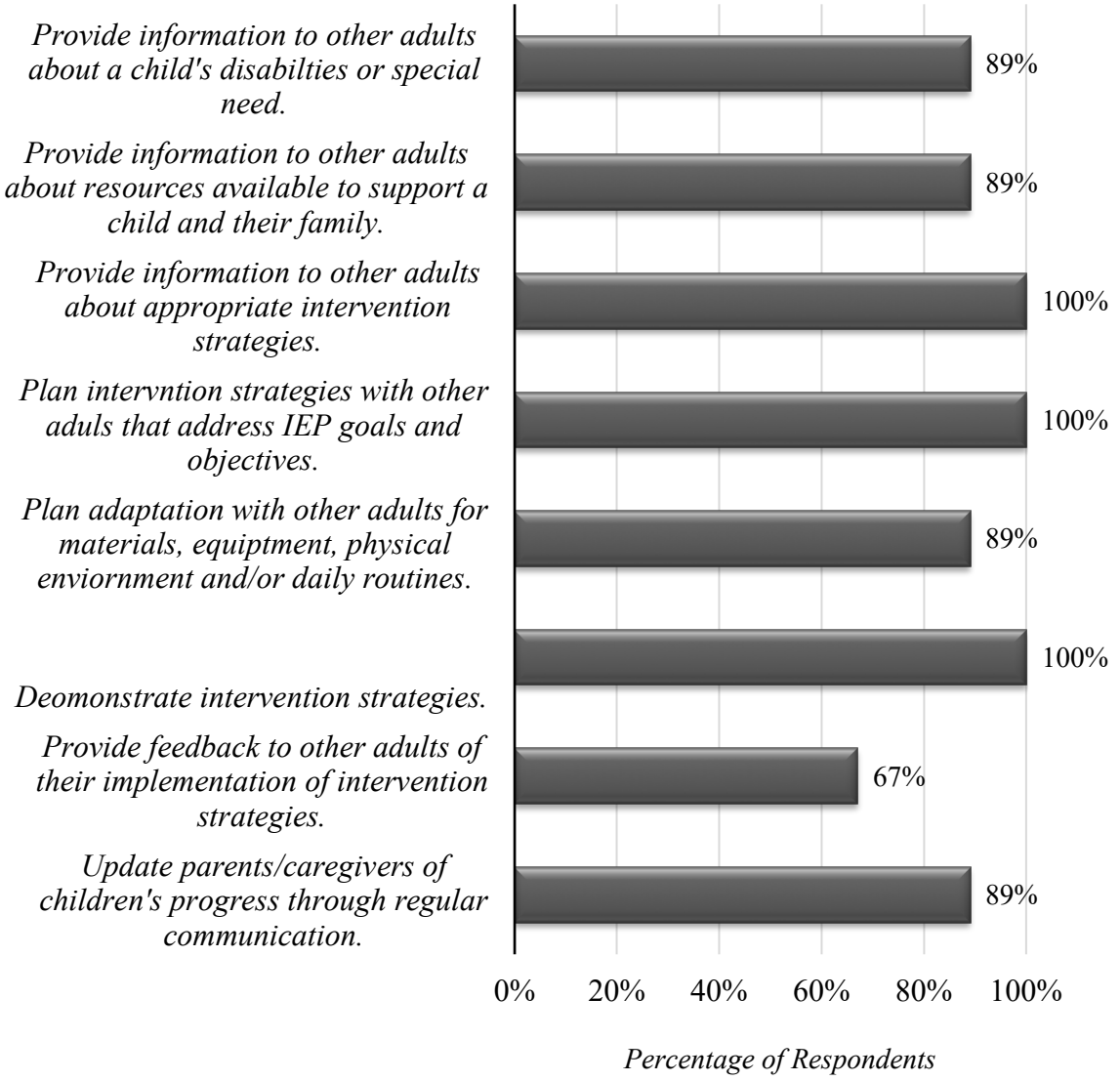
Table 15: *SLP Caseloads by Service Delivery Model (Question 5-7)*

Service Delivery Model	***Number of students on Caseload for Speech Services***	***Number of students receiving both Speech and ECSE services***
Preschool Age Students only	0-5	0-5
Preschool age students only	11+	11+
Preschool age students only	11+	11+
Preschool age students only	11+	11+
Preschool Age Students only	11+	11+
All Ages of Students	11+	0-5
All ages of students	11+	6-10
All ages of students	11+	11+
All Ages of Students	11+	11+

4.8.2 Roles and Responsibilities as an SLP (Question 8-11)

The following figures (18-21) represent the respondent's roles and responsibilities as an SLP. The tasks represented in the questionnaire are not specific to the roles and responsibilities of supporting children with SLI or DD, but rather as an overall understanding of the day to day tasks of an SLP. These tasks were divided into four categories; Consultant to other adults, Assessor/Monitor, Team Member and Direct Service Provider.

Figure 18: *SLP- Consultant to other Adults (Question 8)*



All nine respondents have reported that their daily tasks involve providing other adults information about appropriate intervention strategies, planning intervention strategies and demonstrating these strategies (see Figure 18). However, six indicate their responsibility was to give other adults feedback from these intervention strategies. All but one respondent assume the role of providing parents with information about their child's disability, available resources to support their child and family, and plan adaptations for their students.

Figure 19*: SLP- Assessor/Monitor (Question9)*

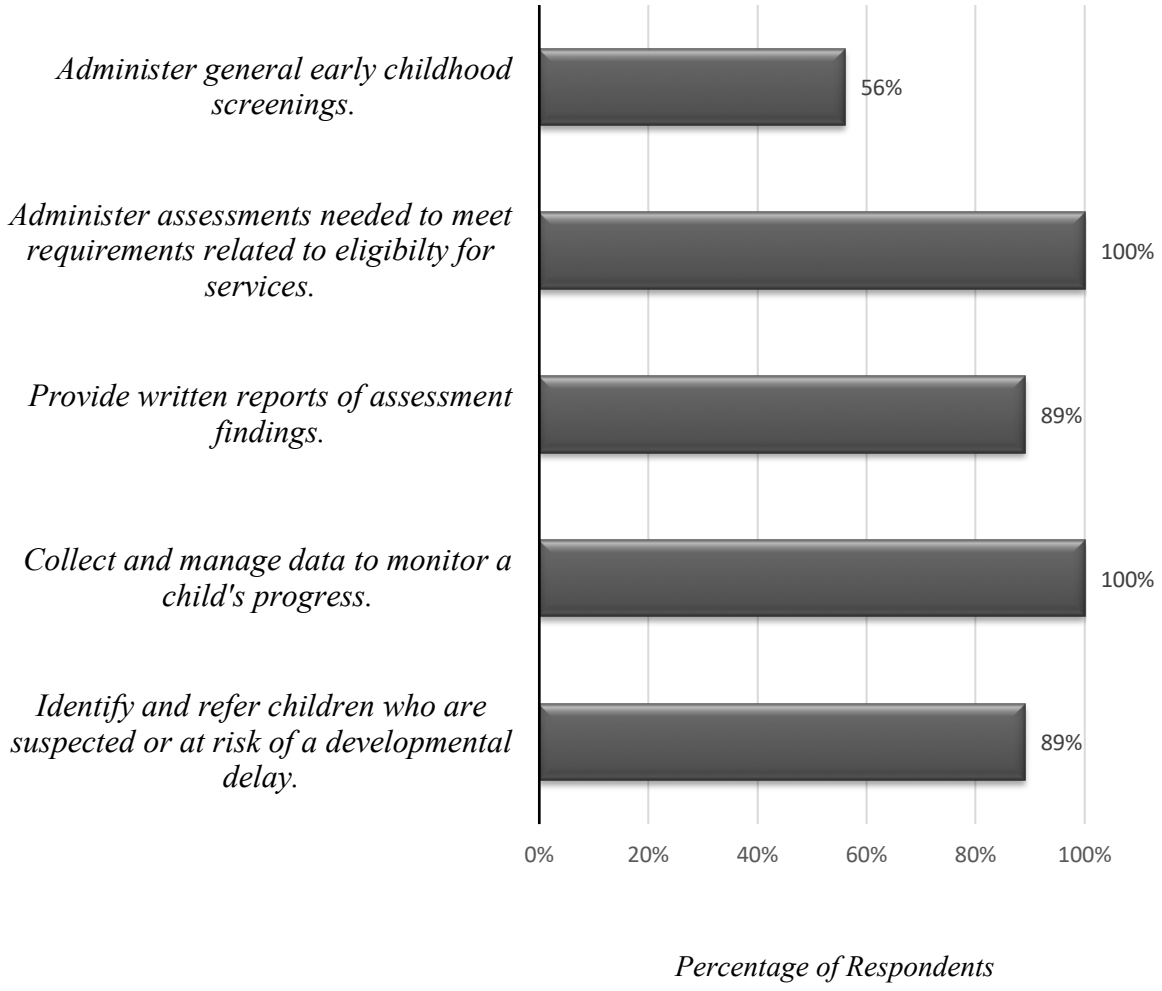


Figure 19 describes SLP's roles and responsibilities in regard to assessing and monitoring student progress. All respondents (100%) indicated their role in administering the assessments needed to determine eligibility for speech and language services, whilst eight (89%) indicate that they provide written reports of their assessment findings. Many respondents are involved with identifying and referring children who are at risk of a SLI. However, 56% (n=5) of SLP's take part in general ECE screenings. Finally, all participants suggest their day to day tasks involve collecting and managing data to monitor a child's progress, equivalent to the results of the ECSE questionnaire.

Figure 20: *SLP- Team Member (Question 10)*

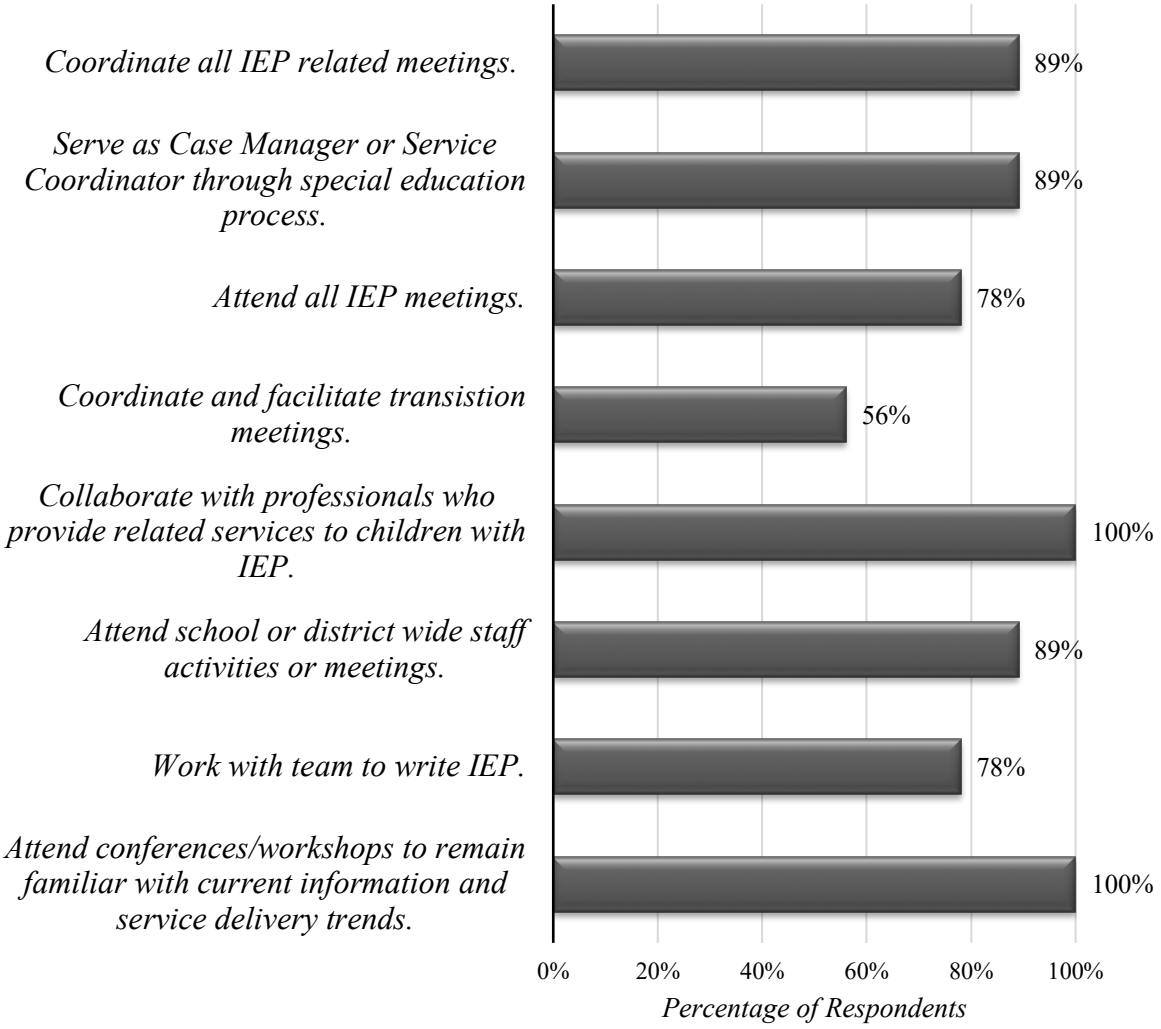
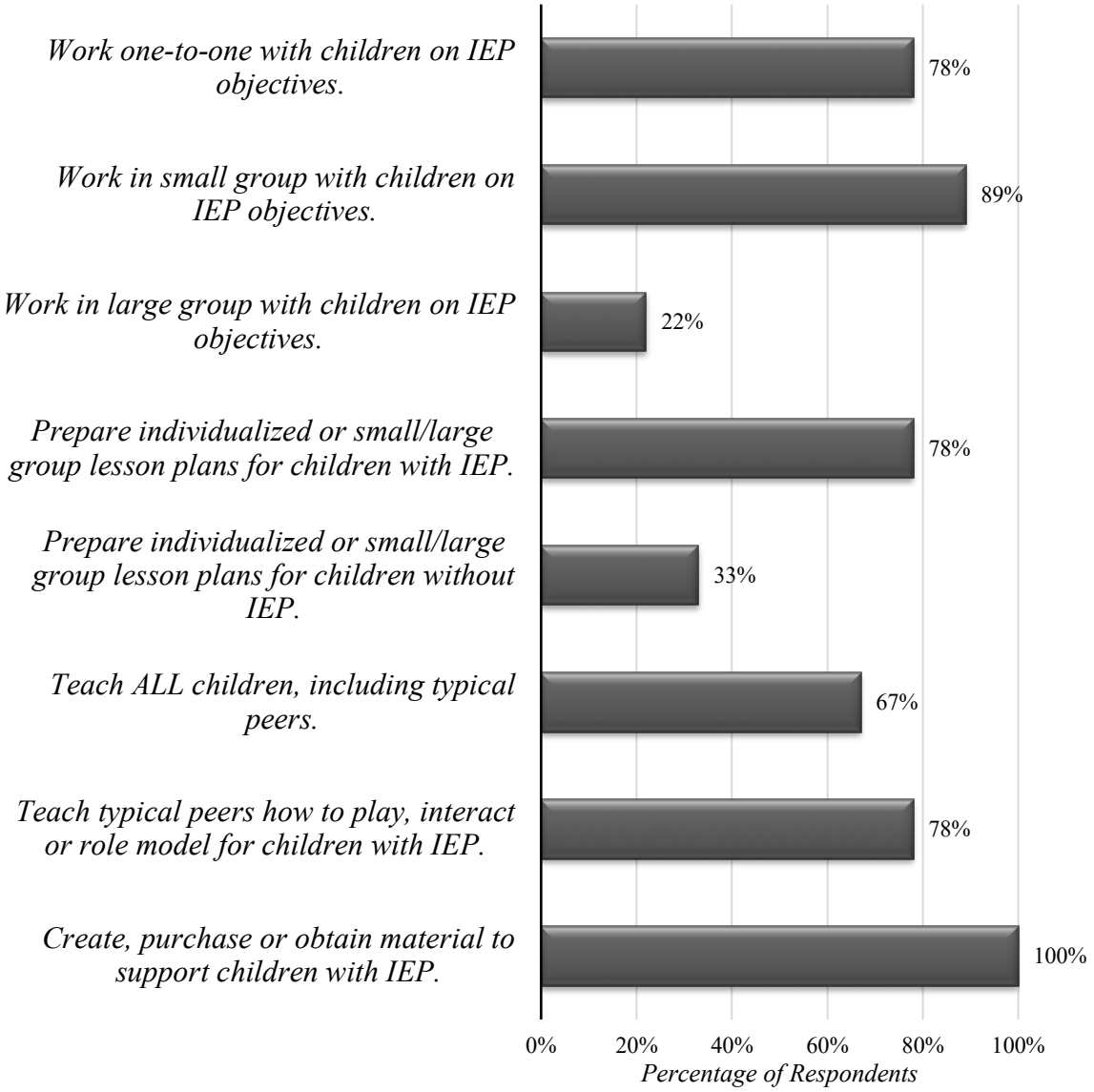


Figure 20 suggests that most SLP's are consistent and share the same roles and responsibilities as a member of the special education team. All nine SLP participants work in collaboration with other professionals who provide related services to young children with an IEP. The majority of SLP's advocated for their involvement to serve as the case manager or service coordinator (n=8), coordinate IEP related meetings (n=8), attend all IEP meetings (n=8), or to work with the team in writing a child's IEP (n=7), Different to ECSE's, more SLP's attend conferences/workshops on current service delivery trends (100%) than school or district-wide staff meetings or activities (89%). From these roles, SLP's have suggested they are least involved (56%) in the transition process (Part C to Part B).

Figure 21: *SLP- Direct Service Provider (Question 11)*



SLP's generally work with students on a one-to-one basis (n=7) or small group setting (n=8) rather than in large groups (n=2), on their IEP objectives (see Figure 21). The majority of SLP's (67%) prepare lessons and activities for students with SLIs or DD, and not for those who do not have an IEP. 78% (n=7) of SLPs teach typical peers how to play or interact for children with an IEP. Furthermore, six (67%) are educating typically-developing peers. All SLP's have indicated their involvement in creating, purchasing or obtaining material to support children with an IEP.

4.8.3 SLP's Role in Supporting Students with Early Childhood Special Education Needs (Question 12 and 13)

Overall, all nine SLP respondents indicated to have experience supporting children with early childhood developmental disorders or delays. Participants were asked to report which areas of early childhood development (social/emotional, cognitive, or adaptive/coping skills) they have worked with, by choosing 'not at all', 'a little', 'quite a lot' or 'I'm not sure'. 100% of participants have 'quite a lot' experience working with children on cognitive development, whilst 78% had quite a lot experience of working with children on their social and emotional development, followed by 67% who had quite a lot experience working with students on adaptive and coping skills.

Unfortunately, this data is slightly misleading as the next question asked respondents to describe how they support children with early childhood DDs by ticking all categories that apply. One respondent marked 'I do not support children with early childhood developmental disorders or delays', after suggesting they have had some experience with this in from the previous question. Seven (78%) of the respondents described their experiences to include; identification of children with DD, direct one-to-one or small/large group service for children with DD, planning activities to support children with DD, and collecting data and reporting on progress. Five (56%) of the respondents described their experience as using assessments to determine eligibility for children with early childhood DDs.

4.8.4 SLP's Pre-Qualification Training

All nine respondents indicated to have received at least one hour of pre-service training regarding typical early childhood development. Eight have received at least one hour of pre-service training relating to early childhood disorders or delays. Figure 22 on the next page demonstrates how many hours of pre-service training respondents received concerning both normal early childhood development, and early childhood disorders and delays. This suggests that SLP's receive more hours of training relating to early childhood disorders and delays, with 66% receiving 21 or more hours, in comparison to 44% receiving 21 or more hours in normal early childhood development.

Figure 22: *SLP Hours of Preservice Training (Question 14 and 16)*

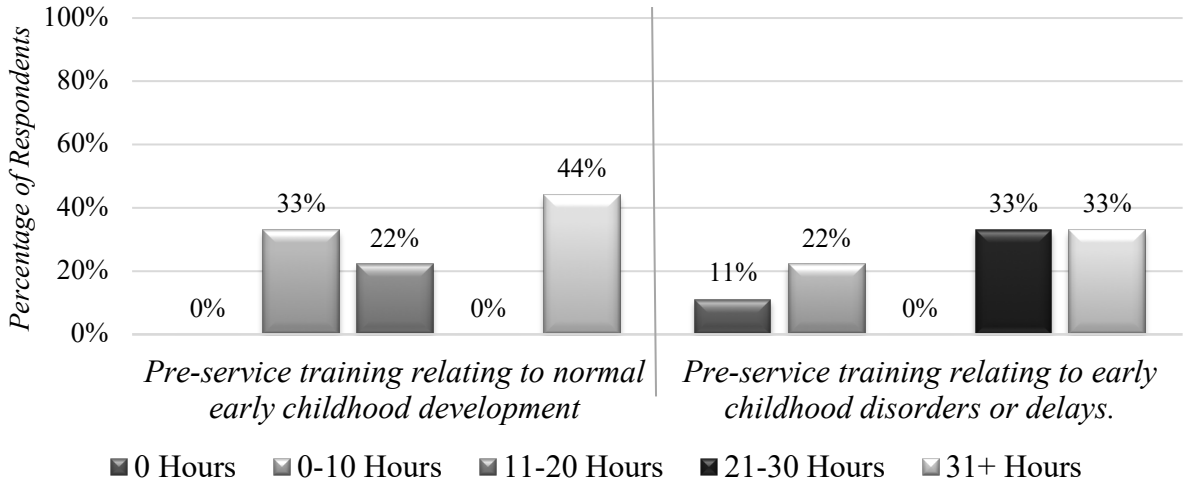


Table 16 represents hours of pre-service training in relation to the university or pre-service training institute of the participants. It is interesting to note all three universities from the state of Colorado offered a higher number of hours of initial training in both normal early childhood development as well as early childhood disorders/delays.

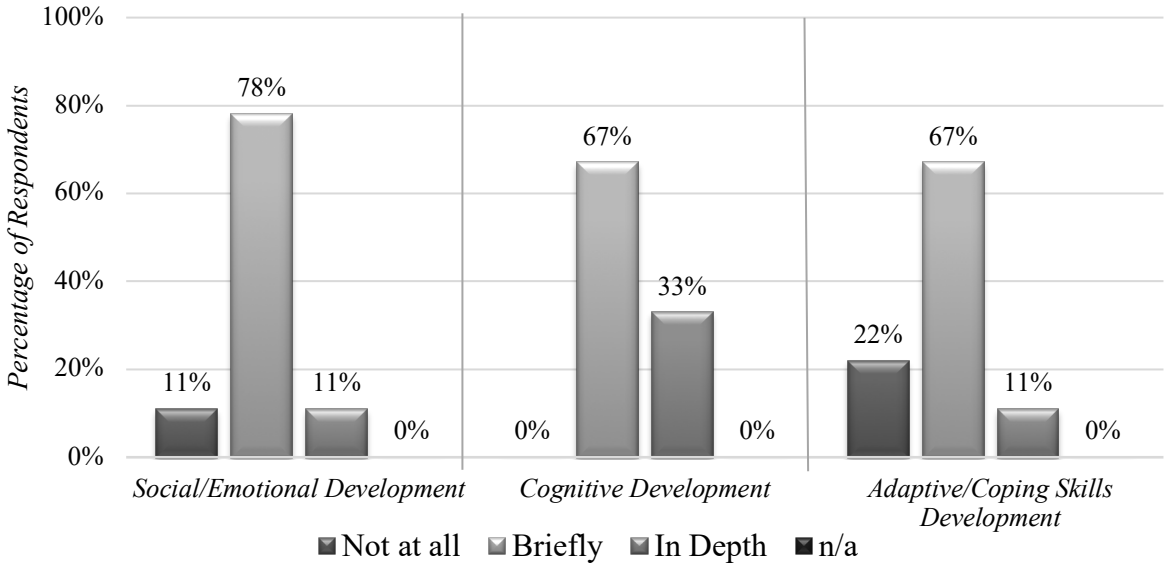
Table 16: *SLPs Hours of Pre-service Training by University (Question 4)*

Institution	***Number of Hours: Normal Early Childhood Development***	***Number of Hours: Early Childhood Disorders/Delays***
Colorado	11-20	21-30
Colorado	31+	21-30
Colorado	31+	31+
Michigan	31+	31+
Kansas	31+	31+
Utah	0-10	1-10
Georgia	0-10	0
Missing	0-10	1-10
Missing	11-20	21-30

Respondents reported that these trainings were delivered by the general course leader, special education lecturer, speech and language therapist, a visiting early years practitioner or a mixture of all. Instruction relating to normal early childhood development appeared to be regularly delivered from the general course lecturer (31%), the special education lecturer (23%) and the speech-language therapist (36%), with only 8% being delivered by a visiting early years practitioner. Whilst training relating to early childhood disorders appeared to be primarily delivered by the speech-language pathologist (50%), followed by the general education lecturer (25%), with only two respondents (17%) receiving this training from a special education lecturer.

Respondents were then asked to describe what aspects of early childhood disorders/delays were covered in training they had received within the areas of; Social/Emotional, Cognitive, and Adaptive/Coping Skills. The majority of participants were briefly trained in all three areas of early childhood development (see Figure 23) with the most in-depth training covering cognitive development, and the least amount of training in adaptive and coping skills. Participants were given the 'n/a' option if they received 0 hours of pre-service training in early childhood disorders/delays. However, one respondent who indicated to have received 0 hours of training, also indicated to have covered cognitive development 'briefly'.

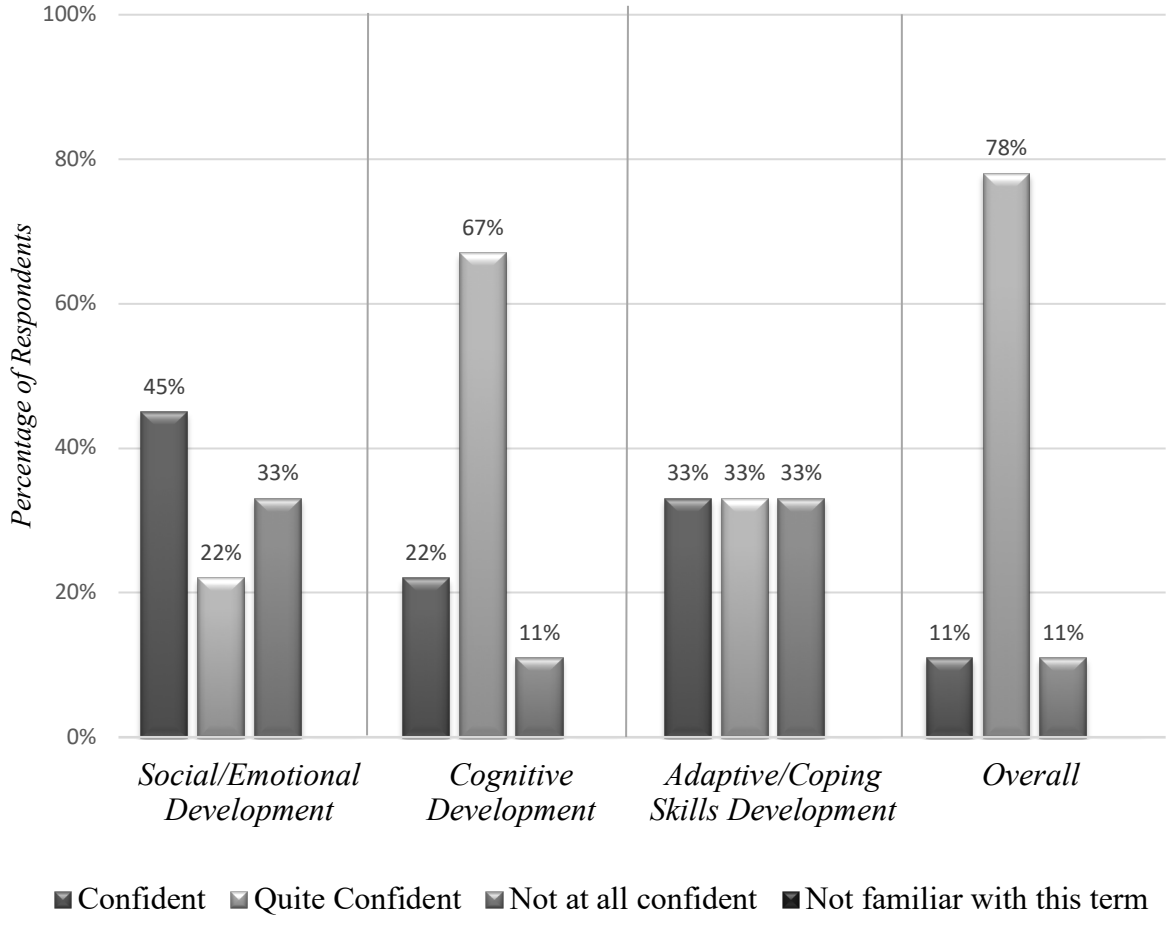
Figure 23: *Areas of Early Childhood Development Covered in SLP Preservice Training (Question 18)*



4.8.5 SLP Initial Training and Confidence (Question22)

For each element of early childhood development (social/emotional, cognitive, adaptive/coping skills), respondents identified their level of confidence by choosing 'confident', 'quite confident', 'not at all confident', or 'I'm not familiar with this term'. Overall, SLP's suggest a positive level of confidence in supporting young children with early childhood disorders or delays (see Figure 24). The majority of SLP's (67%) feel quite confident in the area of cognitive development, which is not surprising considering respondents claim in receiving the most in-depth or brief coverage in this area. Social/Emotional and adaptive skills display the least amount of confidence with 33% of respondents indicating to feel not confident at all in both areas. None of the respondents were unfamiliar with any of these terms, which may contribute to their level of knowledge discussed in section 4.7.8.

Figure 24: *SLP Initial Training and Confidence Levels (Question 22)*



It is interesting to note that overall, seven of the respondents felt 'quite confident' in supporting young children with early childhood disorders when three of them were not at all confident in two areas of early childhood development. The one respondent who did not feel confident at all received 0-10 hours of training in normal early childhood development, and 0 hours in early childhood disorders.

Figures 25 and 26 explore the relationship between pre-service training and overall confidence in supporting children with DD. From this, we can see one respondent who received less than 10 hours of pre-service training was not confident at all. However, four respondents who received less than 20 hours of training were either confident or quite confident. From Figure 26 we can see that over half (n=6) of the participants felt more confident when they received additional hours of pre-service training in early childhood DDs or disorders.

Figure 25: *SLPs Pre-Service Training (normal early childhood development) and Confidence(Question 14 and 22)*

How many hours of pre-service training relating to normal early childhood development did you receive? (based on 1 college credit hour = 10 hours)	*Overall ability to support children with early childhood developmental disorders/delays*		
	Confident	**Quite Confident**	**Not at all Confident**
0 hours	0	0	0
0-10 hours	0	2	1
11-20 hours	1	1	0
21-30 hours	0	0	0
31+ hours	0	4	0
Other	0	0	0

Figure 26: *SLPs Pre-Service Training (Developmental Disabilities) and Confidence (Question 16 and 22)*

How many hours of pre-service training relating to early childhood disorders or delays did you receive? (based on 1 college credit hour = 10 hours)	*Overall ability to support children with early childhood developmental disorders/delays*		
	Confident	**Quite Confident**	**Not at all Confident**
0 hours	0	0	1
1-10 hours	0	2	0
11-20 hours	0	0	0
21-30 hours	1	2	0
31+ hours	0	3	0
Other	0	0	0

4.7.6 SLP Post Qualification Training (Question 19-21)

Seven of the nine respondents (78%) stated to have received some post-qualification training in early childhood developmental disorders or delays. These respondents were asked to describe the training they had received including how many hours, who delivered the training and the content as it related to early childhood development. Below are the respondent's replies.

1. *"Mostly conferences related to Early Childhood Development, and not targeted disorders."*
2. *"I attended the American Speech and Hearing Association convention. My district provides trainings on these topics as well."*
3. *"Attending conferences and doing web-based CEU's."*

4. *"I have taken several classes on play (both development of play and sensory impact on play) as well as training on identifying and supporting young children with ASD."*
5. *"Three-day training on social, emotional curriculum through a school district."*
6. *"Our school district does an excellent job providing district led trainings on social/emotional development as well as adaptive skills development. The leadership team at the preschool delivers these trainings.*
7. *"Continued professional Development through my places of employment*."

4.8.7 SLP Training Needs (Question 21 and 22)

In this section, respondents were asked to indicate if they felt they received adequate training in regard to early childhood development or disorders in their pre-service program and post qualification. The following tables (Table 17 and 18) outline the relationship between respondent's satisfaction of training in association with how many hours of training they have received

Table 17*:* SLPs Pre Service Hours and Satisfaction of Training - Normal Development (Question 14 and 21)

Question: How many hours of pre-service training relating to normal early childhood development did you receive?	*Question: I received adequate training in regards to early childhood development in my pre service program.*				
	Strongly Disagree	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**
0 hours	0	0	0	0	0
0-10 hours	0	**1**	0	**2**	0
11-20 hours	0	**1**	0	**1**	0
21-30 hours	0	0	0	0	0
31+ hours	**1**	0	0	**1**	**2**
Other	0	0	0	0	0

Table 18*: SLPs Pre Service Hours and Satisfaction of Training - Early Childhood Disorders (Question 16 and 21)*

Question: How many hours of pre-service training relating to early childhood disorders or delays did you receive?	*Question: I received adequate training in regards to children's speech or language impairments/delays in my pre service program.*				
	Strongly Disagree	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**
0 hours	**1**	0	0	0	0
1-10 hours	0	**2**	0	0	0
11-20 hours	0	0	0	0	0
21-30 Hours	0	0	0	**3**	0
31+ hours	**1**	0	0	0	**2**
Other	0	0	0	0	0

From Table 17, we can see that respondents who have had fewer hours of pre-service training in early childhood disorders or delay were not as satisfied as those who had received more hours. However, three respondents with 20 or fewer hours in normal early childhood development suggested they were content with the training they received (see Table 18). Furthermore, two respondents (22%) felt a strong satisfaction with the training they received, which accounted for 31+ hours. Finally, one respondent who receive 31+ hours in both normal childhood development and childhood disorder, indicated they were not at all satisfied with their training.

Table 19: *SLPs Post-Qualification Satisfaction of Training - Typical Early Childhood Development (Question 19 and 21)*

Question: Have you had any post-qualification training in early childhood DDs or disorders?	*Question: I received adequate training regarding typical early childhood development in post qualification.*				
	Strongly Disagree	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**
Yes	0	**2**	0	**3**	**2**
No	0	0	**2**	0	0

Table 20*: SLPs Post-Qualification Satisfaction of Training - Early Childhood Disorders (Question 19 and 21)*

Question: Have you had any post-qualification training in early childhood DDs or disorders?	*Question: I received adequate training regarding early childhood developmental disorders/delays in post qualification.*				
	Strongly Disagree	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**
Yes	0	**2**	0	**3**	**2**
No	0	0	**1**	**1**	0

The five respondents who specified to have had some post-qualification training in both typical early childhood development and early childhood disorders agree that they have received adequate training. What is interesting about Tables 19 and 20 is of the seven respondents who have not had any post-qualification training, two (22%) are undecided or agree that they are

satisfied with their post-qualification training in regards to both typical early childhood development and early childhood disorders or delays.

Furthermore, as the data presented in Table 21 suggests, the one respondent who has had no post-qualification training, and has expressed satisfaction with their training, has also indicated to have had 'quite a lot' or 'a little' experience working with students within all three areas of development (social/emotional, cognitive, adaptive/coping skills).

Table 21: *SLP Respondents Post-Qualification Training and Experience (Question 18, 19 and 21)*

	Respondent 1
Question: Have you had any post-qualification training in speech and language development or disorders?	No
Question: I received adequate training in regards to children's speech or language impairments/delays in post qualification.	Agree
Question: Can you please describe any experience you may have had where you have supported children with speech or language impairments by specifying 'not at all', 'a little', 'quite a lot', or 'I'm not sure' for the following categories;	
Social Emotional Development	Quite a lot
Cognitive Development	Quite a lot
Adaptive/Coping Skills Development	A little

4.8.8 SLPs Knowledge of Speech and Language Development (Question 23)

This was the final question from the questionnaire:

> *'This section will consist of examples of children who may display characteristics of early childhood DDs or disabilities. I don't expect you to make a diagnosis, just imagine that this child had just joined your setting and you have made these observations over*

a few weeks. Please answer these based on your knowledge of early development in young children. For each child, please indicate whether you feel the child has 'social/emotional delays', 'cognitive delays', 'adaptive/coping skills delay' or 'developmentally appropriate.'

Five case studies of children were used to assess the knowledge of the respondent's identification skills of early childhood DDs. The first child was 4 years old with adaptive or coping skills such as zipping a coat and eating soft or liquid foods. The second child was 4 years old demonstrating developmentally appropriate skills such as responding to teachers' questions, identifying letters and sounds, and following the daily schedule. The third child is 5 years old and has difficulty with social/emotional skills such as keeping hands and feet to himself, playing nicely with other children and becoming upset when the daily schedule is modified. The fourth child was 3.5 years old and exhibited a delay in cognitive development as he was described as not able to identify his name, only one colour, and can count to 3. The final child was 4 years of age and demonstrated difficulties in social/emotional development as he/she often plays alone, does not participate in small or large group activities and is not able to continue relationships with other children or adults. Each of these case studies can be seen in full in Appendix 2.

Table 22*: SLP Case Study Scores (Question 23)*

	Correct	***Incorrect***
Child 1: Adaptive/Coping Skills	78%	22%
Child 2: Developmentally Appropriate	89%	11%
Child 3: Social/Emotional Delay	67%	33%
Child 4: Cognitive Delay	67%	33%
Child 5: Social/Emotional Delay	78%	22%

One of the respondents answered all five case study questions correctly (see Table 22). It is interesting to note that respondents consistently choose one of two answers for each case study. Table 23 indicates incorrect answers (lightly shaded) and correct answers (no shading) from each respondent.

Table 23: *SLP's Individual Answers by Case Study (Question 23)*

	Case Study 1	***Case Study 2***	***Case Study 3***	***Case Study 4***	***Case Study 5***
Respondent 1	A/C	DA	S/E	DA	S/E
Respondent 2	A/C	DA	A/C	C	S/E
Respondent 3	A/C	S/E	A/C	C	S/E
Respondent 4	DA	DA	S/E	DA	A/C
Respondent 5	A/C	DA	A/C	C	S/E
Respondent 6	DA	DA	S/E	DA	S/E
Respondent 7	A/C	DA	S/E	C	A/C
Respondent 8	A/C	DA	S/E	C	S/E
Respondent 9	A/C	DA	S/E	C	S/E

Key: *Adaptive/Coping Skills Delay: A/C; Developmentally Appropriate: DA; Social/Emotional Delay: S/E; Cognitive Delay: C*

As we can see from Table 23, for the first child, the respondents either answered correctly with 'Adaptive/Coping skills' or incorrectly with 'Developmentally Appropriate'. Just one respondent answered the second case incorrect with 'Social/Emotional Delay'. The third case study was answered correctly from six respondents choosing 'Social/Emotional Delay', whilst the other three respondents choose 'Adaptive/Coping Skills'. Likewise, six respondents answered the fourth case study correctly with 'Cognitive Delay', whilst the other three answered incorrectly with 'Developmentally Appropriate'. Finally, seven respondents

answered the last case study question correctly with 'Social/Emotional Delay', and two answered incorrectly with 'Adaptive/Coping Skills'. Although an ECSE had reviewed these questions before the distribution of the questionnaire, these results may suggest that the case studies were too closely related to one or more available answers, and therefore should carefully reflect the knowledge of participants, regarding early childhood development.

Table 24*: SLP Individual Scores and Hours of Training (Question 16, 19 and 23)*

	Hours of Pre-Service training relating to Early Childhood Disorders or delays	***Post-Qualification training***	***Individual Case study scores***
Respondent 4	1-10	Yes	40%
Respondent 6	0	Yes	60%
Respondent 5	1-10	Yes	80%
Respondent 1	21-30	No	80%
Respondent 7	21-30	No	80%
Respondent 2	31+	Yes	80%
Respondent 3	31+	Yes	80%
Respondent 8	21-30	Yes	100%
Respondent 9	31+	Yes	100%

Table 24 presents the respondent's scores and hours of training in early childhood disorders or delays. The information from this provides evidence for respondents scoring lower with fewer hours of training, and higher with more hours of training. However, the participant with the fewest hours of training did not have the lowest score. Both participants who scored 100% indicated to have had some post-qualification training, whilst just over half (60%) of those scoring 80% reported as having post-qualification training.

4.8.9 Conclusions from the SLP Questionnaire

- Most SLPs are working in several different classrooms with an average caseload of 11 or more children.
- Many students who receive speech services are also receiving Early Childhood Special Education services.
- SLP's primarily administer assessments needed to determine eligibility and work with students on their IEP goals in a small group or one-to-one basis.
- SLPs mostly support young children's cognitive and social-emotional development in the area of early childhood disorders or delays.
- SLPs receive more pre-service training in early childhood disorders than they do normal early childhood development, with the most training relating to cognitive development.
- There is a link between SLP's experience of supporting students, preservice training and level of confidence as the results from the questionnaire suggest that SLPs' feel most confident supporting students' cognitive development.
- Most SLPs with more hours of pre or post qualification training suggest feeling satisfied with the information they have received. Over half SLP's are receiving just 20 hours or less of training in normal early childhood development, and 21 or more hours in early childhood disorders or delays.
- The amount of training SLP's received is closely linked with their level of knowledge concerning early childhood development.

Section 5: The Interview Phase

This section discusses the design, purpose, methodology and findings from both the ECSE and SLP individual interviews on behalf of the present study. Ethical considerations are also addressed to ensure appropriate measures were taken during the data collection process.

The second phase of this study consisted of individual interviews with both ECSE's and SLP's. Interviews are used when the researcher is interested in collecting "facts" and gaining insights into the participant's opinions or experiences (Rowley 2012). As described by Cohen, Manion and Morrison (2011) interviews are an exchange of views between two people with a mutual interest, and enable participants to discuss interpretations of the world, and express how they regard certain situations from their point of view. Tuckman et al., (2012) continues by stating, interviews make it possible to measure what a person knows (knowledge or information), and what a person thinks (attitudes and beliefs). The purpose of the interviews in the present study was to provide participants with the opportunity to expand on the content of the questionnaire. Likewise, it allowed them to contribute to the collection of rigorous data in regards to four main areas; roles and responsibilities in supporting children with SLI or ECSE services, knowledge and understanding of SLI or ECSE, pre and post qualification training and training needs, and level of confidence in supporting children with SLI or ECSE. The data gathered in these interviews reflect on these professionals' perspectives of their ability to assist children with SLI or ECSE, their training needs and how this may influence their confidence.

The interviews followed a semi-structured format described by Halcomb and Hickman (2015) as, interviews in which the researcher has some predefined questions or topics (derivative of the questionnaire) but can then probe further as the participant responds. The semi-structured form of the interview questions facilitated the flexibility to change the sequence of the questions or reword questions when necessary and ask further questions based on the participant's response.

5.1 Interview Schedule: ECSE

The interview schedule for ECSE's was developed in response to key themes from the questionnaire, with adaptations from Mroz et al., (2002) (see Appendix 13). Due to the unexpectedly small sample size of questionnaire participants, I chose to develop the interview schedule as a close adaptation of the Mroz et al., (2002) study, as key themes from the questionnaire were not as evident as anticipated. Referring to the interview schedule from the Mroz et al., (2002) study, was a choice made with the purpose of providing reliable and robust data collection from a valid source.

The structure of the schedule was designed first to encourage participants to describe their day to day activities as an ECSE (see Appendix 14). This allowed participants to define their roles and responsibilities within their professional context, before focusing on those services that could be described as 'outside' their profession or those related to speech and language development or delay. This first section of the interview allowed professionals to casually describe their routines and the context of their work, which assisted in creating a more relaxed atmosphere.

The interview then changes focus from describing the participant's profession as an ECSE, to how children with SLI are supported in preschool. The purpose of this section of the interview was to ask participants to set the scene of their workplace, by describing what types of SLI are present in their setting, and how children with SLI are identified. Because the questionnaire had indicated that 100% of ECSE had supported children with both expressive and receptive language skills 'quite a lot', I was interested in what types of SLI were present in their classrooms.

How ECSE's perceive their knowledge and understanding regarding SLI in preschool classrooms was explored next. This information was probed by asking participants to describe the strategies they used when working with a child to support SLI's, and how these strategies were decided. This information was then developed further when I asked participants to describe what characteristics or indicators, they might associate with a child with an SLI. This

created a basis for the level of knowledge the professional had regarding SLI and a brief introduction of how they obtained this knowledge.

The next section of the interview focused on the issue of pre and post qualification training and training needs. As a result of mixed responses to the questionnaire (see section 4.6), this question was included during the interviews to gain a deeper understanding of the correlation between the hours of training received, and the general satisfaction ratings of the training received. Furthermore, participants were asked to describe future training they may be interested in attending, and how they felt this training would help them in their jobs. The purpose of this question was to understand the training needs of ECSE's supporting children with SLI and what reason(s) are given for further training.

The final section of the interview focuses on the professionals' confidence in supporting children with SLI. I was concerned in this section to ensure that participants provided details describing why they felt confident. The primary purpose of the interview was to understand what ECSE's were doing with children experiencing difficulties with speech and language development, and how their training, knowledge and confidence all play a role in the support, they can provide.

5.2 Interview Schedule: SLP

The interview schedule for SLP's was developed in correlation to key themes from the questionnaire, with adaptations from Mroz et al., (2002) (see Appendix 13). The structure of the schedule (see Appendix 15) was designed first to encourage participants to describe their day to day activities as an SLP. This allowed participants to define their roles and responsibilities within their professional context, before focusing on those services that could be described as 'outside' their profession or those related to early childhood special education. This first section of the interview allowed professionals to casually describe their routines and the context of their work, which assisted in creating a more relaxed atmosphere.

The interview then changes focus from describing the participant's profession as an SLP, to how children with developmental disorders are supported in preschool. The purpose of this

section of the interview was to ask participants to set the scene of their workplace, by describing what types of early childhood disabilities or delays are present in their setting, and how children with ECSE are identified. Because the questionnaire had indicated that 100% of SLP's had supported children with cognitive delays and 77% with social/emotional delays 'quite a lot', I was interested in what types of delays or disorders were present in their classrooms.

How SLP's perceive their knowledge and understanding regarding ECSE in preschool classrooms was explored next. This information was probed by asking participants to describe the strategies they used when working with a child to support cognitive, behavioural, social and emotional development, and how these strategies were decided. This information was then developed further when I asked participants to describe what characteristics or indicators, they might associate with a child with an ECSE. This created a basis for the level of knowledge the professional had regarding ECSE and a brief introduction of how this knowledge was obtained. The next section of the interview focused on the issue of pre and post qualification training and training needs. As a result of mixed responses to the questionnaire (see section 4.6), this question was included during the interviews to gain a deeper understanding of the correlation between the hours of training received, and the general satisfaction ratings of the training received. Furthermore, participants were asked to describe future training they may be interested in attending, and how they felt this training would help them in their jobs. The purpose of this question was to understand the training needs of SLP's supporting children with ECSE and what reason(s) are given for further training.

The final section of the interview focuses on the professionals' confidence in supporting children with ECSE. I was concerned in this section to ensure that participants provided details describing why they felt confident. The primary purpose of the interview was to understand what SLP's were doing with children experiencing difficulties with cognitive, behavioural and social/emotional delays, and how their training, knowledge and confidence all play a role in the support, they can provide.

5.3 Recruitment and Sampling Process

Participants for this study were qualified Early Childhood Special Educators (ECSE) and SLP's working within a public preschool, in the state of Colorado. Preschools were chosen based on two main principals; publically funded and operated through local and federal agencies, and who provide special education services to children between the ages of 3 and 5 years.

According to the Colorado Department of Education (www.cde.state.co.us, 2018), the state of Colorado has a total of 179 public school districts. However, smaller school districts are often combined into what is known as Boards of Cooperative Educational Services (BOCES), in which special education staff (ECSE's and SLP's) provide services to several school districts. 22 BOCES are serving a total of 138 school districts, leaving the remaining 41 school districts that provide special education services internally (www.coloradoboces.org, 2017). From personal working experience, each school district or BOCES's employs on average 3 ECSE's and 2 early childhood SLP's. Therefore, 63 school districts/BOCES would provide approximately 190 ECSE's and 125 SLP's working in Colorado preschools.

5.4 Interview Sample

The interviewees were selected from questionnaire participants who indicated their willingness to volunteer in the second phase of this study. There was some speculation from the number of questionnaire responses received, that participants may not be likely to volunteer to take part in the interview phase, as this was a bigger time commitment. However, of the 22 total questionnaire responses, 19 did volunteer to participate in an individual interview. Furthermore, 84.6 % (n=10) of ECSE questionnaire respondents volunteered to interview, whilst 100% (n=9) of SLP questionnaire respondents volunteered.

Participants who had volunteered for an individual interview were contacted via email on 25/04/18 using the address in which they provided when answering the questionnaire (see Appendix 16). The email included the information sheet again as well as the consent form. These emails offered a variety of formats in which participants could interview including; face to face as I would be in Colorado for three weeks, by telephone, or by Skype. This first attempt

of contact resulted in three interested and willing participants. On 14/05/18 a follow-up email was sent (see Appendix 17) which resulted in an additional 6 candidates willing to participate. Finally, 08/06/18 an email was sent to volunteers one last time (see Appendix 18) with the interview questions attached as a document in which the participants were encouraged to fill out in a bulleted format on their own time (within two weeks). Unfortunately, this resulted in zero additional responses (see Table 25). One interview was conducted face to face, whilst the other eight were conducted via telephone. Participants were informed of the use of an audio recording device before the commencement of the interview. The interviews lasted on average, 25 minutes which was slightly less than anticipated.

The interview sample consisted of three ECSE's and six SLP's. Considering the reduced number of volunteers, this sample did not find any further criteria of candidates, to be included in the interview phase of this study.

Table 25*: Interview Contact/Response Overview*

	First Round 25/04/18	***Second Round 14/05/18***	***Third Round 08/06/18***	***Total Number***
Number of ECSE Volunteers Contacted	*10*	*10*	*10*	*10*
Number of ECSE Responses	*2*	*1*	*0*	*3*
Number of SLP Volunteers Contacted	*9*	*9*	*9*	*9*
Number of SLP Responses	*1*	*5*	*0*	*6*

5.5 Addressing Ethical Issues

The ethical issues considered and successfully addressed in the present study were relating to:

- Obtaining informed consent for both questionnaires and individual interviews
- Confidentiality of data
- Anonymity of participants
- Treatment of participants

5.5.1 Obtaining Informed Consent

Through the information sheet, participants were provided with details regarding both phases of the present study. Those who were interested in taking part in phase two (individual interviews) were invited to register their contact information including name, telephone and email on the last page of the questionnaire. These participants were first contacted via email with an additional information sheet attached and were given time to make an informed and voluntary decision to take part in the interview phase. Given their willingness to participate, they were invited to read and sign the corresponding consent form (see Appendix 12). Skype and telephone interviews were offered; however, all participants chose to be interviewed via telephone. Due to the nature of conducting the interviews via telephone, the interviewees were asked first to give verbal consent, followed by a scanned copy of their signed and dated consent form.

5.5.2 Confidentiality of Data

According to the Data Protection Act 1998, personal data "must be obtained and processed fairly and lawfully", it "must be adequate, relevant and not excessive for those purposes" and "be kept safe from unauthorised access, accidental loss or destruction", 2010). Therefore, participants were merely asked for their name, email and telephone number as a means of contact, which was stored using the Online Survey Tool. Hard copies of any data or documentation used for the present study were kept locked in a secure cabinet in universities premises.

The use of audio recording during the interview phase was specified on both the information sheet and consent form. Audio recordings were immediately transferred from the researchers iPhone device to the universities' 'M' drive that only the researcher had access.

5.5.3 Anonymity of Participants

Anonymity was ensured by using pseudonyms of the names of all participants and organisations. This research did not ask questions about the participant's workplace. Furthermore, the researcher did not have a personal or dependent relationship with any of the participants. Any direct quotes were used without the identification of any participant or school.

5.5.4 Treatment of Participants

Participants were not subject to any deception, coercion or distress. The present study did not critique the participants' job description, roles or training experiences. The research was conducted during working hours and within the premises of the participants. Interviews were conducted both face-to-face or via Skype. Participants were given verbal and written assurance of their decision to refuse to answer any question or withdraw from the study at any time up until the data had been written in the final thesis, without any explanation needed.

5.6 Analysing the Interviews

The data from the interviews were analysed using the NVivo software as well as through individual analysis from the researcher. The ECSE interviews and the SLP interviews were interrogated individually to provide tailored and useful data in response to both professions. However, a summary of the conclusion as a whole cohort has been offered in the discussions chapter (Chapter 6) of this document.

The first stage of data analysis during the interview phase consisted of a thin, bulleted transcription of each interview. This was not a full transcription, rather an opportunity for the researcher to select the essential materials directly from the original source, therefore avoiding getting caught up in every detail and losing sight of the bigger picture (Cohen et al., 2011). The

validity of these transcripts was ensured by providing each respondent with a copy (via email) which included a statement requesting their approval, or suggestion of any corrections to be made.

The transcripts were then imported into NVivo 12. The researcher did not use any pre-determined codes, categories or themes during this part of the data analysis as part of a theory-driven deductive approach (Boyatzis, 2009), nor was the data approached with the use of a codebook containing predefined codes. Alternatively, the researcher coded the transcripts manually (see the coding schedule, Appendix 19). The first stage of coding involved the researcher working through each of the interviews and identifying or labelling each response (Bazeley, 2013). The second stage of coding involved refining or developing more analytical categories (Bazeley, 2013) to help focus and develop ideas from the interviewee's responses. Coding led the researcher from the data, to the notion that the passage was trying to get across (Morse & Richards, 2013). Inter-coder reliability was ensured at the next stage of analysis when the researcher looked at each section as part of exploring the patterns in responses.

For some questions, responses will sum to three (ECSE) or six (SLP), however, due to the nature of open-ended questions, some of the interviewee's answers will be 'double-counted'. Clarity of total responses has been made clear throughout each question.

5.7 Results from the ECSE Interviews: Key Questions

The following section will deliver the findings from the three interviews from Early Childhood Special Educators, as seen by the researcher as key questions for the purpose of this study. The first section will address the key roles and responsibilities ECSE's share, and if these roles change when supporting a child with SLI (Research Question 1b; Section 3.4). The next section includes an overview of the types of SLI that are present in early childhood classrooms, the identification process for special education services and what characteristics ECSE's associate with SLI in young children (Research Question 1b; Section 3.4). This is followed with what ECSE's identify as pre and post qualification training needs in the area of SLI (Research Question 1c; Section 3.4). The final section explores how ECSE's perceive their own confidence in supporting young children with SLI (Research Question 1a; Section 3.4). Section

headings are in correlation to question numbers from the questionnaire (Appendix 14), as seen in brackets.

5.7.1 What are the key roles that ECSEs identify in their day to day work? (Question 1)

The first question the researcher the interviewees was to please describe what their job as an ECSE in a preschool setting involved on a day to day basis (Interview Schedule, Appendix 14). This question was designed to provide an easy start for the interviewee and to provide the researcher with valuable insights into different ways of working as an ECSE. When necessary, the researcher used prompts relating to direct and indirect services using key terms such as; consultant, administrative, assessment, behavioural, cognitive, motor, and speech.

All three respondents (1, 4, 9) indicated their role as both a general education teacher and special education teacher within their early childhood settings. Just one respondent mentioned their role as a case manager (4) for their special education students. Two respondents (1, 9) described their role to include consulting with other staff members and adults (student's parents) or as by working with paraprofessionals in teaching them methods when working one to one with a student with significant needs. One respondent (9) indicated that providing all special education related services as part of their day to day role as an ECSE.
From an ECSE (9)*;*

> *'We provided all services, from cognitive services to speech services to occupational and gross motor services, we had to implement all services that were in their IEP because it was an inclusive setting, and students were hardly ever leave the classroom. As the teacher we implemented most of these services.'*

One respondent (1) indicated that part of their role included planning activities, and preparing individualised lessons plans for their students as part of their day to day roles. None of the respondents mentioned assessment or screening as part of their day to day tasks; however, this questions was asked later during the interview, in which interviewees discussed in further detail (see Section 5.7.4).

5.7.2 Do these roles change when supporting a child with SLI? (Question 1)

The second part of the first question asked during the interview, was intended to capture the roles of the ECSE when supporting students who may have SLI only or both DD and SLI. The researcher intended to understand if ECSE's felt their overall responsibilities changed when working with students with SLI.

Two of the respondents (1, 9) indicated that their role in supporting students with SLI was primarily to implement the activities that were provided to them by their speech-language pathologist. Another respondent (4) indicated her role as providing opportunities for all students to access the general education and social wellbeing, whilst another (9) reported to focus on the speech sounds that her students were working with. One respondent (1) indicated that from her teacher training she implements strategies of repeating and extending on what kids are saying.

5.7.3 What types of SLIs are present in young children? (Question 2)

This question was asked to provide the researcher with an idea of what types of SLI's were present in young children attending preschool settings. Additionally, it was in my interest to gather such data to explore if there are reoccurring impairments in young children that may suggest further training for ECSE's in a particular area.

All three interviewees (1, 4, 9) indicated that they work with children with articulation delays. Two of the three respondents (1, 4) reported to work with students with Autism, apraxia or receptive/expressive language delays.

From an ECSE (1);

> *'I would say we see a lot more expressive delays than receptive in relation to their vocabulary and their articulation.'*

Other SLIs that interviewees mentioned included general DDs (1), Down syndrome (1), and students with low muscle tone (4).

5.7.4 What is the identification process for students with SLI? (Question 2)

For this question, respondents were asked to describe the identification process for students receiving speech and language services. This section was particularly important since it gave an impression of how ECSE's might identify children with SLIs and why they might suspect a student in need of these services.

All three respondents (1, 4, 9) were consistent with their answers to this question. All have indicated that most assessments and identifications for students with SLI services are completed through the Child Find team which consists of a therapist for all areas of development (cognitive, social/emotional, speech, motor, audiology and health if necessary). Child Find can be easily be described or compared with Haillier et al. 's., (2010) explanation of case management, whereas a central person within the special-education team takes the lead role in managing the case or the child and its needs. This person may be specially trained as a case manager may be nominated from within the multi/inter/transdisciplinary teams. The majority of the respondent's (n=2) students enter their classroom with an IEP completed by the Child Find team. However, two of respondents (4, 9) indicated that if a student does not already have an IEP, and the ECSE has concerns regarding their speech and language development, they would then make observations, collect data and refer them to the speech therapist who would assess within the classroom.

From ECSEs (9, 4);

> *'If a child is developmentally appropriate in all other areas of development other than speech, then just the SLP might do the evaluation within the classroom.'*
>
> *'Once School has started, if there are concerns, the school team will complete the evaluation process.'*

Finally, all three respondents (1, 4, 9) indicated that some of their children may come from an Individualized Family Service Plan (IFSP) in which they are transitioning from Part C services to Part B.

5.7.5 What strategies are used to support children with SLI and how are these strategies decided upon? (Question 2)

Two of the interviewees (4, 9) reported using language enriched strategies for their students with SLI. Other strategies that were indicated as being used with their students included; oral motor or articulation activities (9), observation and data collection for those demonstrating concerns (4), and meeting with parents or staff to discuss concerns (4).

From an ECSE (1);

> *'Something I know through my teacher training is the strategies of where you repeat and extend on what kids are saying. I tend to focus on what is the message they are trying to get across, using pantomime, gestures, visuals, drawings, what is the message as a whole?'*

None of the interviewees indicated to be solely responsible for the implementation or creation of these strategies. Two (4, 9) described the decision to use certain strategies as material passed to them from the speech and language therapist, whilst one (1) worked collaboratively with an SLP and occupational therapist (OT) to develop these strategies.

From ECSEs (1, 9);

> *'The SLP really helps to pick up on and discuss with me on perhaps what sounds a child might be missing, or if they are working on different verb tenses or pronouns, SLP will often check in with me to offer a "carry over" service to these children.'*

> *'SLP would create the activities and then brief us on how to incorporate them into our day.'*

5.7.6 What characteristics do ECSE's associate with SLI? (Question 3)

Participants were asked to describe what characteristics or indicators they might look for in a child who may demonstrate the need for support in speech and language development. This

question was asked to understand how ECSE's perceive their knowledge of SLI in young children.

Two of the respondents (1, 4) described a child with potential speech or language delays as one who has a low or absent vocabulary. This included children using fewer words in a single phrase than their peers (1), using more general words in their vocabulary and being completely non-verbal (4). One respondent (1) described a child who was unable to follow directions or process information as one that they may be concerned about their speech and language development. Two of the respondents (4, 9) spoke about the intelligibility of a child's speech or being able to understand them. None of the interviewee's comments was in reference to a child's ability to articulate specific sounds.

From ECSEs (9, 4);

> *'I think the most obvious indicator is having a hard time understanding a child, and the next one is them having a hard time following direction or being non-verbal.'*

> *'When I'm concerned that there is a speech and language delay, I always want to start by looking at which side is it? Is it an expressive language delay or receptive language delay? Is it both? Does this appear to be rhetoric, is this a processing issue? I may look at the pragmatics, what types of patterns are they using, is it substitution, and is that the student does not know how to socially communicate with a peer? I know there are a lot of different components to speech that we try to look at.'*

A child's ability to socially communicate with a peer was mentioned once in the interviewee's responses (4). One respondent (1) discussed a child's ability to categorise, as an indication of the framework for language development.

From an ECSE (1);

> *'I am looking for less words in a phrase than their same age peers, a lack of vocabulary, some kids use more general words. Some kids are unable to put things into categories, then I know they just do not have that framework for language. We look for how can they show their understanding of stories or directions in the classroom.'*

5.7.7 What types of trainings did ECSE's receive during their teacher preparation programs in relation to SLI? (Question 4)

In this section of the interview, the researcher was looking to explore the interviewees pre-qualification training and post-qualification training in young children's speech and language development, in terms of the detail of the training, how much they were provided and how happy they were with the training they received.

All three respondents (1, 4, 9) indicated that none of their pre-service training included courses or material that focused only on speech and language development or delays. Two of the respondents (1, 9) specified that information on speech, and language development was occasionally embedded into their ECSE courses, and one respondent (4) simply stated to have received no training relating to speech and language development in their master's program.

From an ECSE (1);

> *"I do not remember a class that was "SLIs only", now working in a classroom I am like WOW this is most of what the majority of kids have, even kids with other disabilities, they always have SLI as a secondary, I have had maybe 1 kid in 11 years with DD who did not have an SLI"*

Finally, one respondent (1) indicated to have taken 2 college courses as elective modules during their teacher training program, to have a better understanding.

5.7.8 What types of trainings did ECSE's receive post-qualification in regards to SLI, and how do they access these trainings? (Question 4)

The interviewee's responses regarding post-qualification training they had received were varied. Two of the respondents (1, 9) spoke of professional or staff development training offered by their schools, and one respondent (4) indicated that even their district training was not related to SLI, rather Autism or English language acquisition (ELA), for second language learners. Another respondent (4) indicated to have attended a four-day conference led by the American Speech-Language and Hearing Association (ASHA) post qualification, whilst another

respondent (1) suggested most of her post-qualification training consisted of 45 minutes per month consultation time with her class SLP.

From an ECSE (1);

> *'It is mostly the indirect services through our SLP's in the classroom or we have a team meeting once a month for 45 minutes, even our district trainings are never really related to speech and language'*

Many respondents (n=2) were told from their school administration which training was available, with some as mandatory and others as optional, with one respondent indicating to have been given a chance to suggest specific topics for a future training (9). Another respondent (4) was signed up to receive newsletters or emails from the Division of Early Childhood, which occasionally presented opportunities for training relating to speech and language development. This information was missing from one of our respondents.

5.7.9 What views did ECSE's have concerning their training experiences? (Question 5)

In general, ECSE's indicated a need for further training in both their teacher preparation programs and post-qualification teaching positions.

From an ECSEs (9, 4, 1);

> *'I think our SLP's were very knowledgeable but didn't provide enough or as frequent trainings as might have been needed.'*

> *'I would have liked to receive more training in my teacher program related to speech or language impairment or delays. Very little of what I know is from my teacher training program.'*

> *'I definitely feel I would like more training that is really specific to special education. A lot of the training is around regular education.'*

Respondents were also asked to suggest any future trainings they may be interested in, provided the opportunity. Respondents were encouraged to describe what content they would be interested in covering, what sort of format they prefer their training to be delivered, and how they felt these training would impact or help them in their current roles as ECSE's.

All three respondents (1, 4, 9) were interested in further training in speech and language development and delays. Two interviewees (1, 9) would like to learn more about supporting a child's ability to articulate speech sounds and how to improve overall language development, both suggesting this would help support them in providing a more inclusive classroom environment for all their students. One respondent (4) was interested in attending training that shares information on dual language learners in comparison to speech and language delay and indicated that this type of training would help her understand the difference between a child just learning two languages and a child who may need speech and language support. Finally, one of the respondents (1) was interested in more training in all areas of speech and language development, in which she believed would increase her awareness and knowledge of how to think of new and helpful strategies or modifications for her students, and that these ideas would be more at the forefront of her planning.

Two of the respondents (4, 9) indicated to learn best from hands-on teaching experiences with their classroom SLP, whilst one interviewee (1) reported to enjoy training that followed a workshop format.

5.7.10 How do ECSE's perceive their own confidence in supporting students with SLI? (Question 6)

Overall, the respondents from this interview sample felt somewhat or very confident in supporting students with SLI. All three respondents (1, 4, 9) credited a lot of this confidence to time spent collaborating and learning from the SLP's they worked alongside. Two of the respondents (9, 4) felt confident in supporting students with SLI due to many years of experience working with young children who were receiving speech services.

From an ECSE(1, 4, 9):

'In general, I do feel confident, the biggest thing I have learned is to use the language that every kid can access. It was a compliment from the speech therapist in my classroom that made me feel this way. She told me she noticed that the language that I used, really allowed the kids to be able to access it, and really appreciates what I do.'

'I feel very confident in supporting a student with speech and language delays. I have a wide variety of experiences. I worked in early intervention which was a lot of collaborating with SLP.'

'I feel fairly confident, that is only because I had 15 years' experience working in preschool which makes me feel like the more students and professionals (collaborating with speech therapist) you are around, you gain knowledge of different techniques and strategies to use with students throughout the years.'

5.7.11 Conclusions from ECSE Interviews

- Many ECSE's are responsible for teaching general education students and special education students.
- Overall, ECSE's feel their role in supporting students with an SLI, involves incorporating activities and lessons that are given to them from the SLP.
- Articulation delays are present in most preschool classrooms.
- The Child Find team is an essential part of the identification process for young children with SLI.
- ECSE's do not develop strategies to support students with SLI independently.
- ECSE's often demonstrate concerns for children who are not easily understood, or who have a low vocabulary.
- ECSE's do not receive training exclusively regarding young children's speech and language development or SLI's.
- ECSE's indicate a need for further training in both pre-service programs and post-qualification positions. They are interested in training relating to articulation and dual language learners.

- ECSE's feel confident in supporting students with SLI due to collaboration with special education team, or SLP's specifically.

5.8 Results from the SLP Interviews: Key Questions

The following section will deliver the findings, as seen by the researcher as the key questions for this study, from the interviews of six speech and language therapist working in public preschools across the state of Colorado. The first section will address the key roles and responsibilities SLP's share, and if these roles change when supporting a child with DD (Research Question 2b; Section 3.4). The next section includes an overview of the types of DD that are present in early childhood classrooms, the identification process for special education services and what characteristics SLP's associate with DD in young children (Research Question 2b; Section 3.4). This is followed with what SLP's identify as pre and post qualification training needs in the area of DD (Research Question 2c; Section 3.4). The final section explores how SLP's perceive their own confidence in supporting young children with DD (Research Question 2a; Section 3.4). Section headings are in correlation to question numbers from the interview schedule (Appendix 15), as seen in brackets.

5.8.1 What are the key roles that SLPs identify in their day to day work? (Question 1)

The first questions from the SLP interviews asked participants to describe what their job as an SLP in a preschool setting involved on a day to day basis (interview schedule, Appendix 15). This question was designed to provide an easy start for the interviewee and to provide the researcher with valuable insights into different ways of working as an SLP. When necessary, the researcher used prompts relating to direct and indirect services using key terms such as; consultant, administrative tasks, assessments, behavioural or social emotional, cognitive, motor or speech skills.

The majority of respondents (n=5), described their day to day tasks to involve direct push-in (within the classroom) services relating to supporting students with SLIs. Some of the respondent's answers were more specific, indicating that they provide language lessons or articulation lessons, whilst others were vauger with their answers, simply stating that they offer

'push-in' services, or therapy within the preschool classroom, with students on their speech caseloads. Three respondents (2, 5, 8) specified that most of these services are delivered either 1:1 or in a small group setting.

All six respondents stated that collaboration with other members of the special education team or classroom team (such as paraprofessionals or teacher assistants) was part of their job as an SLP. How often this collaboration took place varied. One respondent (8) indicated to have meetings with her team once per month or once per week depending on the needs of their students. One respondent (6) met once per month, two others (3, 7) indicated to meet once per week, whilst one respondent (2) indicated to meet bi-weekly with other staff members.

Half of the respondents (n=3), (3, 5, 6), stated that administering screenings, assessments and evaluations for students with speech and language delays was also part of their daily job.

From an SLP (6);

'My job is to identify and then provide speech therapy services for kids in preschool.'

Other roles that were mentioned throughout the interviews included; case-manager duties such as managing and attending all IEP meetings and preparing the necessary paperwork for these meetings (5), and planning IEP goals for students on their caseload (6).

5.8.2 Do these roles change when supporting a child with DD? (Question 1)

The second part of the first interview questions was intended to capture the roles of the SLP when supporting a student who may also have developmental disorders as well as SLIs. It was in the interest of the researcher to understand if SLPs felt their overall responsibilities changed when working with students with DD.

From an SLP (2, 2, 5, 7, 8);

'All kiddos I work with have both services (SLI/ECSE).'

'Most of a child's need are language based so the ECSE and I do tend to collaborate and work on similar things'

'The type of language I use varies based on a student's receptive language. I would usually keep receptive and expressive language goals the same. In Preschool, the academic rigour is such that speech and language and special education goals often look very similar.'

'Most of my SLI students are articulation. I tend to still focus on the language, but also to incorporate the ECSE goals as well. So often, our skills do overlap.'

'It is hard to separate working with speech and behaviours. Usually if there are increased behaviours, it is because they cannot communicate, and lower cognitive skills usually also means lower language skills.'

The majority (n=5; 2, 5, 6, 7, 8) of respondents indicated to continue to work on speech service for their students with both SLI and DD. One respondent (3) stated that students with DD require more 1:1 work, which is resulting in more consultation time with special education staff. Three of the respondents (5, 8, 7) described their role in supporting students with social/emotional or behavioural development, before even considering their speech and language goals.

Whilst another respondent (3) indicated to support student social and emotional development that was not on her caseload because she had so many students with social and emotional developmental needs.

From and SLP (5);

'For some students I am working on the behaviours of a student before I even try to target specific language skills.'

Finally, half of the interviewees (n=3; 5, 6, 8) reported spending more time collaborating with special education teacher and team to consult and plan activities together for those students on their caseload with developmental disorders.

5.8.3 What types of DDs are present in young children? (Question 2)

This question was asked to inform the researcher of what types of DDs might be present in young children attending preschool. Additionally, it was in my interest to gather such data to explore if there are reoccurring disabilities in young children that may suggest further training for SLPs in a particular area.

Most of the respondents commented that they often worked with young children diagnosed as having Autism (n=5; 3, 5, 6, 7, 8) or Down syndrome (n=5; 2, 5, 6, 7, 8). The next most common disability mentioned throughout the interviews from four of the respondents was children with a medical diagnosis such as; Fetal Alcohol Syndrome, Traumatic Brain Injury (TBI), congenital brain malformation, Ret syndrome, Williams syndrome and Fragile X syndrome. Four of the respondents (3, 5, 6, 7) mentioned working with students with DDs or cognitive delays in a more general sense. One respondent (3) indicated to work with students with social/emotional delays, whilst one respondent (2) included working with children who were multi-impacted in several areas of development.

5.8.4 What is the identification process for students with DD? (Question 2)

For this question, respondents were asked to describe the identification process for students receiving early childhood special education services. This section was particularly important since it gave some idea of how SLPs might identify children with DD services, or why they might suspect a student in need of these services.

It was unanimous amongst the interviewees (n=6) that students with DD are identified through their school or districts Child Find team. Most of the participants (n=5; 2, 3, 5, 6, 8) also stated that once a child started the school year without any special educational service, if there were concerns the classroom team would then collect observational data and begin the identification process to determine eligibility for that child. One respondent (6) also mentioned that most of her students enter her classroom under an IFSP.

5.8.5 What strategies are used to support children with DD and how are these decided? (Question 2)

Participants were asked to describe what characteristics or indicators they might look for in a child who demonstrates the need for developmental support. This question was asked to understand how SLPs perceive their knowledge of DD in young children.

One of the respondents (2) indicated to use applied behaviour analysis (ABA), techniques specifically targeted to support children with Autism. Three other interviewees (3, 7, 8) shared similar opinions by describing some of the strategies they used to assist students with DD as providing visuals throughout the classroom as well as daily schedules. Another respondent (3) mentioned preparing her students for any change in their daily activities or schedule.

From an SLP (7);

> *'One thing being an SLP that I like to reiterate is the use of visuals throughout the classroom to help not only facilitate language but any sort of learning. I do not involve myself an incredible amount with the behaviour side of things, unless there can be visual supports put into place to help.'*

Other strategies that were mentioned from the interviewees included the use of scaffolding activities (n=2; 3, 8) or moving through a tiered system. This was described as working with a student individually on a one to one basis, moving towards small group lessons and eventually their ability to participate in large group activities. Two respondents (3, 5) described strategies that involved learning about student interests and incorporating these into their lessons. Finally, one respondent (5) explained the used of positive reinforcement when working with children with behavioural concerns.

From SLPs (6, 2, 3, 5, 7, 8);

> *'The strategies I use very much depends on what the diagnosis of the child is. The supports used within the Autism classroom is very different from other classrooms just because students with Autism need a different type of structure. The Autism special education teacher teaches these strategies. In the other classrooms, the strategies are*

dependent on what the behaviour is stemming from. Usually, at the monthly accommodations' meetings, the special education team discuss, and problem solve for these students to develop a game plan of support.'

'I have a lot of training in ABA practices and absolutely collaborate with teams. I also have a strong background in preschool special education for 10 years.'

'The activities in the box suggestions was me working collaboratively with the preschool para to find out what she enjoys.'

'Usually what ends up happening is someone working with the student will ask about different strategies or offer suggestions across disciplines.'

'Within the IEP meeting when talking about accommodations and modifications or through conversations with all the SPED team.'

'The SPED team (SLP, ECSE, Social Worker) brainstorm strategies of what is needed for each student to then implement in the classroom.'

All six interviewees indicated that the strategies they used to support students with DD are decided upon through collaboration with the special education team. Two respondents (2, 7) included statements regarding their knowledge and experience as a means of developing strategies, whilst one respondent (8) shared information regarding a social-emotional curriculum that all staff are trained on and incorporate in their preschool classrooms.

5.8.6 What characteristics do SLPs associate with DDs? (Question 3)

Participants were asked to describe what characteristics or indicators they might look for in a child who may demonstrate the need for early childhood special education support. This question was asked to understand how SLPs perceive their knowledge of DD in young children.

From SLPs (8, 5, 7);

'If the child's language skills are so low, that's going to affect so many other things in the classroom, their ability to follow directions, their ability to talk to their friends, their ability to share information that they learn.'

'Usually communication is a big indicator for the need of ECSE services.'

'Goes back to language, if their expressive/receptive language skills are severely impacted, there is a high possibility that there are some other factors with that child'

Several of the interviewees (n=5; 2, 5, 6, 7, 8) indicated to look at a child's language skills as an indication that there may be concerns for DDs as well. Whilst some of these responses were explicitly concerning language and DD, and others were more indirect or passing comments during the interview. For example, one respondent (2) stated that when a child does have lower language skills, they would then consider their attention skills as an indicator for further DDs. Another respondent (6) worked with a densely populated second language learner community in which she suggested to look for developmentally appropriate skills in a child's native language as an indicator for DDs.

From an SLP (6);

'A lot of times it is watching students in group and seeing how they are engaging in those lessons. I then try to ask them questions to determine is it that they cannot sit that long, or that they are not understanding the information?

Two of the interviewees (3, 5) referred to a child's social/emotional or behavioural skills as areas of concern for DD. This included behaviours such as running away, throwing objects, screaming, yelling, and hitting. Also, not being able to interact and play with their peers, or unable to quickly make friends and keep relationships.

Half of the respondents (n=3; 3, 6, 8) indicated to look for a child's ability to participate in small or large group situations. Furthermore, three (2, 6, 7) of the interviewees suggested that children who are unable to recall or retain information from one week to the next may also indicate the need for support.

From an SLP (6);

> *'Usually what I look for it when working with kids, and they are not picking up on things as quickly as others.'*

5.8.7 What types if trainings did SLPs receive during their teacher preparation programs in relations to Early Childhood Special Education? (Question 4)

In this section of the interview, the researcher was aiming to explore the interviewees pre-qualification training and post-qualification training in early childhood special education, in terms of the detail of the training, how much training they were provided and how happy they were with the training they received.

The majority of the interviewees (n=5; 2, 3, 5, 7, 8) indicated that they had very little or no training specifically covering early childhood special education during their speech and language training program. The remaining respondent (6) had minored in special education and therefore had more training than what she described as a normal SLP. One respondent (3) also indicated to have taken two elective credits in early childhood at her discretion, not as part of her speech and language degree.

From SLPs (2, 3, 5, 6, 7, 8);

> *'My entry level degree I did not receive a ton of training on early childhood, it was embedded into some of our classwork. My papers and projects were always in language development. I was really lucky and had early childhood experiences in all of my internships.'*

> *'In all honesty, I think I had two early childhood classes, and in the last semester of my program three Autism trainings that might have hit on pre-k, but in school there really was not a lot for pre-k, it was primarily k-12.'*

> *'I have not had a whole lot, we did talk about the stages of development in grad school, then I worked with kids ages 6-21 so I really did not have a whole lot of hands on experience with early childhood prior to working in it.'*

'I chose to minor in special education, so I received more than most SLP's. Our typical speech therapy program we were required to take 1 special education classes on early development.'

'I would have to say, probably not a lot in my school program as far as moving away from the speech and language end of things.'

'None!'

Four of the interviewees (2, 3, 5, 6) described most of their training on early childhood special education to be embedded within their speech and language coursework in which they would touch on areas of development or specific disabilities in relation to early childhood.

From an SLP (2);

'We talked about atypical development. We often talked about how different syndromes and disabilities impacted a child as a whole child not just communication. For example if we talked about Down syndrome, they wouldn't only focus on the language deficits of that but they would talk about tone and how that tone for speech has the same problems as tone for learning motor skills'

5.8.8. What types of trainings did SLPs received post-qualification in regards to DD and how do they access these trainings? (Question 4)

From an SLP (2);

'The deepest training I get now is collaborating with colleagues who have been in the field for a while.'

Although the respondents provided various training that they have attended post-qualification, half of them (n=3; 5, 6, 7) indicated that the training they have attended were primarily targeted towards speech and language, with topics concerning early childhood, being briefly included.

Two respondents (2, 8) indicated to get most of their post-qualification training regarding early childhood special education through the collaboration with their special education team.

Other trainings that were mentioned throughout the interviews included the following;

- Autism trainings (pre-k to high school), (3, 7)
- Brain Steps (traumatic brain injury), (3)
- One year long course on social/emotional development (8)
- Transdisciplinary play based assessment training (2, 7)

Many respondents (n=4; 3, 5, 6, 7) were informed or offered training through their school or district. Three respondents (2, 6, 8) indicated to received regular emails or newsletters from state agencies to inform them of future training, whilst one respondent (3) stated to hear of training from her work colleges.

5.8.9 What views did SLPs have concerning their training experiences? (Question 5)

From SLPs (7, 5, 3);

> *'I think I am happy with the training I have received, it is hard because I work from pre k – high school, for what I need to be confident and successful in my job- Yes.'*

> *'I would have liked to receive more training in my Speech training that specifically related to working with students who also qualify for ECSE services.'*

> *'Amazing training from the company I currently work for!'*

Overall, SLPs are generally satisfied with the pre or post-service training they have received, with one interviewee suggesting the need for more training in her speech training relating to ECSE services. However, all participants commented on future trainings they would be interested in attending, given the opportunity. Respondents were encouraged to describe what content they might be interested in, what sort of format they prefer their training to follow and how they felt these training would impact or help them in their current roles as SLPs working in early childhood.

Three of the respondents (2, 5, 6) discussed the desire for more training regarding a child's social/emotional development or how to work with challenging behaviours.

From SLPs (5, 6);

> *'Right now a lot of students need social emotional and behavioural support so trainings in that would be beneficial.'*

> *'Behavioural intervention is something that I feel I am lacking in the skills and confidence, and really have to follow other people's lead.'*

Respondents felt this type of training could assist the entire special education team as they would have the suggestions to offer when working with a student. Another respondent discussed the benefits of knowing how to respond to a child's behaviour in the moment, in the case that this behaviour does not arise again, and the student has not learned from the experience.

From SLPs (5, 6);

> *'I could use this information as suggestions when collaborating with SPED team. But I do not feel like it is my place to step in and use these strategies without consulting with the ECSE first.'*

> *'So many behavioural breakdowns happen in the moment and then are over in a minute, going and debriefing after is great, but it is likely that this situation will not arise again. So knowing what to do on my own in that moment.'*

Two of the interviewees (3, 8) described the need for training in how to teach other adults or teachers in the classroom. Their suggestions involved their ability to show the classroom teachers how to include language skills in their lesson plans every day to create a language-rich environment at all time, rather than just when they were in the classroom. Furthermore, one respondent discussed how increasing every child's language skills, would hopefully impact all areas of learning.

From an SLP (8);

> *'If I could be an SLP but also be a language coach, teachers would be focusing more on language every day rather than just when I am there, which would benefit the kids in the long run. Increasing teacher's knowledge of language development would help build students language which again would then help with all areas of development in the classroom.'*

Two respondents spoke about recent studies and training that have been offered, and that they would like to eventually attend, concerning how childhood trauma impacts a child's learning. This included children from low SES backgrounds with little parent involvement.

From SLPs (7, 2);

> *'I would like more training on child informed care. A lot of students in my community come from low SES households, with little parent involvement.'*

> *'It was several years ago that the 'A study' went out about childhood trauma and how that even impacts health in adults, but I think we could learn a lot more about that, especially with our population in this community.'*

These respondents described how these trainings could impact how they treat and work with the kids in their classroom, but also help them respond to these students in the appropriate ways to improve the situation.

From an SLP (7);

> *'The way we have to respond to so much trauma in our schools, this training would help me to tailor my responses to students in a more appropriate way to not make the situation worse, but hopefully help.'*

The majority of respondents (n=4; 2, 3, 6, 7) indicated to learn best from a hands-on training approach where the skills being taught were embedded into what they were doing in their classroom. This was described as having conferences in which you were first presented with

the information. These methods were then tried in the classroom, and later you reconvened with the presenter and other staff to discuss the outcomes. Another respondent (5) spoke about having presenters come into the school or classroom and show you their methods whilst working with your actual students. One respondent (8) also mentioned self-guided or online training a preferred choice, as well as watching videos followed with conversations with other special education staff.

5.8.10 How do SLPs perceive their own confidence in supporting student with DD? (Question 6)

Most participants (n=5; 2, 3, 5, 6, 7) felt confident in their ability to work with and support children with developmental disabilities in early childhood settings. One respondent described her level of confidence as more comfortable working with mild behaviours but felt herself struggle when a child demonstrated more extreme behaviours.

From an SLP (8);

> *'I feel pretty comfortable, depending on what the level of behaviour is. We have a social skills curriculum that we all follow and use the same language, which has helped me. I think for me I think I am probably less comfortable with more extreme behaviours, self-injurious is probably my toughest.'*

Three of the respondents (2, 5, 7) credited their feeling of confidence, to the collaboration with the special education team, whilst the others felt their experience (7), positive parent comments (5), having a social/emotional curriculum to follow (8) and the outcomes of their students (3), were all associated with how confident they felt.

From an SLP (6);

> *'It is not that I have any fear of anything, it is mostly that I want to know that what I am doing what is best for the kids or is following the right guidelines. Since I do not really know what those guidelines are it's almost as if I am "faking it until I make it" kind of thing. I don't think this is necessarily the best way to go about it. I have really high training in a lot of areas, and behavioural intervention is just not one of them.'*

5.8.11 Conclusions from SLP Interviews

- SLP's roles involve providing in-classroom speech services, administering assessments and collaborating with special education team.
- When working with students with DD, SLPs tend to continue to work on language skills whilst supporting behaviours and have more collaboration time built into their schedule.
- SLP's often work with young children with Autism, Down syndrome, and medical diagnosis affecting cognitive development.
- Students with DD are primarily identified and diagnosed through the schools Child Find team.
- Visuals, daily schedules and scaffolding activities are all strategies that SLP's use to support students with DD.
- SLP's often consider a child's language skills as a concern for other DDs.
- The majority of SLP's do not receive training in their initial speech programs relating to early childhood special education only.
- SLP's post-qualification training is often associated with speech and language, whereas early childhood may be briefly mentioned.
- SLP's gain knowledge and skills to support children with DD from collaboration with colleagues.
- SLP's would like further training in social/emotional development, childhood trauma and how this impacts a child's learning, and how to coach or teach other adults.
- The majority of SLP's felt confident in their ability to support children with developmental disabilities in early childhood.

5.9 A comparison between the Questionnaire and Interview Data

An individual by individual comparison of participant data between questionnaire and interview answers was assembled for two main reasons; warrant reliability of responses from participants, and to investigate the success or failures of the methodology chosen. This compilation resulted in minor differences, with the vast majority of answers aligning between

questionnaire and individual interview data. Overall, there was one instance where there was minimal misalignment;

> Participant 8: Questionnaire - How has your initial training made you feel in supporting the early childhood developmental disorders and delays; "*Not at all confident*", Interview - How confident do you feel about supporting young children with ECSE? *"I feel pretty comfortable, depending on the level of behaviour"*

As the questionnaire for the present study did not prompt for detailed explanations of participant answers, this misalignment may be due to the nature of individual interviews allowing for more in-depth and specific responses. It is encouraging to see consistent results between the questionnaire and interview results — this comparison of data collection warrants a worthy approach to answering the present studies research questions. For example, the consistency between respondents' answers brought validity to the present study and solidified the findings. Furthermore, information that was analysed using cross tabulation throughout the questionnaire would not have been made available through individual interviews alone, whilst further detail concerning roles and responsibilities were expelled throughout the interview process, whereas they were not on the questionnaire.

The present study resulted in several interesting points to consider when reflecting on overall findings across these two professional groups. Various similarities and some differences that were observed in the data are listed below.

- ECSE's typically work within an interdisciplinary service delivery model in which they find themselves supporting both typically developing children as well as children with special educational needs. Contrary to this, SLP's are often associated with an itinerant service deliver model and primarily work with only with children who receive special education services. Likewise, ECSE's tend to receive training in normal speech and language development, whilst SLP's receive more training in developmental delays. This may be due to SLP's being a more medically based profession than ECSE's.
- Both SLP's and ECSE's have an essential Child Find team that is responsible for completing most evaluations of young children used to assess and determine eligibility of special education services.
- SLP's and ECSE's do not receive training specific to any other discipline other than their own. Most of the training outside their discipline is said to be embedded into

courses and modules developed for their actual qualification. In the same vein, both professions expressed an interest in further training which was specific to other developmental areas.

- ECSE's and SLP's share a common belief that their skills, knowledge and confidence of supporting areas of development outside their scope of practice, is largely associated with collaboration efforts with one another.

The next section of this thesis aims to use this information to build on and consider overall conclusions from the data presented throughout the questionnaires and interviews, and how the original research questions are reflected by the outcomes of the present study.

Section 6: Overall Conclusions and Discussion

The present study had a purpose of broadening and adding to the research based on young children's speech and language development, by investigating ECSE's and SLP's knowledge and confidence in supporting students within early childhood special education settings. The study also aimed to explore what professionals perceive as their roles and responsibilities in supporting children with SLI and DD. Finally, the present study aimed to understand the training needs of ECSE's and SLP's in the area of SLI and DD in young children.

This section includes a summary of the findings and implications for future research concerning ECSEs and SLPs as separate entities, but also as a cohort, hereafter referred to as early childhood professionals.

6.1 How have the Roles and Responsibilities of Early Childhood Professionals affected their Knowledge, and Confidence of SLI and DD.

The present findings show that the roles and responsibilities of ECSEs and SLPs are similar, in that their day to day tasks involve consulting with other adults, monitoring student data, working collaboratively as a member of the special education team and providing direct, special education services to young children. However, it is relevant that most public preschools are supported by a Child Find team, who are responsible for the assessment of young children to determining special education eligibility. Child Find teams are used in public schools throughout the United States. Without these teams', early childhood staff and parents would face the challenges of coordinating qualified professionals to administer standardized testing required by law themselves. This could potentially mean longer waiting times for our youngest learners. As most participants from the present study have reported to use Child Find teams, it is likely this program will continue long term.

ECSE's primary responsibility was that of a direct service provider, aligning with the findings from Dinnebeil et al., (2006) who described the role of ECSE's as; assessors/monitors, consultants to other adults, direct service providers to children, lifelong learners, and service coordinators/team members. However, this was shared between students receiving special

education and general education. This suggests that the shift from itinerant service provider to an interdisciplinary service delivery model may require further investigation with regards to the roles and responsibilities of an ECSE within each model. Furthermore, just 2 of the 15 ECSEs who took part in the present study, worked as an itinerant service delivery model. This prompts consideration of Klein and Harris's (2004) idea that the shift from segregated classrooms to inclusive environments, is a result of ECSE's doing a job that may be disappearing (teaching a small group of children with disabilities in a segregated classroom). ECSEs are no longer working in segregated classrooms, (this is supported by the data in the present study), and are consistently supporting both typically developing children and children with special educational needs. Overall ECSEs and SLP's share similar roles and responsibilities within early childhood classrooms. Whilst ECSEs are more likely to assume the interdisciplinary position of general educator and special educator, SLPs primarily provide their services using an itinerant service delivery model. The data from the present study suggests that students receive the majority of their speech services inside the classroom, with the occasional 'pull out' service provided outside the general education classroom. Furthermore, an itinerant ECSE will primarily work with students with DD rather than SLI, whereas an interdisciplinary ECSE is more likely to work with students with both a DD and SLI diagnosis. This suggests that interdisciplinary ECSE's might benefit from additional training in speech and language development, in order to promote language development for all students.

The sampling process was designed to reach SLPs working with young children in public preschools, with the assumption that many would work with students attending preschool through grade 12. It was not surprising that over half (55%) of the participants supported preschool aged students only, as early intervention has been pushed internationally (see section 2.6) through public schools in recent years. This could imply that SLPs who work within public schools often find themselves supporting early learners only, and this may reinforce the need for increased training in early childhood development in speech training programs.

The number of children that ECSEs and SLPs have on their caseload was expected, as this was similar to my caseload size as an ECSE and the SLPs I worked alongside. ECSEs reported to have caseloads averaging from 6 children to over 11, whilst SLPs consistently reported caseloads of 11 or more students. However, what is interesting about the ECSEs and SLPs

caseloads from this study, is the prevalence of young children with co-existing diagnoses of DD and SLI. Referring to previous research and literature explored in section 2.4.4, we know that SLI is one of the most common learning difficulties affecting preschool aged children (Law, 2000; McLeod & Harrison, 2009; Robertson & Ohi, 2016). Considering the results from this study, in which many providers reported to have several students with both DD and SLI diagnoses, this suggest a need to explore the relationship between SLI and DD. Evidence to support the relationship between language disorders and other reading disorders has been investigated (Nithart et al., 2008; Guasti et al., 2015), however, research related to the relationship between the co-existence of DD and SLI is needed.

In addition, the data concerning early professionals' caseloads resulted in all ECSEs indicating to support some students with SLI and all SLPs indicating to support some students with DD. Early childhood professionals saw their role in supporting children with disabilities that they were otherwise not specifically trained in. As a collaborative effort with one another, they sought to plan and implement activities that would simultaneously encourage skills for both speech or language development and social, emotional or behavioural development. I would best describe this as a holistic approach, considering all areas of a child's development.

Future research is needed to consider the role or responsibility of early childhood professionals as collaborators in their day to day tasks. The data presented in this study has offered several instances in which SLP's and ECSE's are expected or request time to collaborate with one another, in order to support the children, they are working with. As we have learned from section 3.2, collaboration or interprofessional working is common in educational settings, however practitioners are seldom trained on what successful collaboration looks like within a classroom or educational setting.

There was some discrepancy between the questionnaire and interview results concerning the type of SLI that ECSEs were exposed to. Questionnaire respondents appeared to have more experience working with young children with receptive and expressive language disorders, whilst ECSEs from the interviews worked with more children who were displaying articulation errors. As there were not many opportunities to further develop participant answers within the questionnaire, perhaps expressive language disorders could have been misunderstood as

articulation disorders. Likewise, language disorders are said to be difficult to diagnose before the age of three (www.asha.org, 2019), this can be associated with difficulties in administering a norm-referenced, or formal test on younger children (Rosenbaum, 2019). This also challenges the need for further investigation into what SLI are most common in preschool age children. The predominance of SLI as a general term is evident in young children; however, early childhood professionals may benefit from knowing more specifically what types of SLI are most common, and which most commonly co-occur. According to the American Psychiatric Association (2013), autism spectrum disorder and cognitive impairments are universally associated with SLIs. Furthermore, whilst SLI (those not associated with other disorders) are common, it is likely that a significantly greater number of children and adults will experience SLI's when associated with other disorders (Rosenbaum, 2019). Finally, there is evidence to suggest that speech and language disorders may be among the earliest symptoms of neurodevelopmental disorders (Rosenbaum, 2019), Table 26 further explores the association between receptive and expressive language difficulties with other disorders. This table was included to establish commonalities between receptive and expressive communication difficulties, in association with other disorders. Using this information encouraged me to consider the literature available exploring the various associations of SLI with other disabilities, I am prompted to deliberate on how professionals are trained to work with young children with co-existing disorders, some of which may be outside their discipline.

Table 26: *Disorders commonly associated with Expressive and Receptive Language Difficulties*

Condition/Cause	***Receptive Communication Problems***	***Expressive Communication Problems***
Psychosocial risk, abuse and neglect		Less talkative and fewer conversational skills than expected; seldom volunteer ideas or discuss feelings; utterances shorter than peers
Autism spectrum disorder	Difficulty analysing, integrating, and processing information; misinterpretation of social cues	Variability in speech production from functionally nonverbal to echolalic speech to nearly typical speech; use of language in social situations is more challenging than producing language forms (eg, articulating speech sounds, using sentence structure); tendency to use verbal scripts; difficulty selecting the right words to represent intended meaning; often mechanical voice quality
Brain injury	Difficulty making connections, inferences and using information to solve problems; challenges in attention and memory which affect linguistic processing; challenges in understanding figurative language and multiple meaning words	Greatest difficulty is commonly in pragmatics – using language appropriately across contexts, especially narratives and conversations
Cerebral palsy	Speech sound discrimination, information processing and attention can be areas of challenge; language comprehension is affected by cognitive status	Dysarthric speech – slower rate, with shorter phrases or prolonged pauses; articulation is often imprecise with distorted vowel productions; voice quality can be breathy or harsh, hypernasal with a low or monotone pitch; apraxic speech – sound substitutions that can be inconsistent, language production is affected by breath support as well as cognitive status
Fetal drug or alcohol exposure	Difficulty comprehending verbal information, especially understanding abstract concepts, multiple word meanings, and words indicating time and space	Fewer vocalizations in infancy, poor use of gestures and delays in oral language[6]; poor word retrieval, shorter sentences, and less well-developed conversational skills

Table 26: *Disorders commonly associated with Expressive and Receptive Language Difficulties Continued*

Condition/Cause	***Receptive Communication Problems***	***Expressive Communication Problems***
Fluency disorders		Difficulty with the rate and rhythm of speech; false starts; repetitions of sounds, syllables and words; may or may not be accompanied by atypical physical behaviours (eg, grimacing, head bobbing)
Hearing impairment	Difficulty with sound perception and discrimination, voice recognition, and understanding of speech, especially under adverse hearing conditions	Sound productions made until about 6 months; limited oral output depending on degree of hearing loss; for oral communicators, vocal resonance, speech sound accuracy, and syntactic structure often affected
Intellectual Disability	Comprehension of language is often below cognitive ability; difficulty organizing and categorizing information heard for later retrieval; difficulty with abstract concepts; difficulty interpreting information presented auditorily	Production is often below cognitive ability[10]; similar but slower developmental path than typical peers; tendency to use more immature language forms; tendency to produce shorter and less elaborated utterances
Specific language impairment	Slower and less efficient information processing; limited capacity for understanding language	Shorter, less elaborated sentences than typical peers; difficulty in rule formulation for speech sound, word, and sentence productions; ineffective use of language forms in social contexts sometimes leading to inappropriate utterances; poorly developed vocabulary

(Prelock, et al., 2008)

6.2 How has Pre and Post-qualification Training of Early Childhood Professionals affected their Knowledge, and Confidence of SLI and DD.

ECSE's received more training in typical speech and language development in their pre-service programs than they did in SLI. However, SLPs received more in-depth training concerning early childhood disorders and DD, than they do in typical early childhood development. Perhaps this reflects the nature of the profession of an SLP to be more medically based. Furthermore, early childhood professionals received no preservice training that was specific to SLI or DD only, but rather the information they received was embedded into their ECSE/SLP coursework. An example of this was; if an SLP was learning about oral motor development, a brief discussion concerning a child with Down Syndrome would be included. Alternatively, several participants took the initiative to take additional courses or even complete secondary degrees in either SLI or DD, outside of their regular course. Considering the previous discussion reflecting on the association of SLI with other DD, one might presume an implication to limited coursework specific to SLI and DD for these two professions could have an impact on teacher preparedness, and confidence levels when entering the workforce.

Most aspects of typical early childhood development (social/emotional, cognitive and adaptive or coping skills) were covered during an SLPs pre-service training. Likewise, ECSEs pre-service training covered most areas of typical speech and language development (articulation, expressive, receptive and social language). Although the most in-depth training ECSEs received was related to expressive and receptive language development, articulation disorders were only briefly covered. This could suggest an association with ECSEs feeling the least confident about supporting students with articulation disorders, aligning with the Mroz et al., (2002). However, this also probes me to consider the relationship between confidence and metacognition, or an assessment of one's own ability, knowledge, and understanding of task-relevant factors (Kleitman and Stankov, 2007). According to Schraw and Moshman, (1995) and Schraw et al., (1995), there are three processes of metacognitive regulation that are typically theorized:

1. Planning, which refers to the selection of appropriate strategies and allocation of cognitive resources before the task;

2. Monitoring, which refers to the awareness of understanding and performance during the task; and
3. Evaluation, which refers to the appraisal of performance after task completion.

Specific to the second process of metacognitive regulation, self-monitoring is said to reflect confidence scores (Kleitman and Stankov, 2007). As ECSE's indicated to encounter supporting children with articulation delays, perhaps this leads to a bigger awareness or frequent reminder of gaps in knowledge.

It is hypothesised that teachers with high confidence levels are more likely to engage in effective pedagogy by increasing students' motivation and engagement (Martin, 2006). Since motivation and engagement play a large part in student's energy to learn and work effectively (Martin, 2001), the role of early childhood professional's confidence is vital. The findings from the present study align with this hypothesis, as those participants with higher levels of confidence received higher test scores from the case study segment during the questionnaire phase. Referring back to Bandura's theory of self-efficacy (section 2.8), perhaps teacher motivation is reflected in student levels of motivation, eventually affecting levels of teacher confidence.

The data from the present study suggests a potential association between the number of training hours and early childhood professional's confidence levels. Interestingly, ECSEs who had not received any post-qualification training felt slightly more confident than those who had. However, in contrast, SLPs who received post-qualification training were more confident than those who did not.

Interview data suggest higher levels of confidence in early childhood professionals may be associated with collaboration efforts between SLPs and ECSEs. However, there is a need for further investigation into collaboration efforts directly affecting professionals' level of confidence or self- efficacy. Bandura's (1997) theory of self-efficacy stressed the importance of how people function independtly, however also recognized that professionals do not work isolated of one another, but as a collective group. He defined *collective efficacy* as "a group's shared belief in its conjoint capabilities to organize and execute the courses of action required to produce given levels of attainments" (Bandura 1997, p. 477). An example of this in education

might be where successful teachers are likely to possess a strong sense of self-efficacy, and successful schools are characterized by a collective belief that their combined capabilities influence the lives and development of their students (Klassen et al., 2010). As discussed in Section 3.2, The WHO (2010) use the term interprofessional practice to describe the situation where two or more professions are working together as a team with a common purpose and commitment. Likewise, Malin and Marrow (2008) suggest that interprofessional work is said to encompass the meaning of multidisciplinary, interdisciplinary and transdisciplinary service delivery models. Therefore, it is worth considering if collective efficacy could also reflect on the confidence of these professional groups working within interprofessional or transdisciplinary settings.

Years of experience also suggest higher levels of confidence (suggested by the data in the present study). Further exploration into what specific experiences over the years (collaboration, training, parent involvement, and personal growth) could have impacted an individual's confidence, is needed. Examples of this might include, professionals feeling confident as they regularly encounter serving children with similar needs, learning specific techniques on how to support their students from other professionals, or from interacting with parents of children with DD/SLI who share their own skill set and knowledge. Another way to explore this might be to investigate individual confidence of early childhood professionals as an influence or as being influenced by other parts of the microsystem in which they are situated.

Considering that early childhood professionals with more hours of pre-service training were more likely to score higher on the case study assessments and that their levels of confidence were not directly influenced by post-qualification training, it is of interest to consider a relationship between case study scores and post-qualification training. The results of SLPs case study scores varied, with no apparent association with post-qualification training. However, all ECSEs who scored less than 70% had not received any post-qualification training.

The case study segment of this research was included to provide insight into the knowledge base of early childhood professionals concerning SLI and DD in young children. Post-qualification training seems to have a higher impact on SLPs confidence levels, with little to no

influence on their knowledge of DD. Contrasting with ECSEs in which post-qualification training has a higher impact on their knowledge of SLI, with little to no influence on their confidence.

In general, early childhood professionals indicate that they were satisfied with the pre and post-qualification training they received. Nonetheless, when asked to describe their need or desire for future training, ECSEs and SLPs are keen to share their interests. It is unclear as to why early childhood professionals who regularly support students with DD and SLI, with little to no pre and post-service training, are in general, satisfied with their pre and post-service training.

6.3 The Importance of Collaboration

It is evident from the results of both phases in this study that ECSEs and SLPs regularly work with one another in early childhood settings. With caseloads predominately including children with both a DD and SLI diagnosis, it was consistently reported that collaboration with one another was of high importance. The data from this study suggest that early childhood special educators and speech-language pathologist get their most in-depth post-qualification training from collaboration with one another. This aligns with the work of Wong (2014), McIntosh et al., (2007) and Overby et al., (2007) (see Section 3.2), which suggests that collaborative practices between educators and SLPs are essentials to improving language support for young children. Furthermore, the results of the present study suggest that "joint working is critical" as seen in the Bercow Report (2008), is nevertheless consistent with service providers today.

When considering post-qualification training, it is useful to refer to the NPDCI Conceptual Framework for Professional Development (Section 2.9), and deliberate where training for interprofessional, transdisciplinary, or collaborative working fits within this context.

In Figure 27 on the next page, I have made suggestions to include the relationship between what, how, where and for who, professional development is offered to Early Childhood professionals. I also incorporate transdisciplinary, interprofessional, and collaborative working as being influenced by these four components, but also influencing the overall outcome of highly effective teaching and intervening.

Figure 27: *NPDCI Conceptual Framework for Professional Development Modified*

Figure adapted from Winton et al., 2008

6.4 Implications for Early Childhood Professionals

Implications for this study lies more in the absence of certain aspects of early childhood professionals' training than in the presence of others. That is, the results of this study show that

early childhood professionals often support the needs of students outside their discipline with little to no training. However, regular collaboration amongst early childhood professionals appears to result in increased knowledge and confidence. Consider the following definitions;

> *Collaboration:* We have come to see dialogue as the centerpiece of our exchange. We see this as a fundamentally different take on collaboration—one that characterizes sharing and mutuality not in terms of doing the same research work but, rather, in terms of understanding the work of one another (Clark et al., 1996, p. 196); *Interprofessional Working:* two or more professions working together to achieve common goals (Green and Johnson, 2015); *Transdisciplinary:* Transdisciplinary: "a common system of axioms for a set of disciplines" (Klein 2004, 515).

These are three terms often used throughout the literature, results, and discussion of the present study. It is evident, from the present study and relevant literature, that transdisciplinary, interprofessional or collaborative service delivery models are being used in preschools providing special education services. Hillier et al's., (2010) systematic review explored the implications of training when using collaborative models between health and education professionals working in school settings. Their work included a total of 220 titles published after 1975. Their findings suggest that further discussion and investigation is needed when considering whether any undergraduate teacher or allied health training offer experience in interdisciplinary team-working (Hillier et al., 2010). This is relevant to the present study as it concerns SLPs. As the role of the SLP has evolved from medically based services, to an in-classroom (least restrictive environment) service, so have their collaborative service delivery models (ASHA, 1991). Further suggestions from Hillier et al's., review included;

- "undergraduates should experience modelling of interdisciplinary working by the university faculties themselves" (pg. 8);
- "there is a need for postgraduate and work-site specific training" (pg. 8);
- "models of interaction and teamwork are well-described but not well-evaluated in the education-health domain" (pg. 9).

Investigation into how early childhood professionals are trained or learn how to collaborate within school settings, could be an interesting next step to the present study.

From the results of this study, it can be suggested that through working collaboratively as part of a special education team, early childhood professionals are able to develop higher levels of confidence and increase their professional knowledge. As the respondents from the present study suggest, they often find themselves working within a transdisciplinary model, supporting the needs of students outside their discipline, however, are doing so with little to no training. Therefore, in parallel with early childhood professionals doing a job that they were not necessarily trained to do, policymakers and higher education institution should consider the lack of preparation, and the limited understanding of SLI and DD, that were evident in the findings of the present study.

The results of this study further suggest that many young children receive special education services for both SLI and DD. This encourages the need for further research which investigates how ECSEs and SLPs are being prepared to work with students with co-existing disabilities such as SLI and DD. As described by the participants from the present study, goals and objectives of SLPs and ECSEs for their students often overlap. For me, the question here then lies in the context of; is more training in each of these disciplines needed, or is it a matter of further training in these collaborative or interprofessional efforts for professionals? As reported in section 3.2, the importance of transdisciplinary work in early intervention is vital in providing best practices to young children (Bruder, 2000; Gurlanick, 2001). Thus, suggesting a need for policymakers, higher education institutions, and school supervisors to consider incorporating interprofessional training and work in pre-service training. An example of this might be providing opportunities for both ECSEs and SLPs to attend courses together which may cover overlapping content in child development.

Likewise, state and local authorities have an obligation to consider the importance of post-qualification training for early childhood professionals. Referring to the NPDCI's framework for professional development (Section 2.9), the current study suggests the need of federal, state and local governments in adopting a similar framework, ensuring highly effective teaching and intervention from planned and purposeful post-qualification training. When considering these

two professions (ECSE and SLP) these frameworks should carefully consider "where" their training is offered, as many ECSEs and SLPs work in several schools and classrooms.

6.4.1 Implications for Theory

The findings from the present study offer the opportunity to explore transdisciplinary approaches through Urie Bronfenbrenner's theory of ecological systems. In earlier sections of this thesis (see Section 3.3), each system was labelled and explored as a means of supporting young children with SLI. This included limited relations of SLPs and ECSEs only, collaborations efforts between these two professionals, and the indirect impact of pre-service/post-qualification training and the laws and policies that govern both, the profession of ECSE and SLP and the support that young children receive. The results of the present study encourage me to consider additional elements, which I believe warrant further exploration.

More specifically, the present study's data suggests an importance of networks between early childhood professionals. The work of Neal & Neal (2013), prompted me to consider Bronfenbrenner's ecological systems theory as a juxtaposed network rather than nested concentric circles (Simmel, 1955, pg. 147). Theorists George Simmel (1858-1918), bears a close resemblance to Bronfenbrenner, as both agree; the fundamental building block of ecological theories is the setting (Neal & Neal, 2013). For Bronfenbrenner (1979), 'a setting is a place where people can readily engage in face-to-face interaction' (p. 22). Defining settings as a set of interacting people, I can reformulate the presents study's theory from nested concentric circles, to a network of overlapping structures which directly or indirectly connect to another by the direct or indirect social interactions of their participants (Neal & Neal, 2013). Figure 28 gives an example of how a networking model might look in regard to the present study. However, rather than *people* interacting, this model demonstrates how both people and *system variables* might interact.

Figure 28:Example of Networking Model

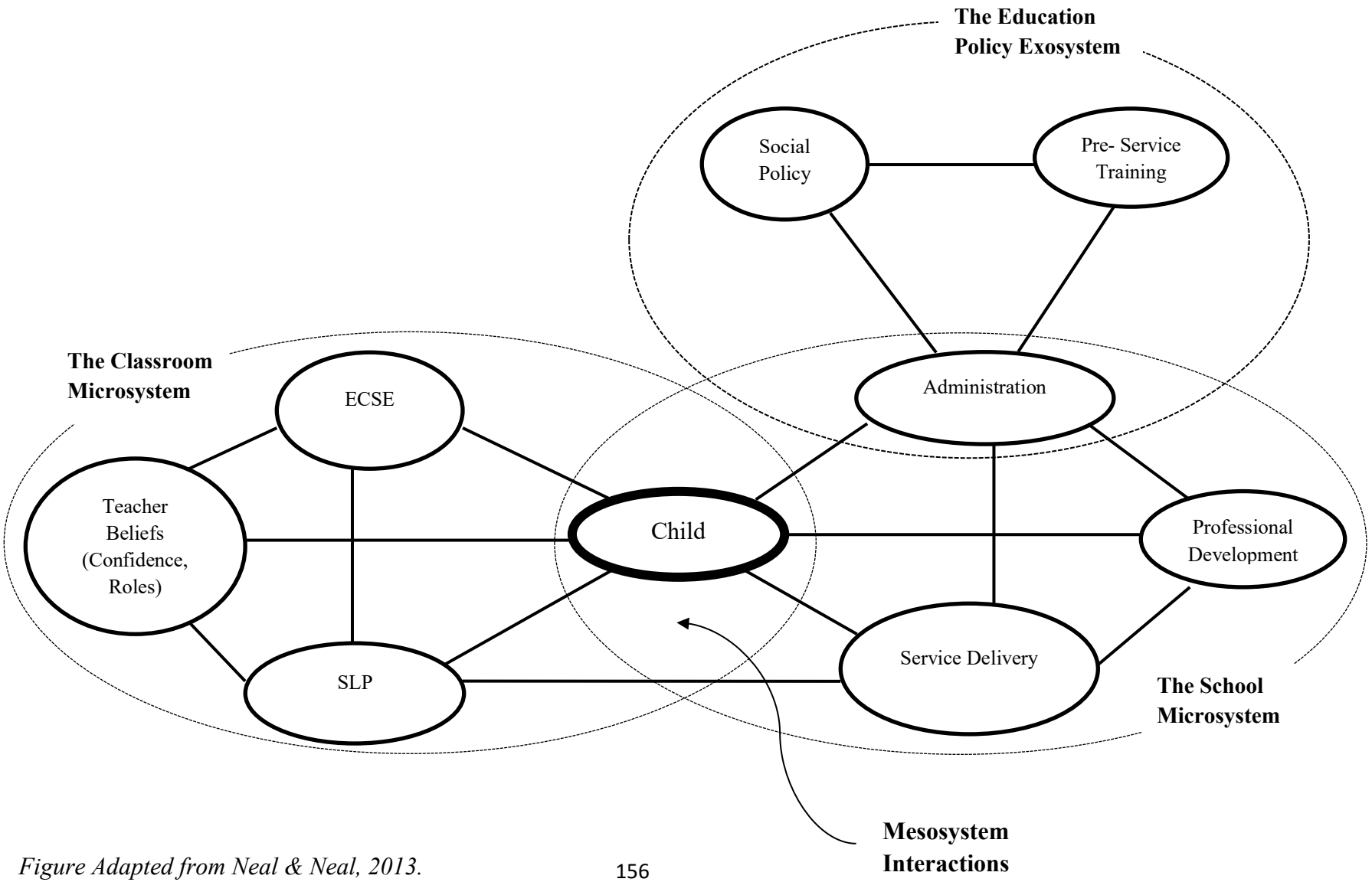


Figure Adapted from Neal & Neal, 2013.

This example illustrates two different settings. The setting to the right is composed of the daily interactions within the school, whereas the left can be identified as daily interactions inside the child's classroom. This model allows me to look at systems as having multiple microsystems that work together and are directly or indirectly impacted by other systems (mesosystem, exosystem, macrosystem and chronosystem). Furthermore, these microsystems can then be identified more purposely, with specific identities of their roles and participants.

The setting in the upper right-hand corner of Figure 28, is one that does not include the child. This is because the child does not actively participate in this setting, but nonetheless may be either directly or indirectly influenced by its participants or system variables (Neal & Neal, 2013). For example, the role of social policy and pre-training programs are indirectly shaping the development of the child as it affects how participants within the microsystem are learning and supporting them.

Figure 28 highlights the importance of collaboration efforts or interprofessional working, between all systems which impact the development of young children. Thinking of what the present study has offered concerning the importance of collaboration, I feel a networking model demonstrates a clear understanding of how ecological systems directly or indirectly impact one another and the development of young children. This demonstrates that if we are to expect early childhood professionals to adopt transdisciplinary approaches when providing support to young children, collaboration should be incorporated within all systems working together. Bronfenbrenner's models also emphasise the importance of culture, religion, and the social status in which a child lives. The present study has not considered these elements, not because they lack importance; instead the aims of this study were to be focused on specific areas of development, and specific units of each of these systems.

Although the macrosystem and chronosystem were not illustrated in Figure 28, a network-model can still be applied to the developing child in this example. For instance, private vs public schooling (variables which can be associated with the macrosystem in the present study) may look different in terms of funding. This has potential effects on the classroom microsystem. For example, if a school has more funding to hire additional therapist, this could result in the ability to perform more direct or 1:1 therapy, compared to small or large groups of children.

Additionally, cultural practices (example: gender specific schools) could potentially alter relationships between teacher, administrator and family beliefs.

Finally, a reflection of changes in pattern that occur over time, the chronosystem, can also be applied to this example. As discussed in section 2.9, an example of a variations in the chronosystem directly affecting the microsystems in Figure 28, would be the nature of early intervention changing from segregated classrooms to inclusive environments. Additionally, as a child's skills increase, he or she may spend less time interacting with certain participants within their microsystems and shifting their relationships.

The present study has successfully applied existing theories such a Bronfenbrenner's ecological theory, as well as Neil & Neil's example of a networking model to a new topic area; supporting young children with SLI, the roles and responsibilities of ECSE's and SLP's. However, I have also been able to develop or merge these theories coherently, hopefully contributing to the improvement of speech, language and communication development for young children.

6.4.2 Connection between Frameworks and Theories

Reflecting on the data from the present study, I believe Bronfenbrenner's ecological theory, and this example of a networking model could be considered collectively, magnifying each individual microsystem and/or mesosystem interactions. For example, a separate microsystem within the Administration of the Exosystem might specifically focus on the NPDCI professional development framework (section 2.11), and how professional development can be offered or included in the school or classroom microsystems. The complicated structures involved in the field of education require special attention to the details of each system operating individually, but also collectively as an influence on other systems.

Professionals working in early years settings might be interested in how the findings of the present study have presented a new look on Bronfenbrenner's Ecological Theory as it applies to the networks in which they are involved. The information presented in this study could be used by early childhood professionals in suggesting more focused or target professional development or collaboration efforts at an administrative level.

6.5 Limitations of the Present Study

- The significance of this study was limited by the size of respondents as well as geographical area, affecting the ability of the results to be generalised. Given that teaching qualifications and licensing requirements vary from state to state, it can only be hypothesised that the current findings would be formed in the same way if educators from several states across the United States were sampled. Replications of this study in various geographical locations must be conducted.
- In addressing the roles and responsibilities of early childhood professionals, the results of this study were as expected from personal experience. As this did not reproduce any new information, this aspect of the questionnaire and interviews could have been revised to have a more solid focused on early childhood professionals' roles and responsibilities in supporting children outside their discipline rather than both.
- The timing of the study may have resulted in a lower than expected response rate and should be considered for future research. Asking for an hour of a teacher's time the end of the school year may have resulted in fewer participants.
- Telephone interviews can often be faced with challenges such as poor connection, difficulty with hearing, or during a limited time frame. Opportunities to conduct more interviews face to face, could have potentially resulted in more rigorous data collected from the participants of this phase.
- Finally, having multiple or one additional researcher help code the data would enhance the reliability of the themes identified throughout this study.

6.6 Suggestions for Further Research

- This study did not explore the feelings and perspectives of the parents of young children with SLI and DD which could be a handy extension of this work. Parent interaction manifests significantly in Bronfenbrenner's bioecological theory and is evident in supporting the development of young children. As the data from the present study suggest the importance of collaborative practices, it could be useful to incorporate trainings, or models of collaboration practices between parents and early childhood professionals.

- Regarding interprofessional work, it would be worth exploring the collaboration of ECSEs and SLPs alongside other early childhood professionals such as Occupational Therapist, Physical Therapists, Psychologists and health providers. By looking at the entire team who is responsible for supporting a child with needs, it may provide further insight into how and why interprofessional training and working can be beneficial.
- Considering the amount of time SLPs and ECSEs desire, or do spend collaborating, it is worth exploring options for higher institutions to provide programs specifically designed to train ECSE's with dual qualifications in speech and language therapy or similarly, SLPs with dual qualifications in DD.

6.7 Final Thoughts

Since the completion of this thesis, my own professional experiences have changed. As I am currently working as an ECSE in a slightly different role, the findings and implications of the present study have enlightened my desire to use this work to further explore the use of the NCDPI framework for Professional Development. Early intervention in the state of Colorado begins from a child's birth and continues to the age of 8 years. My current role involves working with children who are eligible to receive special education services within their homes. These services are provided under Part C of the IDEA (Section 2.3.1) for children birth – three years of age. Working primarily as an independent contractor from home, further supports the need for target professional development, using an adaptable framework as discussed in the present study. For example, the organization of employment should consider "how" professional development will be offered, "where" it can be conducted, and "who" will participate. This could be influenced by separate microsystems of the *school or organization* and *the parent, child and provider*. Interactions between these microsystems (the mesosystem) also requires careful consideration due to the absence of proximity of each microsystem. For example, the mesosystem between the organization and the parent/child for Early Intervention, primarily consists of a single provider working between the two. Without carefully considering arrangements or procedures, the mesosystem between these two microsystems could get lost.

Furthermore, positions which require professionals to work independently, may limit opportunities to collaborate with other professionals in the special education team which presents a challenge to the key recommendation of collaboration that emerged from the present data.

Reflecting on the data from the individual interviews has inspired me to consider how much importance I previously attributed to collaboration with members of my team. I believe I always contributed my confidence, skills and knowledge of working with children with SLI to the information I was given and taught by my classroom SLP's. However, I am now compelled to agree with the participants of the present study, that collaboration opportunities have been paramount to my post-qualification training.

Overall this research journey has taught me several important skills to conduct further research in the field of Early Childhood Special Education. I have gained the confidence needed to determine appropriate methodologies, conduct relevant literature searches, use qualitative and quantitative methods to analysis data and approach participants.

There is much more that can and needs to be done in exploring the roles, responsibilities and affiliations between ECSEs and SLPs in early childhood. Time, restricted participation, and my limited research experience have impacted on the amount possible within the context of an EdD. However, I hope to take the information gathered, along with the skills I have developed as a researcher and continue to contribute to the literature concerning early childhood professionals. As this document is submitted in accordance with the requirements to obtain a Doctorate in Education, I am encouraged by the results of this study in making a positive impact on my professional career as an ECSE.

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Appendices

Appendix 1: ECSE Questionnaire Outline

How are children with Speech and Language Communication Needs supported in Early Childhood Education: The role of the Early Childhood Special Educator

Page 1: Introduction

The purpose of this research study is to collect information regarding the roles, knowledge, training needs, and confidence in the area of children's speech or language impairments or delays of ECSE's. Your participation in this study is entirely voluntary and you have the ability to withdraw at any time, up until the data has been analyzed and written in final thesis (approximate date 30/09/2018). All responses to this questionnaire will be treated as strictly confidential. Your answers will not be used in any way which could identify you or your setting. By submitting your answers, you are providing your consent to participate in this study.

Personal Details

This section asked for details about your background and training. Please answer all of questions as these are important for our research.

1. School district in which you are employed. (your answers to this are only collected for geographical reference)

2. How many years have you been an ECSE?
   - 0-3
   - 4-6
   - 7-10
   - 10+

3. Which best describes your ECSE Qualification?
   - Bachelors Degree: Early Childhood Education
   - Bachelors Degree: Special Education
   - Bachelors Degree: Early Childhood Special Education
   - Masters Degree: Early Childhood Education
   - Masters Degree: Special Education
   - Masters Degree: Early Childhood Special Education
   - Other

4. Name of Training Institution

5. Which best describes your current position as an ECSE?
    - Itinerant: I travel between schools or classrooms providing only special education services to preschool students
    - Interdisciplinary: I remain in one classroom, assuming the role of the general education teacher and the special education teacher for preschool students.

6. Number of students on your caseload?
    - 0-5
    - 6-10
    - 11+

7. Number of students on your ECSE case load who also receive speech and language services?
    - 0-5
    - 6-10
    - 11+

ECSE Services

The next section will ask questions concerning your role and responsibilities as an ECSE. Within each category, please tick all that apply to you and your current role.

8. Consultant to other Adults
    - Provide information to other adults about a child's disability or special need
    - Provide information to other adults about resources available to support a child and their family.
    - Plan intervention strategies with other adults that address IEP goals and objectives.
    - Plan adaptation with other adults for materials, equipment, physical environment and/or daily routines.
    - Demonstrate intervention strategies.
    - Provide feedback to other adults of their implementation of intervention strategies. Update parents/caregivers of children's progress through regular communication.
    - Other: please specify

9. Assessor/Monitor:
    - Administer general early childhood screenings.
    - Administer assessments needed to meet requirements related to eligibility for services.
    - Provide written reports of assessment findings.
    - Collect and manage data to monitor a child's progress.
    - Identify and refer children who are suspected or at risk of a developmental delay/disorder.

- Other: please specifiy

10. Team Member:
    - Coordinate all IEP related meetings.
    - Serve as Case manager or Service Coordinator through special education process. Attend all IEP meetings.
    - Coordinate and Facilitate transition meetings.
    - Collaborate with professionals who provide related services to children with IEP. Attend school or district wide staff activities or meetings.
    - Work with team to write IEP.
    - Attend conferences/workshops to remain familiar with current information and service delivery trends
    - Other: Please Specify

11. Direct Service Provider
    - Work one-to-one with children on IEP objectives.
    - Work in small group with children on IEP objectives.
    - Work in large group with children on IEP objectives.
    - Prepare individualized or small/large group lesson plans for children with IEP.
    - Prepare individualized or small/large group lesson plans for children without IEP.
    - Teach ALL children, including typical peers.
    - Teach typical peers in how to play, interact or role model for children with IEP.
    - Create, purchase or obtain material to support children with IEP.
    - Other: please specify

12. Can you please describe any experience you may have had, where you have supported children with speech or language impairments by specifying 'not at all', 'a little', 'quite a lot' or 'I'm not sure' for the following categories.(Please don't select more than 1 answer(s) per row. Please select at least 4 answer(s). Please don't select more than 4 answer(s) in any single column.)

	Not at all	A little	Quite a lot	I'm not sure
Articulation/Speech Sounds				
Expressive Language (identifying)				
Receptive Language (understanding)				
Use of Language in a Social Context.				

13. Can you please describe how you personally support children with speech or language impairments by ticking all that apply?

- Identification of children with speech or language impairments/delays.
- Assessment to determine eligibility for children with speech or language impairments/delays.
- Direct one-to-one, small/large group services for children with speech or language impairments/delays.
- Planning activities to support children with speech or language impairments/delays.
- Collecting data and reporting on progress in relation to children with speech or language impairments/delays
- I do not support children with speech or language impairments or delays
- Other: Please specify

Pre and Post Qualification Training

This section will ask questions concerning pre and post qualification training you have received in relation to children's speech and language development and disorders. I understand it may be difficult to remember exact details of training that happened several years ago, so please complete these questions to the best of your recollection. Finally, for the purpose of this research, it is important for me to understand which parts of your training were effective enough to make an impact.

14. How many hours of pre-service training relating to normal speech and language development did you receive? (based on 1 college credit hour = 10 hours)

- 0 hours
- 0-10 hours
- 11-20 hours
- 21-30 hours
- 31+ hours
- Other: Please Specify

15. Who delivered this training?

- General course lecturer
- Special education lecturer
- Speech and Language Therapist
- Visiting Early Years Practitioner
- Other: Please Specify

16. How many hours of pre-service training relating to speech or language impairments or delays did you receive? (based on 1 college credit hour = 10 hours)

- 0 hours
- 1-10 hours
- 11-20 hours
- 21-30 hours
- 31+ hours
- Other: Please Specify

17. Who delivered this training?
    - Special education lecturer
    - Speech and Language Therapist
    - Visiting Early Years Practitioner
    - Other

18. Please indicate the level of coverage for the following aspects of speech and language development you received in your pre-service program, by specifying 'not at all', 'briefly', 'in depth' or 'n/a' if you received 0 hours of training.(Please don't select more than 1 answer(s) per row. Please select at least 4 answer(s).Please don't select more than 4 answer(s) in any single column.)

	Not at all	A little	Quite a lot	I'm not sure
Articulation/Speech Sounds				
Expressive Language (identifying)				
Receptive Language (understanding)				
Use of Language in a Social Context.				

19. Have you had any post-qualification training in speech and language development or disorders? (yes or no)

20. If you answered yes to number 19, can you please describe this training by providing details concerning how many hours you attended; who delivered it; and the content as it relates to speech and language development or disorders. (if you answered NO to question 19 please indicate with'n/a')

21. This question will ask how you perceive your training needs in the areas of children's speech and language development. Please answer the following questions in a way that represents your current training needs. (Please don't select more than 1 answer(s) per row. Please select at least 4 answer(s).)

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
I received adequate training in regards to children's speech and language typical development in my pre service program.					
I received adequate training in regards to children's speech or language impairments/delays in my pre service program.					
I received adequate training in regards to children's speech and language typical development in post qualification.					
I received adequate training in regards to children's speech or language impairments/delays in post qualification.					

22. How has your initial training made you feel in supporting the following areas of children's speech and language development? (Please don't select more than 1 answer(s) per row. Please select at least 4 answer(s).)

	Confident	Quite Confident	Not at all Confident	I'm not familiar with this term
Articulation/Speech Sounds				
Expressive Language (identifying)				
Receptive Language (understanding)				
Use of Language in a Social Context.				
Overall ability to support children with speech or language impairments				

Children's Speech and Language Development

This section will consist of examples of children who may display characteristics of speech and language disabilities. I don't expect you to make a diagnosis, just imagine that this child has just joined your setting and you have made these observations over a few weeks. Please answer these based on your knowledge of speech and language development in young children.

23. For each child, please indicate whether you feel the child has 'articulation delays', 'expressive language delays', 'receptive language delays', 'social language delay' or 'developmentally appropriate. (Please don't select more than 1 answer(s) per row. Please select at least 6 answer(s).)

	Articulation Delay	Expressive Language Delay	Receptive Language Delay	Social Language Delay	Developmentally Appropriate
Child 1 (4 years old): friends and family often say they cannot always understand what he is saying. Often says '"tat" for "cat", or "do" for "go".					
Child 2 (4 years): shy in large group activities and is hesitant to respond to the teacher's questions, though interacts well with others. His teacher notes that he "mixes up some of his speech sounds" and "has trouble saying longer words" but is stimulable to correct errors. He is attentive and follows directions					
Child 3 (5 years): actively participates in activities with others, understands and follows directions, uses 2-3-word sentences, with a vocabulary of 200 words.					
Child 4 (3years): uses 4-5 word sentences with an expressive vocabulary of 500 words, follows 1-2 step directions and is understood by other children and adults.					
Child 5 (4 years): positively enters the room and says "hello", has difficulty following directions and answering questions or pointing to items when asked, demonstrates highly intelligible speech.					
Child 6 (5 years): uses 5+ word sentences and is understood by most, does not have many friends and finds it difficult to share toys or take turns during games.					

Thank you for taking the time to complete this questionnaire. I will be following this questionnaire with individual interviews and advisory groups, to guide a more detailed account of speech and language support in the early years. If you would like to be considered for the next phase of this research, please fill in your contact details below.

24. Name
25. Email Address
26. Please enter a valid phone number

Appendix 2: SLP Questionnaire in Full

How are children with Speech and Language Communication Needs supported in Early Childhood Education: The role of the Speech Language Pathologist

The purpose of this research study is to collect information regarding the roles, knowledge, training needs, and confidence in the area of children's speech or language impairments or delays of SLP's. Your participation in this study is entirely voluntary and you have the ability to withdraw at any time, up until the data has been analyzed and written in final thesis (approximate date 30/09/2018). All responses to this questionnaire will be treated as strictly confidential. Your answers will not be used in any way which could identify you or your setting. By submitting your answers, you are providing your consent to participate in this study.

Personal Details

This section asked for details about your background and training. Please answer all of questions as these are important for our research.

1. School district in which you are employed. (your answers to this are only collected for geographical reference)

2. How many years have you been an SLP?
   - 0-3
   - 4-6
   - 7-10
   - 10+

3. Which best describes your SLP Qualification?
   - Bachelors Degree: Speech Language and Communication Disorders
   - Masters Degree: Speech Language and Communication Disorders
   - Other: Please Specify

4. Name of Training Institution

5. Which best describes your current position as an SLP?
   - Itinerant: I travel between schools or classrooms providing speech and language services to all ages of students.
   - Itinerant: I travel between schools or classrooms providing speech and language services to only preschool students.
   - Other: Please Specify

6. Number of students on your caseload?
    - 0-5
    - 6-10
    - 11+

7. Number of students on your SLP case load who also receive early childhood special education services?
    - 0-5
    - 6-10
    - 11+

SLP Services

The next section will ask questions concerning your role and responsibilities as an SLP. Within each category, please tick all that apply to you and your current role.

8. Consultant to other Adults
    - Provide information to other adults about a child's disability or special need
    - Provide information to other adults about resources available to support a child and their family.
    - Plan intervention strategies with other adults that address IEP goals and objectives.
    - Plan adaptation with other adults for materials, equipment, physical environment and/or daily routines.
    - Demonstrate intervention strategies.
    - Provide feedback to other adults of their implementation of intervention strategies. Update parents/caregivers of children's progress through regular communication.
    - Other: please specify

9. Assessor/Monitor:
    - Administer general early childhood screenings.
    - Administer assessments needed to meet requirements related to eligibility for services.
    - Provide written reports of assessment findings.
    - Collect and manage data to monitor a child's progress.
    - Identify and refer children who are suspected or at risk of a developmental delay/disorder.
    - Other: please specifiy

10. Team Member:
    - Coordinate all IEP related meetings.

- Serve as Case manager or Service Coordinator through special education process. Attend all IEP meetings.
- Coordinate and Facilitate transition meetings.
- Collaborate with professionals who provide related services to children with IEP. Attend school or district wide staff activities or meetings.
- Work with team to write IEP.
- Attend conferences/workshops to remain familiar with current information and service delivery trends
- Other: Please Specify

11. Direct Service Provider
    - Work one-to-one with children on IEP objectives.
    - Work in small group with children on IEP objectives.
    - Work in large group with children on IEP objectives.
    - Prepare individualized or small/large group lesson plans for children with IEP.
    - Prepare individualized or small/large group lesson plans for children without IEP.
    - Teach ALL children, including typical peers.
    - Teach typical peers in how to play, interact or role model for children with IEP.
    - Create, purchase or obtain material to support children with IEP.
    - Other: please specify

12. Can you please describe any experience you may have had, where you have supported children with early childhood developmental disorders/delays by specifying 'not at all', 'a little', 'quite a lot' or 'I'm not sure' for the following categories.(Please don't select more than 1 answer(s) per row. Please select at least 4 answer(s). Please don't select more than 4 answer(s) in any single column.)

	Not at all	A little	Quite a lot	I'm not sure
Social/Emotional Development				
Cognitive Development				
Adaptive/Coping Skills Development				

13. Can you please describe how you personally support children with early childhood developmental delays by ticking all that apply?

- Identification of children with speech or language impairments/delays.
- Assessment to determine eligibility for children with speech or language impairments/delays.
- Direct one-to-one, small/large group services for children with speech or language impairments/delays.

- Planning activities to support children with speech or language impairments/delays.
- Collecting data and reporting on progress in relation to children with speech or language impairments/delays
- I do not support children with early childhood developmental delays
- Other: Please specify

Pre and Post Qualification Training

This section will ask questions concerning pre and post qualification training you have received in relation to early childhood developmental delays and disorders. I understand it may be difficult to remember exact details of training that happened several years ago, so please complete these questions to the best of your recollection. Finally, for the purpose of this research, it is important for me to understand which parts of your training were effective enough to make an impact.

14. How many hours of pre-service training relating to normal early childhood development did you receive? (based on 1 college credit hour = 10 hours)

- 0 hours
- 0-10 hours
- 11-20 hours
- 21-30 hours
- 31+ hours
- Other: Please Specify

15. Who delivered this training?

- General course lecturer
- Special education lecturer
- Speech and Language Therapist
- Visiting Early Years Practitioner
- Other: Please Specify

16. How many hours of pre-service training relating to early childhood developmental delays did you receive? (based on 1 college credit hour = 10 hours)

- 0 hours
- 1-10 hours
- 11-20 hours
- 21-30 hours
- 31+ hours
- Other: Please Specify

17. Who delivered this training?
    - Special education lecturer
    - Speech and Language Therapist
    - Visiting Early Years Practitioner
    - Other

18. Please indicate the level of coverage for the following aspects of early childhood development you received in your pre-service program, by specifying 'not at all', 'briefly', 'in depth' or 'n/a' if you received 0 hours of training.(Please don't select more than 1 answer(s) per row. Please select at least 4 answer(s). Please don't select more than 4 answer(s) in any single column.)

	Not at all	A little	Quite a lot	I'm not sure
Social/Emotional Development				
Cognitive Development				
Adaptive/Coping Skills Development				

19. Have you had any post-qualification training in early childhood developmental delays or disorders? (yes or no)

20. If you answered yes to number 19, can you please describe this training by providing details concerning how many hours you attended; who delivered it; and the content as it relates to speech and language development or disorders. (if you answered NO to question 19 please indicate with'n/a')

21. This question will ask how you perceive your training needs in the areas of early childhood developmental delays or disorders. Please answer the following questions in a way that represents your current training needs. (Please don't select more than 1 answer(s) per row. Please select at least 4 answer(s).)

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
I received adequate training in regards to children's speech and language typical development in my pre service program.					
I received adequate training in regards to children's speech or language impairments/delays in my pre service program.					
I received adequate training in regards to children's speech and language typical development in post qualification.					
I received adequate training in regards to children's speech or language impairments/delays in post qualification.					

22. How has your initial training made you feel in supporting the following areas of early childhood developmental delays? (Please don't select more than 1 answer(s) per row. Please select at least 4 answer(s).)

	Confident	Quite Confident	Not at all Confident	I'm not familiar with this term
Social/Emotional Development				
Cognitive Development				
Adaptive/Coping Skills Development				
Overall ability to support children with early childhood developmental delays/disorders				

Early Childhood Development, Disorders or Delays

This section will consist of examples of children who may display characteristics of early childhood developmental delays. I don't expect you to make a diagnosis, just imagine that this child has just joined your setting and you have made these observations over a few weeks. Please answer these based on your knowledge of speech and language development in young children.

23. For each child, please indicate whether you feel the child has 'social/emotional delays', 'cognitive delays', 'adaptive/coping skills delay' or 'developmentally appropriate'. (Please don't select more than 1 answer(s) per row. Please select at least 6 answer(s).)

	Articulation Delay	Expressive Language Delay	Receptive Language Delay	Social Language Delay	Developmentally Appropriate
Child 1 (4 years old): has many friends and enjoys playing games and taking turns with other children, assistance is needed to zip coat, and when eating soft or liquid foods such as applesauce or yogurt. Needs to be reminded to go to the toilet and requires assistance when going.					
Child 2 (4 years): shy in large group activities and is hesitant to respond to the teacher's questions, identifies 20/26 letters and 18/26 letter sounds, follows daily routine with few teacher reminders and plays well in small groups or one-to one.					
Child 3 (5 years): student needs frequent reminders and sometimes physical assistance to keep hands and feet to self. Plays nicely one-to-one with other children when assisted by an adult, becomes easily upset when daily routine is modified.					
Child 4 (3.5 years): often needs help to identify name, answers questions about books, but often turns pages from back to front or starts reading in the middle of book. Sits during circle time for 2-3 minutes, then often starts lying on floor, or playing with fingers/clothing/etc, consistently rote counts 1-3, and can identify the color 'pink'.					
Child 5 (4 years): child follows daily routine independently, uses eating utensils at appropriate times, verbally expresses needs and wants to adults when desperate, often plays alone and does not participate in small and large group activities or discussions, and does not continue relationships with children or adults.					

Thank you for taking the time to complete this questionnaire. I will be following this questionnaire with individual interviews and advisory groups, to guide a more detailed account of speech and language support in the early years. If you would like to be considered for the next phase of this research, please fill in your contact details below.

24. Name
25. Email Address
26. Please enter a valid phone number

Appendix 3: Adopted questionnaire questions from Mroz et al., 2002

Question Number from: Mroz et al., 2002 Questionnaire	Question Number from: Present Study ECSE Questionnaire
14. During my initial training I received instruction in normal child language development which lasted (approximately): ⌗ 0-1 hour ⌗ 2-4 hours ⌗ 5-7 hours ⌗ 4-8 hours	13. How many hours of pre-service training relating to normal speech and language development did you receive? (based on 1 college credit hour = 10 hours): ⌗ 0 hours ⌗ 0-10 hours ⌗ 11-20 hours ⌗ 21-30 hours ⌗ 31+ hours ⌗ Other 14. How many hours of pre-service training relating to speech or language impairments or delays did you receive? (based on 1 college credit hour = 10 hours): ⌗ 0 hours ⌗ 0-10 hours ⌗ 11-20 hours ⌗ 21-30 hours ⌗ 31+ hours ⌗ Other
15. This training was delivered by: ⌗ a general course tutor ⌗ a speech and language therapist ⌗ a speaker with a special needs background ⌗ an educational psychologist ⌗ a visiting early years practitioner ⌗ don't know	15.&17. Who delivered this training: ⌗ General course lecturer ⌗ Special education lecturer ⌗ Speech and Language Therapist ⌗ Visiting Early Years Practitioner ⌗ Other
16. The following areas were covered as part of training in normal speech and language development (specifying, 'not at all', 'briefly', 'in depth'): ⌗ comprehension; ⌗ attention and listening skills ⌗ the relationship between play and language development ⌗ speech sound development ⌗ expressive language ⌗ use of language in social contexts	18. Please indicate the level of coverage for the following aspects of speech and language development you received in your pre-service program, by specifying 'not at all', 'briefly', 'in depth' or 'n/a' if you received 0 hours of training: ⌗ Articulation/Speech Sounds ⌗ Expressive Language (identifying) ⌗ Receptive Language (understanding) ⌗ Use of Language in a Social Context
13. How has your training made you feel in assessing the following areas of children's speech and language development (confident, quite confident, not at all confident, I'm not familiar with this term): ⌗ Comprehension ⌗ Attention and listening skills ⌗ Symbolic play ⌗ Speech sound development ⌗ Expressive language ⌗ Use of language in social contexts	22. How has your initial training made you feel in supporting the following areas of children's speech and language development (confident, quite confident, not at all confident, I'm not familiar with this term): ⌗ Receptive Language ⌗ Speech Sound Development ⌗ Expressive Language ⌗ Use of Language in Social Context ⌗ Overall ability to support children with speech or language impairments

Appendix 4: Colorado School Districts

1. Academy 20 - 1040 - COLORADO SPRINGS
2. Adams 12 Five Star Schools - 0020 - THORNTON
3. Adams County 14 - 0030 - COMMERCE CITY
4. Adams-Arapahoe 28J - 0180 – AURORA
5. Aspen 1- 2640- Aspen
6. Boulder Valley RE 2 - 0480 - BOULDER
7. Canon City RE-1 - 1140 - CANON CITY
8. Cherry Creek 5 - 0130 - GREENWOOD VILLAGE
9. Cheyenne Mountain 12 - 1020 - COLORADO SPRINGS
10. Colorado Springs 11 - 1010 - COLORADO SPRINGS
11. Delta County 50(J) - 0870 - DELTA
12. Denver County 1 - 0880 - DENVER
13. Douglas County RE 1 - 0900 - CASTLE ROCK
14. Durango 9-R - 1520 – DURANGO
15. Eagle County RE 50 - 0910 – EAGLE
16. Eaton RE-2 – 3085- EATON
17. Elizabeth C-1 - 0920 - ELIZABETH
18. Englewood 1 - 0120 - ENGLEWOOD
19. Fountain 8 - 1000 - FOUNTAIN
20. Greeley 6 - 3120 - GREELEY
21. Gunnison Watershead RE1J-1360- Gunnison
22. Harrison 2 - 0980 - COLORADO SPRINGS
23. Hinsdale County RE 1 - 1380 - LAKE CITY
24. Jefferson County R-1 - 1420 - GOLDEN
25. Johnstown-Milliken RE-5J - 3110 - MILLIKEN
26. Lewis-Palmer 38 - 1080 - MONUMENT
27. Littleton 6 - 0140 - LITTLETON
28. Mapleton 1 - 0010 - DENVER
29. Plateau Valley 50 - 1990 - COLLBRAN
30. Poudre R-1 - 1550 - FORT COLLINS
31. Pueblo County 70 - 2700 - PUEBLO
32. Revere School District - 2865 - OVID
33. School District 27J - 0040 - BRIGHTON
34. Sheridan 2 - 0123 - SHERIDAN
35. Summit RE-1 - 3000 - FRISCO
36. Thompson R2-J - 1560- Loveland
37. Weld County S/D RE-8 - 3140 - FORT LUPTON
38. Weld County School District RE-3J - 3090 - KEENESBURG
39. Westminster Public Schools - 0070 - WESTMINSTER
40. Widefield 3 - 0990 - COLORADO SPRINGS
41. Windsor RE-4 - 3100 - WINDSOR

Appendix 5: Colorado Department of State BOCES

1. Adams County BOCES – 9120 - NORTHGLENN
2. Centennial BOCES - 9035 – GREELEY
3. Colorado Digital BOCES – 9170 – COLORADO SPRINGS
4. East Central BOCES - 9025 – LIMON
5. Expeditionary BOCES – 9130 - DENVER
6. Front Range BOCES - 9160 – DENVER
7. Grand Valley BOCES - 9135 - GRAND JUNCTION
8. Larimer BOCES – 9110 - LOVELAND
9. Mountain BOCES - 9030 - LEADVILLE
10. Mt Evans BOCES - 9140 - IDAHO SPRINGS
11. Northeast BOCES - 9040 - HAXTUN
12. Northwest Colo BOCES - 9095 - STEAMBOAT SPRINGS
13. Pikes Peak BOCES- 9045 – COLORADO SPRINGS
14. Rio Blanco BOCES - 9125 - RANGELY
15. San Juan BOCES - 9050 - DURANGO
16. San Luis Valley BOCES - 9055 - ALAMOSA
17. Santa Fe Trail BOCES - 9150 - LA JUNTA
18. South Central BOCES - 9060 - PUEBLO WEST
19. South-eastern BOCES - 9075 – LAMAR
20. Southwest BOCES – 9080 - CORTEZ
21. Uncompahgre BOCES - 9145 - RIDGWAY
22. Ute Pass BOCES - 9165 - WOODLAND PARK

Appendix 6: Questionnaire Email sent 09/02/18

February 9, 2018

Dear Director/Staff of Early Childhood Education,

My name is Judy Davis and I am a Doctorate of Education (EdD) student at the University of Leeds in England (http://www.education.leeds.ac.uk/). I am writing to invite you and members of your staff to take part in a research study. I am contacting you as a gateway to intended participants; Early Childhood Special Educators (ECSE's) and Speech Language Pathologist (SLP'S) working within a public preschool.

Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the attached information sheet carefully and discuss it with others if you wish.

Should you feel this study may be of interest to some or all of your staff, I would kindly like to ask for any contact details you are willing to provide (eg. work email address).

Alternatively, please feel free to forward this message with the attached information sheet and link to the online questionnaire to any and all ECSE's/SLP's working with preschool aged children.

The online questionnaire will close at 8:00 pm on March 9, 2018.

Thank you for your time and consideration. Please do not hesitate to contact me with any further questions or comments. I look forward to your response.

Early Childhood Speech and Language Questionnaire

https://leeds.onlinesurveys.ac.uk/how-are-children-with-speech-language-and-communication-ne

Early Childhood Special Education Teacher Questionnaire

https://leeds.onlinesurveys.ac.uk/how-are-children-with-speech-and-language-communication-ne

Kind Regards,
Judy Davis
EdD Student
University of Leeds

Paula Clarke, P.J.Clarke@leeds.ac.uk, +44 0113 343 9410 (Supervisor)Mary Chambers, M.E.Chambers@education.leed.ac.uk, +44 0113 3433576 (Supervisor)

Appendix 7: Information Sheet

How are children with SLCN supported in Early Childhood: The role of the Early Childhood Special Educator and Speech Language Pathologist?

You are being invited to take part in a research project. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. You are welcome to contact me at edjld@leeds.ac.uk if there is anything that is not clear or if you would like more information. Take time to decide whether you wish to take part.

What is the purpose of the project?

This is a research project that will be conducted under the supervision of The School of Education, in efforts to obtain a Doctor of Education (EdD) from the University of Leeds in the United Kingdom.

This research aims to understand the roles and responsibilities of Early Childhood Special Educators (ECSE), as well as their training, knowledge, and confidence in relation to Speech and Language Communication Needs (SLCN). This research also aims to understand the training, knowledge and confidence of SLP's when working within early childhood settings. The need for trained professionals within public early childhood classrooms has become more pressing, as more young children within preschool are determined eligible to receive speech and language services.

Why have I been chosen?

You have been chosen for this study as you hold an Early Childhood Special Educator or Speech Language Pathologist position within a public preschool setting within the state of Colorado. I aim to obtain approximately 250 questionnaire responses and would like to conduct 20-30 individual follow-up interviews.

What will I have to do?

The first phase of this research project; an online questionnaire, this should take no more than 20 minutes of your time. At the end of this questionnaire, I will ask for volunteers to participate in an individual follow-up interview. It will take approximately one hour to complete the interview, and an additional 30 minutes to review and approve the analysis of the data. Interviews will be conducted via telephone, Skype, or in person, at a time that is suitable for you. The interviews are intended to be carried out up until May 2018.

Interviews will include a mixture of open and close ended questions. Individuals who have volunteered to participate in the interview phase will be given the questions in advance for their own review. These participants should be able to discuss in depth, their knowledge of speech or language impairment and delays/early childhood special education, as well as their own training needs in this area.

What are the possible disadvantages and risks of taking part?

I do not foresee any risks in participating in this research. There is a slight inconvenience of taking at most 2 hours of your time should you take part in both phases of this research.

What are the possible benefits of taking part?

Whilst there are no immediate benefits for those people participating in the project, it is hoped that this work will encourage and inform more pre-service training in speech and language delays or disorders for ECSE's, or Early Childhood training for SLP's, therefore providing increased opportunities for young children to receive the support they need to communicate effectively. Participants will be given the opportunity to receive a brief written summary of the findings from this research.

Do I have to take part?

It is up to you to decide whether to take part. During the first phase of this research, submission of the questionnaire provides your consent to participate. If you volunteer to take part in the second phase, individual interviews, you will be asked to sign a consent form prior to any data collection. You may decline to answer any questions with no negative consequences. Furthermore, you can withdraw at any time, up until the data is written in the final thesis (estimated 31/10/2018). You do not have to give a reason.

Will my taking part in this project be kept confidential? / What will happen to the results of the research project?

Participant's personal information and data collected will be kept confidential through the University of Leed's M Drive, using desktop anywhere and backed up by the university's server. This requires a user name and password, in which I will be the only person with access. The results of this study will be analysed and included anonymously within my final research thesis. I will use pseudonyms within the final thesis and during conversations with relevant colleagues. The data will be retained for at least 2 years after publication, and then deleted. Names and places of work will not be revealed at any point during this research.

Will I be recorded, and how will the recorded media be used?

The audio recordings of your interviews made during this research will be used only for analysis. No other use will be made of them without your written permission, and no one outside the project will be allowed access to the original recordings.

Contact for further information

As this is a supervised student research project, please feel free to contact myself or my supervisor, should you have any further questions or comments at;

Judy Davis: Email – edjld@leeds.ac.uk

Paula Clarke: Telephone – 0113 343 9410
Email – P.J.Clarke@leeds.ac.uk

Thank you for taking the time to read this information sheet. Finally, this study has been reviewed and given a favourable opinion by the University of Leeds Research Ethics Committee on February 7, 2018, ethics reference 17-023. I look forward to your participation.

Kind Regards,

Judy Davis
EdD Student
University of Leeds

Appendix 8: Questionnaire Email sent 9/2/18

February 9, 2018

Dear Director/Staff of Early Childhood Education,

My name is Judy Davis and I am a Doctor of Education (EdD) student at the University of Leeds in England(http://www.education.leeds.ac.uk/). I am writing to invite you and members of your staff to take part in a research study. I am contacting you as a gateway to intended participants; Early Childhood Special Educators (ECSE's) and Speech Language Pathologist (SLP'S) working within a public preschool.

Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the attached information sheet carefully and discuss it with others if you wish.

Should you feel this study may be of interest to some or all your staff, I would kindly like to ask for any contact details you are willing to provide (eg. work email address).

Alternatively, please feel free to forward this message with the attached information sheet and link to the online questionnaire to any and all ECSE's/SLP's working with preschool aged children.

The online questionnaire will close at 8:00 pm on March 9, 2018.

Thank you for your time and consideration. Please do not hesitate to contact me with any further questions or comments. I look forward to your response.

Early Childhood Speech and Language Questionnaire

https://leeds.onlinesurveys.ac.uk/how-are-children-with-speech-language-and-communication-ne

Early Childhood Special Education Teacher Questionnaire

https://leeds.onlinesurveys.ac.uk/how-are-children-with-speech-and-language-communication-ne

Kind Regards,
Judy Davis
EdD Student
University of Leeds

Paula Clarke, P.J.Clarke@leeds.ac.uk, +44 0113 343 9410 (Supervisor)Mary Chambers, M.E.Chambers@education.leed.ac.uk, +44 0113 3433576 (Supervisor)

Appendix 9: Questionnaire Email sent 19/03/18

March 19, 2018

Dear Early Childhood Special Educator/Speech Language Pathologist,

My name is Judy Davis and I am a Doctor of Education (EdD) student at the University of Leeds in England (http://www.education.leeds.ac.uk/). I am writing to invite you and members of your staff to take part in a research study. I am contacting you as a gateway to intended participants; Early Childhood Special Educators (ECSE's) and Speech Language Pathologist (SLP'S) working within a public preschool.

Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the attached information sheet carefully and discuss it with others if you wish.

Alternatively, please feel free to forward this message with the attached information sheet and link to the online questionnaire to any and all ECSE's/SLP's working with preschool aged children.

The online questionnaire will close at 8:00 pm on March 30, 2018.

Thank you for your time and consideration. Please do not hesitate to contact me with any further questions or comments. I look forward to your response.

Early Childhood Speech and Language Questionnaire

https://leeds.onlinesurveys.ac.uk/how-are-children-with-speech-language-and-communication-ne

Early Childhood Special Education Teacher Questionnaire

https://leeds.onlinesurveys.ac.uk/how-are-children-with-speech-and-language-communication-ne

Kind Regards,
Judy Davis
EdD Student
University of Leeds

Paula Clarke, P.J.Clarke@leeds.ac.uk, +44 0113 343 9410 (Supervisor)

Mary Chambers, M.E.Chambers@education.leed.ac.uk, +44 0113 3433576 (Supervisor)

Appendix 10: Questionnaire Email sent 06/04/18

April 6, 2018

Dear Early Childhood Special Educator/Speech Language Pathologist,

My name is Judy Davis and I am a Doctor of Education (EdD) student at the University of Leeds in England (http://www.education.leeds.ac.uk/).

Please check out my video briefly explaining a little more about myself and my research. A more detailed information sheet is attached, along with the questionnaire links.

Alternatively, please feel free to forward this message to any and all ECSE's/SLP's working with preschool aged children.

The Questionnaire will close on Friday April 20th, 2018 at 8:00pm.

Thank you for your time and consideration. Please do not hesitate to contact me if you have any difficulties accessing or completing the questionnaire. I look forward to your response.

Judy Davis has shared a video with you on YouTube

Early Childhood Speech and Language Questionnaire

http://leeds.onlinesurveys.ac.uk/how-are-children-with-speech-language-and-communication-ne

Early Childhood Special Education Teacher Questionnaire

https://leeds.onlinesurveys.ac.uk/how-are-children-with-speech-and-language-communication-ne

Kind Regards,
Judy Davis
EdD Student
University of Leeds

Paula Clarke, P.J.Clarke@leeds.ac.uk, +44 0113 343 9410 (Supervisor)

Mary Chambers, M.E.Chambers@education.leed.ac.uk, +44 0113 3433576 (Supervisor)

Appendix 11: Video Transcription

Hi everyone, my name is Judy Davis; I am an EdD student at the University of Leeds in England, which is a Doctor of Education. I am in my third year so that is the year for my research and the writing of my thesis.

I am originally from Colorado which is why you are getting this video. I just wanted to briefly introduce my research in hopes that you might want to participate in the questionnaire that I have sent over. Basically, I was an early childhood special educator for about 8 years before moving abroad. I worked closely with speech therapist, so I went and did an undergrad in speech therapy and never made it to get my Masters so now I'm doing a doctor instead!

I fell in love with it. I fell in love with supporting students and realized the need to support these students I had so many on my caseload or in my classroom, which I'm sure you' re all familiar with, who needed speech services, and I just didn't feel as equipped as a maybe should or could've been to support the students. Likewise, and many of the speech therapist that I spoke to feel the same way about supporting students with cognitive disabilities or behavioural issues within early childhood.

So, my research really is just looking at these two professions and trying to understand their knowledge that the confidence and the understanding of one another's… support I guess for the students. How are early childhood special educators supporting students with speech, and how are speech therapists able to support students with cognitive and behavioural disabilities. I understand as a teacher there is no such thing as a spare minute, so I do appreciate that. I am hoping this survey should not take any longer than 20 minutes. So, if you're interested and want to support my research, I would be very greatly appreciative. So good luck, and I hope you enjoy!

Total Running Time: 2 minutes 28 seconds

Appendix 12. Individual Interview Consent Form

School of Education: Faculty of Education, Social Sciences and Law (ESSL)
Consent to take part in: How are Children with SLCN Supported through Interdisciplinary and Itinerant Service Delivery Models in ECE: The role of the Early Childhood Special Educator.

	Add your initials next to the statements you agree with
I confirm that I have read and understand the information sheet, explaining the above research project and I have had the opportunity to ask questions about the project.	
I agree for the data collected from me to be stored and used in relevant future research in an anonymised form.	
I understand that relevant sections of the data collected during the study, may be looked at by auditors from the University of Leeds or from regulatory authorities where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records.	
I agree to take part in the above research project and will inform the lead researcher should my contact details change during the project and, if necessary, afterwards.	
I am aware of my right to withdrawal from this study at point up until October 2018, when data has been analysed and written within findings chapter of final thesis.	

Name of participant	
Participant's signature	
Date	
Name of lead researcher	
Signature	
Date*	

*To be signed and dated in the presence of the participant.

Once this has been signed by all parties the participant should receive a copy of the signed and dated participant consent form, the letter/ pre-written script/ information sheet and any other written information provided to the participants. A copy of the signed and dated consent form should be kept with the project's main documents which must be kept in a secure location.

Appendix 13: Adopted Questions from Mroz et al., (2002) Interview Schedule

Number and Question from Mroz et al., (2002) Interview Schedule	**Number and Question from present study: ECSE Interview Schedule**	**Number and Question from present study: SLP Interview Schedule**
1. What does your job as a (nursey nurse) in a (day care setting) involve?	1. What does your job as an ECSE in a preschool setting involve?	1. What does your job as an SLP in a preschool setting involve?
2. Can you tell me about any training you've has in the last 3 years that has touched on speech and language?	4. Can you tell me about any training you have had that has touched on speech and language development in young children?	4. Can you tell me about any training you have had that has touched developmental delays in preschool?
4. This is an ideal world question so, if you wanted further training in in speech and language can you think about the sort of things you would particularly like to know about?	5. If you wanted and were granted access to further training in speech and language development, can you think of what you would particularly like to know about?	5. If you wanted and were granted access to further training in early childhood special education, can you think of what you would particularly like to know about?
3(b). How confident do you feel about helping to develop children's language?	6. How confident do you feel about supporting a child with speech and language delays?	6. How confident do you feel about supporting children with DD in preschool?

Appendix 14: Individual Interview Questions for ECSE's

1) **What does your job as an ECSE in a preschool setting involve? (5 Minutes)**

   Prompts
   - What indirect services do you provide? (Consultation, administrative)
   - What direct services do you provide? (assessment, behavioural, cognitive, motor, speech and language)
   - Do you do anything differently with reference to direct/indirect services you provide when working with a child with who has speech and language difficulties?
   - What is your role when working with a child with speech and language difficulties?

2) **Can you please explain how children with SLI are supported in preschool? (5 Minutes)**

   Prompts
   - What types of delays/disorders are present in preschool?
   - Who identifies children with SLI? Explain this process.
   - What strategies are used to support children with SLI?
   - How are these strategies developed and decided upon?

3) **How do you perceive your own knowledge and understanding regarding speech and language development in young children? (5 Minutes)**

   Prompts
   - What characteristics would you associate with speech or language impairments or delays?
   - What indicators might you look for?

4) **Can you tell me about any training you have had that has touched on speech and language development, delays or disorders? (5 Minutes)**

   Prompts
   - What training did you receive in your teacher preparation program? By whom?
   - What training have you received post qualification? By Whom?
   - How do you find out about training? Do you have a say in what trainings you attend?
   - How happy are you with the training that has been offered?

5) **If you wanted, and were granted access to further training in speech and language development, can you think of what you would particularly like to know about? (5 Minutes)**

Prompts

- Content: comprehension, attention and listening skills, speech sound development, expressive language, use of language in social contexts.
- What sort of format (workshops, conferences, online learning)
- How do you feel this training would benefit you and working with young children with SLI?
- How would this training help you in your job?

6) How confident do you feel about supporting a child's language development? (5 Minutes)

Prompts

- Can you give details to support your answer? Was it certain trainings or lack of training that made you feel this way?
- Has another educator or parent made you feel this way?
- Does working with a specific child/ or speech language disability make you feel this way?

Appendix 15: Individual Interview Questions for SLP's

1) **What does your job as an SLP in a preschool setting involve? (5 Minutes)**

   Prompts
   - What indirect services do you provide? (Consultation, administrative)
   - What direct services do you provide? (assessment, behavioural, cognitive, motor, speech and language)
   - Do you do anything differently with reference to direct/indirect services you provide when working with a child with a developmental delay (DD)?
   - What is your role when working with a child with early childhood special educational needs?

2) **Can you please explain how children with developmental delays (DD) are supported in preschool? (5 Minutes)**

   Prompts
   - What types of delays/disorders are present in preschool?
   - Who identifies children with DD? Explain this process.
   - What strategies are used to support children with DD?
   - How are these strategies developed and decided upon?

3) **How do you perceive your own knowledge and understanding regarding early childhood special educational needs? (5 Minutes)**

   Prompts
   - What characteristics would you associate with early childhood special educational needs?
   - What indicators might you look for?

4) **Can you tell me about any training you have had that has touched on developmental delays in preschool? (5 Minutes)**

   Prompts
   - What training did you receive in your teacher preparation program? By whom?
   - What training have you received post qualification? By Whom?
   - How do you find out about trainings? Do you have a say in what trainings you attend?
   - How is your training funded?
   - How happy are you with the training that has been offered?

5) **If you wanted, and were granted access to further training in early childhood special education, can you think of what you would particularly like to know about? (5 Minutes)**

Prompts

- Content: social/emotional, behavioural, cognitive, adaptive and coping skills?
- What sort of format (workshops, conferences, online learning)
- How do you feel this training would benefit you and working with young children with speech and language delays?
- How would this training help you in your job?

6) How confident do you feel about supporting children with DD in preschool? (5 Minutes)

Prompts

- Can you give details to support your answer? Was it certain trainings or lack of training that made you feel this way?
- Has another educator or parent made you feel this way?
- Does working with a specific child/ or speech language disability make you feel this way?

Appendix 16: Interview Email Sent To Volunteers on 25/04/18

Dear Early Childhood Special Educator or Speech Language Pathologist,

I want to send my sincerest thank you for taking the time to fill out the online questionnaire that was sent to you. I truly appreciate your willingness to support my research, and am grateful for your response.

I would also like to thank you for agreeing to be interviewed for the second phase of this research. I would like to start this process as soon as next week (April 30, 2018). As you are aware I am studying at the University of Leeds in England and therefore expect most interviews to be conducting via Skype or Face Time. I will be returning to Colorado the beginning of May and would like to offer a face-to-face interview to those who are available during the time that I am there.

The interview will take between three-quarters of an hour to a maximum of one hour. Your responses will be treated as strictly confidential and you will not be identified in any documents. With your permission, I will record the interview, so that your views can be reported accurately.

If you would not mind responding to this email with your availability for the following days/times:

I will be in England the following dates and am therefore mindful of the 7-hour time difference. If you could please tell me the times you are available between the hours of 6:00am - 5:00pm on
April 30th (between the hours of
May 1st

I will be in Colorado on the following days and are therefore available all day. I appreciate that some of these days are weekends, so please do not feel obligated.
Saturday May 12th
Monday May 14th
Tuesday May 15th
Saturday May 19th

If none of these will work for you schedule, please let me know and we can consider alternate days and times.

I have attached the interview questions and a more detailed information sheet for your reviewing. If you have any questions about the interview, please feel free to email me. Thank you again for agreeing to take part, I look forward to meeting you.

Appendix 17: Follow up email to Interview Volunteers 14/5/18

Hello,

I just wanted to follow up with you regarding your availability to participate in the second phase of my research which is an individual interview. I am currently in Colorado until the 21st of the May, and am available to meet you, or conduct interviews via telephone. Otherwise, I am aware this is one of the busiest times of the school year, and would like to offer to wait until your students are on summer vacation? Please let me know either way, if you would like to try and arrange a time or if you have just had a change of mind in participating. I appreciate your support and look forward to hearing back from you soon.

Thank you,

Judy

Appendix 18: Follow up email to Interview Volunteers 08/06/18

Hello,

I hope you are all well and enjoying the summer months! I wanted to reach out one last time to invite you to participate in the second phase of my research as you have shown interest in the questionnaire.

I am back in the UK now and am still more than happy to offer a phone interview, however would also like to offer the option of sending the interview questions over to you, to fill out (in a bulleted format) on your own time.

I have attached the document to the email. If you are interested in a phone interview, they have been lasting on average 25 minutes. Please let me know and I will be in contact to arrange a time. Likewise, if you have interest in participating but cannot make the time for a phone interview please fill free to fill in the form that correlated to your profession.

Thank you again for your consideration, I look forward to hearing back from you soon!

Happy summer,
Judy

Appendix 19: NVivo Coding Schedule

Question	ECSE Interviews	SLP Interviews
Key Roles	1. Assessment 2. Speech 3. Consultant 4. General Education and SPED teacher 5. Case manager 6. Work with Others 7. Individualization 8. Planning	1. Assessment 2. caser manager 3. Collaboration 4. Individualization 5. Planning 6. Speech Services (Language, artic, PECS)
Roles when supporting a child with SLI or DD	1. Social emotional wellbeing 2. Implementation of SLP activities 3. Expressive Language 4. Articulation	1. Collaboration with SPED team 2. Social emotional development 3. Work 1 to 1 with students 4. Language or Speech
Types of disabilities or disorder present in preschool.	1. Developmental Disorders 2. Language (Expressive and Receptive) 3. Low Muscle Tone 4. Deaf or hard of hearing 5. Apraxia 6. Autism 7. Articulation	1. Medical Diagnosis 2. Down Syndrome 3. Multi Impacted 4. Social, Emotional or Behaviour 5. Cognitive delay 6. Autism
Identification process	1. Child Find 2. Preschool Screening 3. IFSP 4. SLP within Classroom 5. ECSE Identifies	1. IFSP 2. SLP 3. Classroom Team 4. Child Find Team
Strategies used to support young children	1. Visuals 2. Oral Motor Activities 3. Language Enriched Activities 4. Producing Sounds Correctly 5. Meet with staff or parents 6. Data collection or Observation	1. Missing 2. Positive reinforcement 3. Scaffolding from one to one to small group to large group 4. Finding student Interest 5. Behaviour
How are these strategies decided upon?	1. ECSE 2. SLP 3. Collaboration	1. Social-emotional curriculum 2. SLP knowledge 3. Collaboration

Indicators of suspected need for additional support.	1. Categorizing 2. Effective social communication 3. Intelligibility of Speech 4. Low Vocabulary 5. Can they follow directions	1. Social-Emotional-Behavioural 2. Cognition 3. Retain Information 4. Language Skills 5. Developmental Milestones 6. Independence 7. Participation
Pre-Qualification training	1. Embedded lessons in ECSE coursework 2. Elective College Credits 3. None	1. Not a lot 2. Elective Early Childhood Courses 3. Practicum during Speech Program 4. Embedded into Speech classes
Post Qualification Training	1. Consultation with SLP 2. Professional or Staff development form School District 3. ASHA trainings	1. Social and emotional 2. None relating to EC 3. Autism 4. Brain Steps 5. Transdisciplinary play based assessment 6. Collaboration
How do professional access trainings?	1. District 2. Self Interest 3. Various Memberships	1. ASHA 2. Colleagues 3. School District or School 4. State
Future Training Wants	1. Speech delays and dual language learners 2. Articulation 3. Comprehension 4. Attention-Listening skills 5. Language Development	1. Social-Emotional and behavioural 2. Childhood Trauma 3. Teaching other adults
Format of Training	1. Hands on with SLP 2. workshop	1. In person 2. Hands on 3. Videos 4. Self-Guided 5. Online
How would this training help?	1. Modification of activities 2. SLI or Dual Language Learner 3. Support Inclusive classroom	1. Build Language Skills 2. Correctly respond to students needs
Confidence	1. Fairly 2. Very	1. A little Confident 2. Yes-Confident
Reasons for Confidence	1. Experience 2. Collaboration with SLPs	1. Outcomes of Students 2. Parent Comments 3. Experience 4. Collaboration with Team 5. Social-Emotional Curriculum