Rural Speech-Language Pathologists' Perceptions and Knowledge of Emergent Literacy Instructional Practices: A Mixed Methods Study

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RURAL SPEECH-LANGUAGE PATHOLOGISTS’ PERCEPTIONS AND KNOWLEDGE OF EMERGENT LITERACY INSTRUCTIONAL PRACTICES: A MIXED METHODS STUDY

DISSERTATION

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the College of Health Sciences at the University of Kentucky

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ABSTRACT OF DISSERTATION

RURAL SPEECH-LANGUAGE PATHOLOGISTS’ PERCEPTIONS AND KNOWLEDGE OF EMERGENT LITERACY INSTRUCTIONAL PRACTICES: A MIXED METHODS STUDY

The acquisition of emergent literacy skills has become a prominent focus of early childhood education programs in recent years as research has demonstrated the significance of emergent literacy ability in the process of learning to read. The effectiveness of use of varied instructional techniques targeting the emergent literacy domains of phonological awareness, written language awareness, emergent writing, and oral language is well described in the literature. Consequently, educational service providers like speech-language pathologists are being called upon to assume roles in emergent literacy service provision. However, research has not fully explored the perceptions and knowledge speech-language pathologists possess of emergent literacy instructional practices.

This concurrent triangulation mixed methods study examined speech-language pathologists’ perceptions and knowledge of emergent literacy instructional practices. Three quantitative and two qualitative forms of data were collected and analyzed from a criterion and purposive sample of five educational speech-language pathologists.

Findings revealed speech-language pathologists possessed positive perceptions of emergent literacy instruction and endorsed use of numerous instructional techniques and intervention formats to target multiple emergent literacy skills. Results also indicated the presence of a narrow view of emergent literacy instruction as participants maintained a primary focus on oral language and phonological awareness in intervention sessions. Additionally, varied perspectives of speech-language pathologists’ role in emergent literacy instruction and numerous constraints to implementation of best practice in emergent literacy were identified.

Findings demonstrated strength in participants’ pedagogical knowledge of emergent literacy instructional techniques in oral language and phonological awareness and strength in content knowledge of phonological awareness. However, findings also revealed limitations in understanding as speech-language pathologists’ did not demonstrate thorough knowledge of instructional practices across all domains of
emergent literacy. Additionally, varying degrees of emergent literacy knowledge among speech-language pathologists were noted.

Finally, comparison of quantitative and qualitative results of speech-language pathologists’ emergent literacy perceptions and knowledge revealed convergence of numerous findings.

KEYWORDS: Emergent Literacy, Knowledge, Perceptions, Beliefs, Speech-Language Pathologists

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RURAL SPEECH-LANGUAGE PATHOLOGISTS’ PERCEPTIONS AND KNOWLEDGE OF EMERGENT LITERACY INSTRUCTIONAL PRACTICES: A MIXED METHODS STUDY

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November 24, 2012
DEDICATION

This work is dedicated to my grandfather, the late Jack Williams (September 1, 1928-May 10, 2012). Pappy, you always challenged me to “dream big, work hard, and never give up.” Not only did I gain a love of learning from you, but you inspired me to see the beauty of my dreams. Thank you for believing in my ability to attain this goal.
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TABLE OF CONTENTS

Acknowledgements........................................................................................................ iii
List of Tables..................................................................................................................... vi
List of Figures................................................................................................................... vii

Chapter One: Introduction............................................................................................... 1
  Background..................................................................................................................... 2
  Statement of the Research Problem.............................................................................. 16
  Purpose of the study..................................................................................................... 17
  Research Questions..................................................................................................... 17
  Definitions of Terms................................................................................................... 19

Chapter Two: Conceptual Framework and Review of the Literature......................... 21
  Conceptual Framework................................................................................................. 21
  Evidence Based Practice.............................................................................................. 22
  Emergent Literacy Theory............................................................................................ 23
  Review of the Literature............................................................................................... 24
    Understanding Emergent Literacy............................................................................ 24
    Emergent Literacy Facilitation.................................................................................. 33
    Perceptions and Knowledge of Emergent Literacy.................................................... 43

Chapter Three: Methods................................................................................................. 62
  Research Design........................................................................................................... 62
  Sampling Paradigm and Participant Selection........................................................... 63
  Data and Data Collection............................................................................................ 65
  Data Analysis............................................................................................................... 72
  Verification.................................................................................................................. 79

Chapter Four: Results..................................................................................................... 91
  Participants.................................................................................................................. 91
  Quantitative Findings................................................................................................. 92
  Qualitative Findings................................................................................................... 95
  Research Questions................................................................................................... 107
  Verification.................................................................................................................. 119

Chapter Five: Discussion and Conclusions.................................................................. 131
  Discussion.................................................................................................................. 131
  Limitations.................................................................................................................. 141
  Clinical Implications.................................................................................................. 143
  Future Research......................................................................................................... 146
  Conclusion.................................................................................................................. 148
Appendices
Appendix A: Reading and Writing Developmental Milestones
Appendix B: Levels of Phonological Awareness
Appendix C: Phonological Awareness Tasks and Definitions
Appendix D: Written Language Awareness Tasks and Definitions
Appendix E: Recruitment Letter
Appendix F: Informed Consent Form
Appendix G: Preschool Literacy Beliefs Questionnaire (Seefeldt, 2004)
Appendix H: Teacher Knowledge Assessment of Early Language and Literacy Development (Neuman & Cunningham, 2009)
Appendix I: Informal Survey of Linguistic Knowledge (Moats, 1994)
Appendix J: Photography Instructional Prompts
Appendix K: Semi Structured Interview Prompts

References

Vita
LIST OF TABLES

Table 3.1: Coding Examples for Participant One .................................................. 84
Table 3.2: Categories in Photography Data Analysis ........................................... 85
Table 3.3: Coding Examples for Interview Data .................................................. 86
Table 3.4: Themes from Interview Data ............................................................... 87
Table 4.1: Demographic Characteristics of Participants ...................................... 122
Table 4.2: Participants’ Work Condition and Practice Patterns .......................... 123
Table 4.3: Participants’ Total Scores the PLBQ (Seefeldt, 2004) ....................... 124
Table 4.4: Participants’ Subscale Scores on the PLBQ (Seefeldt, 2004) ............. 125
Table 4.5: Participants’ Total Score Scores on TKA (Neuman & Cunningham, 2009) .......................................................... 126
Table 4.6: Participants’ Overall Performance on the SLK (Moats, 1994) ........... 127
Table 4.7: Range and Mean Percentage of Accuracy on selected SLK tasks (Moats, 1994) .......................................................... 128
Table 4.8: Percentage of participants successful on selected tasks on the SLK (Moats, 1994) .......................................................... 129
Table 4.9: Themes from Interview Data ............................................................... 130
LIST OF FIGURES

Figure 2.1: Continuum of Early Childhood Educators’ Beliefs Regarding Early Literacy .......................................................... 61

Figure 3.1: Visual Model of Research Study .............................................. 88

Figure 3.2: Analytic Scheme for Photography Data .................................... 89

Figure 3.3: Analytic Scheme for Interview Data ....................................... 90
CHAPTER ONE: INTRODUCTION

Studies have demonstrated a strong correlation between the skills with which children enter school and later academic success (Whitehurst & Lonigan, 1998). In fact, recent research has indicated preschool speech and language skills are predictive of reading ability throughout elementary school (Hayiou-Thomas, Harlaar, Dale, & Plomin, 2010). In addition, studies have documented that children with language impairments are six times more likely to have difficulty with reading than typically developing children and that early reading instruction and preventative action may be more efficacious than intervention with students exhibiting reading disorders (Catts, Fey, Tomblin, & Zhang, 2002; Juel, 1988).

Given these findings, the climate of early childhood educational programs and speech and language intervention with preschool aged children seems to have changed over the past years. Along with early childhood educators, today’s speech-language pathologists working in preschool settings are being called upon to assume several different roles and responsibilities. Related service providers and preschool teachers are not only charged with creating safe learning environments to allow for students’ social and emotional development, but speech-language pathologists and early childhood educators are also taking active roles in ensuring that children acquire the foundational skills needed for later academic success. In fact, the National Research Council asserted high quality early childhood education programs possess a critical role in the prevention of reading disorders (Snow, Burns, & Griffin, 1998). In addition, the International Reading Association (IRA) and National Association for the Education of Young Children (NAEYC) stated in their joint position statement on learning to read and write
that “failing to give children literacy experiences until they are school-aged can severely limit the reading and writing levels they ultimately attain” (IRA & NAEYC, 1998, p. 30).

Legislation, including the No Child Left Behind Act of 2001 (Public Law 107-110) and the Individuals with Disabilities Education Improvement Act of 2004 (Public Law 108-446), and recent educational initiatives, like Response to Intervention and Common Core Standards, have also emphasized the importance of prevention of reading disorders and have promoted implementation of research based practices in emergent literacy. Consequently, development of emergent literacy, or a child’s earliest awareness of the function and form of literacy, has become a prominent focus of early childhood educational programs and intervention outcomes in speech-language pathology.

Despite the significance of emergent literacy and the involvement by speech-language pathologists in provision of services to facilitate emergent literacy growth, little is known regarding how speech-language pathologists view emergent literacy instruction. In addition, speech-language pathologists’ knowledge of emergent literacy instructional practices remains unexplored in the literature. This dissertation contributed to the knowledge base surrounding emergent literacy instruction as it reports the findings of a mixed methods study aimed at describing speech-language pathologists’ perceptions and knowledge of emergent literacy instructional practices.

**Background**

The profession of speech-language pathology exists within the wider context of educational service provision. Thus, the first chapter of this dissertation provides a current description of the practice of speech-language pathology in educational settings. The chapter identifies the influence of legislative reform and educational initiatives. In
addition, the chapter describes the consequences of practice expansion over the progression of educational speech-language pathology, including shortages in service providers, emerging barriers to best practice, and utilization of varied service delivery models. The chapter also defines a rationale for speech-language pathologists’ involvement in emergent literacy instruction. Collectively, the information presented in chapter one will situate the study within the larger contextual problem the study addresses and will provide rationale for an investigation of speech-language pathologists’ knowledge and perceptions involving emergent literacy instructional practices. The chapter will conclude with a statement of the study’s purpose and research questions and will supply relevant definitions to assist in binding the study and clarifying terminology used.

**Current State of Practice in Educational Speech-Language Pathology**

The practice of speech-language pathology in educational settings has evolved a great deal over time. From its earliest days in the late 19th and early 20th centuries in which “speech teachers” helped children who “stammered”, school-based speech-language pathology has grown tremendously as speech-language pathologists now provide intervention services to students exhibiting a wide variety of disabilities (Duchan, 2010). Educational speech-language pathologists serve children with communication disorders, including disorders of spoken and written language, speech sound production, voice, fluency, and hearing, and also serve children with communication and swallowing needs resulting from the presence of other disabilities like cerebral palsy, cleft palate, intellectual impairment, developmental disabilities, visual impairment, emotional and behavioral disturbances, autism spectrum disorders, and traumatic brain injury (Blosser &
Neidecker, 2002). In addition, speech-language pathologists employed in educational settings serve school-aged children in elementary, middle, and high schools, as well as preschool-aged children enrolled in early childhood education programs (American Speech-Language Hearing Association [ASHA], 2008a; Blosser & Neidecker, 2002).

**Impact of Legislative Reform and Educational Initiatives**

Throughout the progression of educational speech-language pathology, the literature has described the presence of significant changes, like legislative reform and educational initiatives, which have impacted the practice of speech-language pathology in school settings. Several legal mandates have been cited as having great impact on the course of speech-language pathology service delivery in schools, including section 504 of the Rehabilitation Act of 1973, the Education for All Handicapped Children’s Act of 1975 (the original Public Law 94-142), and updated versions known as the Education of the Handicapped Act Amendments of 1986 (Public Law 99-457), the Individuals with Disabilities Education Act (IDEA) Amendments of 1997 (Public Law 101-476, later revised as 105-17), and the Individuals with Disabilities Education Improvement Act of 2004 (Public Law 108-446), as well as the No Child Left Behind Act of 2001 (Public Law 107-110) (ASHA, 2010a; Blosser & Neidecker, 2002).

Each of these laws had important effects on educational speech-language pathology. Section 504 of the Rehabilitation Act of 1973 stated that individuals with disabilities shall not be excluded from any program receiving federal funding and entitled individuals with disabilities to provision of regular or special education and related aids designed to meet individual education needs (ASHA, 2010a; United States Department of Justice, 2005). Public Law 94-142 specified requirements for identification of children
with disabilities, provision of appropriate services based upon individual needs through implementation of Individual Education Programs (IEPs), and availability of varying ranges of service options providing all children with a free and appropriate education (ASHA, 2010a; Blosser & Neidecker, 2002). Public Law 94-142 was particularly significant to the practice of speech-language pathology in school settings as it mandated services for children with communication disorders, while prior to its passage, state laws had only permitted speech, language, and hearing services in schools (Blosser & Neidecker, 2002).

The reauthorized versions of Public Law 94-142, or The Education of the Handicapped Act Amendments of 1986, IDEA of 1997, and the Individuals with Disabilities Education Improvement Act of 2004, also impacted educational speech-language pathology. The Education of the Handicapped Act Amendment of 1986 expanded the mandate for provision of services to children with disabilities, including children from birth to age five, and also created incentives for states to provide a free and appropriate education for preschool aged children with disabilities (ASHA, 2010a; Blosser & Neidecker, 2002). IDEA of 1997 and the Individuals with Disabilities Education Improvement Act of 2004 mandated services for two new categories of disabilities (i.e., autism spectrum disorders, traumatic brain injury), introduced “person first language,” guaranteed that individuals with disabilities had access to the general education curriculum, provided requirements relative to nondiscriminatory and multidisciplinary assessment, and provided services for students speaking English as a second language (ASHA, 2010a; Blosser & Neidecker, 2002).
Implementation of IDEA was especially important in the practice of speech-language pathology in school settings as it further specified eligibility requirements for special education and related services. Under IDEA, eligibility for services like speech and language intervention is dependent upon the presence of an adverse impact on educational performance. In other words, the presence of a communication disorder alone does not make a child eligible for speech or language therapy in the school setting (Power-de Fur, 2011). Rather, educational speech-language pathologists in collaboration with other members of an interdisciplinary team (i.e., parents, regular education teachers, special education teachers, etc.) are required to utilize a “two pronged approach” in eligibility determination (Power-de Fur, 2011). Speech-language pathologists involved in interdisciplinary educational teams must demonstrate that a child meets the criteria of a specific disability described in the law and that the disability adversely affects the student’s ability to succeed in the classroom. The “two pronged” eligibility requirement for special education and related services under IDEA commanded the need for educational speech-language pathologists to possess knowledge of the academic curriculum and state educational standards (Power-de Fur, 2011). As a result, speech-language pathologists were required to become increasingly more aware of how to provide intervention services that facilitated both communicative and academic growth.

Finally, the No Child Left Behind Act of 2001 involved four major areas of reform including increased accountability, greater participation for parent choice, more flexibility for use of federal education funding by states and local education agencies, and emphasis on use of scientifically based educational practices (ASHA, 2010a). Accountability has been described as the cornerstone of the No Child Left Behind Act of
2001 as the Act required states to implement accountability systems covering varied aspects of education (ASHA, 2011). For example, under The No Child Left Behind Act of 2001, schools are required to demonstrate adequate yearly progress derived from results of student performance on state testing, test participation, and other indicators like graduation and retention rates (ASHA, 2011). Under the Act, states were also required to ensure that students with disabilities were fully participating in testing. The focus on accountability through implementation of the Act created a high stakes testing era that impacted numerous aspects of education, including educational speech-language pathology. More specifically, the influence of adoption of the No Child Left Behind Act of 2001 created the need for the profession of speech-language pathology to demonstrate how speech-language pathologists’ contributed to student learning and the overall success of the school community (ASHA, 2006a).

Like legal mandates, educational initiatives have also impacted the provision of speech-language pathology in school settings. Response to Intervention, an educational framework designed to meet the needs of all learners through implementation of evidence based instruction, has been identified as an agent of change in educational speech-language pathology (ASHA, 2006b; Ehren, Montgomery, Rudebusch, & Whitmire, 2006; Ehren & Nelson, 2005; Ehren & Whitmire, 2005, 2009; Justice, 2006a; Justice, McGinty, Guo, & Moore, 2009; Rudebusch, 2007; Staskowski & Rivera, 2005; Troia, 2005). Response to Intervention is a multi-tiered method of service provision for struggling learners at increasing levels of intensity and involves use of universal screening, high-quality instruction and intervention corresponding to students’ levels of need, frequent progress monitoring, and use of data driven educational decisions (Ehren et al., 2006).
Speech-language pathologists in school settings have been called upon to assume varying roles in use of a Response to Intervention model including roles in assessment and provision of instruction in both general and special education settings (Ehren et al., 2006).

In addition to Response to Intervention, the Common Core State Standards represent a recent educational initiative that impacts service provision in school settings. Adopted by all but five states at present, the Standards outline general cross-disciplinary academic expectations (Ehren, Blosser, Roth, Paul, & Nelson, 2012). While the Common Core State Standards were not developed with the intent of becoming a federal curriculum, they do supply a transparent set of “goals and expectations for the knowledge and skills needed by students to succeed in a global society” (Ehren et al., 2012, p. 10). Because the Standards serve as academic content standards for all students, they play a role in intervention planning for students receiving special education services through an IEP. In addition, adoption of the Standards impact speech-language pathologists engaged in clinical activity to prevent or minimize the presence of language and literacy difficulty. Ehren and colleagues (2012) outlined numerous areas in which speech-language pathologists are helping educational agencies adopt the Standards arguing that speech-language pathologists have a “direct role in implementing the Common Core State Standards with students who are struggling with language/literacy…as well in supporting classroom teachers” (p. 13).

With the reauthorization of IDEA in 2004 (Public Law 108-446), implementation of the No Child Left Behind Act of 2001 (Public Law 107-110), emergence of the Response to Intervention educational framework, and most recently, the application of
the Common Core State Standards, the climate of educational speech-language pathology continues to evolve and today’s school-based speech-language pathologists are embracing new and expanded roles in service delivery. For example, as noted by Ehren and colleagues (2006), the roles assumed by speech-language pathologists within the Response to Intervention framework “require some fundamental changes in the way speech-language pathologists engage in assessment and intervention activities” (p. 3). Additionally, in their recent policy statement, ASHA (2010a) also described the evolving professional practices of educational speech-language pathologists as follows:

In the early years of school practice, provision of services focused on fluency, voice, and articulation disorders, with later inclusion of language disorders. Although these areas continue to be included within the speech-language pathologists’ roles and responsibilities, changing legal mandates and an expanded scope of practice for speech-language pathologists across settings has prompted a redefinition of work in the schools. (p. 10)

**Impact of Practice Expansion**

As described, the practice of speech-language pathology in educational settings has significantly progressed over time as the profession has been shaped by numerous factors, including legislation and educational initiatives. As a consequence, the age range of students receiving services from school based speech-language pathologists has increased to include preschool aged children, as well as students up to 21 years of age. Additionally, the practice of speech-language pathology has evolved to include expansion of services to individuals exhibiting a wide range of disabilities and growth of service provision to include interventions focused on numerous outcomes. For example, as
described by Boswell (2010), school based service provision has expanded to include reading, writing, and academic curriculum, evidence based practice, response to intervention, dysphagia, telepractice, and treatment of students who are medically fragile.

_Shortages in trained professionals._ Although the expansion of practice in school-based speech-language pathology has been positive as it has resulted in the provision of needed services to children, the growth of educational speech-language pathology has also resulted in shortages of trained speech and language professionals. In a recent survey, 55% of school-based speech-language pathology respondents reported job openings in educational speech-language pathology were more numerous than job seekers (ASHA, 2010b). In addition, research has indicated the prevalence of shortages in speech-language pathologists may be greater in particular geographic areas. For example, a higher percentage of respondents in rural areas indicated more job openings than job seekers than respondents in urban areas (ASHA, 2010b). In addition, respondents in the middle Atlantic area of the United States were least likely to report staff shortages (ASHA, 2010b).

_Emerging barriers to best practice._ Practice expansion and consequent shortages in educational speech-language pathology have impacted school-based practice. School-based speech-language pathologists have reported numerous obstacles resulting from the growth of educational speech-language pathology that contribute to barriers in implementation of best practice in service delivery (ASHA, 2010c). According to the most recent ASHA schools survey, the shortage of trained professionals has resulted in increased caseloads and workloads, decreased quality of service, decreased opportunity for individual services, less opportunity for networking and collaborating, reports of
students receiving partial or no services, and increased utilization of staff without Master’s level training (ASHA, 2010c).

*Adoption of varying service delivery models.* To accommodate the demands of an expanding practice, educational speech-language pathologists have developed and utilized a number of service delivery models. Service delivery models, or “organized configuration[s] of resources aimed at achieving a particular educational goal,” described in the literature include pull-out, classroom-based, indirect, community-based, and self-contained models (Cirrin et al., 2010, p. 234).

The pull-out model of service delivery, historically referred to as the primary model used by educational speech-language pathologists, entails provision of speech and language intervention services outside of the context of the regular education classroom to individual students or a group of approximately two to ten students (Blosser & Neidecker, 2002). In pull-out intervention, speech and language services are provided as a supplementary service to general or special education programs and are typically scheduled one to two times per week (Blosser & Neidecker, 2002). Classroom-based intervention serves as a second service delivery model and functions as the opposite of a “pull-out” model as classroom-based models occur when speech-language pathologists “push-in” and provide intervention services in the context of the classroom or other natural school environments (Texas Speech-Language Hearing Association [TSHA], 2010). Also known as consultative models of service delivery, indirect service delivery models function as a third method of provision of services to children with communication disorders in schools as they rely upon educators working together closely to facilitate students’ communication and learning (Blosser & Neidecker, 2002;
Rudebusch, 2010; TSHA, 2010). Indirect services can be defined as student-specific activities performed by the speech-language pathologist for and on behalf of student’s with IEPs for speech-language services (e.g., monitoring, consultation, instructional support, contextual support, and assistive technology/augmentative communication support) (Rudebusch, 2010; TSHA, 2010). As implied by its name, community-based service delivery models involve provision of speech-language intervention services in home or community settings (e.g., restaurants, schools, stores, libraries, banks, etc.) and are aimed at maximizing functional communication (Blosser & Neidecker, 2002; TSHA, 2010). Finally, self-contained service delivery models entail the speech-language pathologist functioning as the classroom teacher responsible for providing instruction in the classroom curriculum, as well as implementing the speech and language intervention services specified in students’ IEPs (TSHA, 2010).

**Speech-Language Pathologists’ Involvement in Emergent Literacy**

In the presence of an ever evolving practice in educational settings, speech-language pathologists have begun embracing varied roles and responsibilities with respect to service delivery to children with communication disorders. Involvement in emergent literacy represents one important aspect of growth in educational speech-language pathology as speech-language pathologists are actively involved in the prevention of and remediation of literacy disorders.

Involvement in emergent literacy by speech-language pathologists has been endorsed due to several factors and has been well documented in the literature for a number of years. The relationship between oral language and literacy serves as one justification for involvement in emergent literacy by speech-language pathologists. More
specifically, rationalization for speech-language pathologists’ involvement in emergent literacy is drawn from the premise that all methods of communication, or speaking, listening, reading, and writing, are interrelated. The literature in speech-language pathology describes the processes of “learning to talk” (i.e., acquisition of listening and speaking) and “talking to learn” (i.e., acquisition of reading and writing) as existing upon an oral-literate language continuum (Westby, 1991, p. 335). In fact, Catts and Kamhi (1999) have asserted that “reading shares many of the same processes and knowledge bases as talking and understanding” and identify reading as a “language based skill” (p. 1). These beliefs are substantiated by the findings of research demonstrating a strong association among linguistic deficits and reading difficulty (Catts & Kamhi, 1986). Assertions regarding the relationship among oral language and literacy that acknowledge the linguistic contributions to reading difficulty contribute to adoption of a broadened conceptualization of the scope of practice of speech-language pathology that includes reading and writing.

In addition, advocacy for speech-language pathologists’ involvement in emergent literacy has been supported by the notion that speech-language pathologists possess a unique set of skills and abilities that support children’s literacy growth. Accreditation requirements established by ASHA require training programs in speech-language pathology to address varied educational standards. ASHA standard 3.1B requires training programs to provide opportunities for students to acquire and demonstrate knowledge of varying aspects of communication, including “receptive and expressive language in speaking, listening, reading, writing, and manual modalities” (ASHA, 2012a). In addition, other practice policies also maintain the significance of speech-
language pathologists’ competencies in literacy. In their 2002 guidelines, ASHA justified speech-language pathologists’ role in literacy instruction, intervention, assessment, and research by identifying five categories of knowledge speech-language pathologists are trained to possess. These include knowledge and skills relating to the nature of literacy, normal development of reading and writing, disorders of language and literacy, clinical tools and methods, and collaboration, leadership, and research principles (ASHA, 2002). ASHA (2001) also identified five roles and responsibilities for speech-language pathologists with respect to literacy in a Knowledge and Skills document. These responsibilities include: prevention of written language problems, identification of at-risk children, assessment of reading and writing, provision of intervention and documentation of outcomes, and fulfillment of other roles such as aiding teachers and parents and advocating for effective practices (ASHA, 2001). ASHA (2001) contended that “speech-language pathologists have the expertise, and therefore, the responsibility to play important roles in ensuring that all children gain access to instruction in reading and writing, as well as in other forms of communication” (p. 357).

Finally, the dynamics of the practice of speech-language pathology in school settings function as rationale for why speech-language pathologists should be involved in emergent literacy. As described, educational speech-language pathologists provide services to individuals exhibiting a wide range of disabilities who are often considered “at risk” for reading difficulty. In addition, school based speech-language pathologists often possess caseloads consisting of a large number of students of diverse ages and speech-language pathologists employed in school districts often provide intervention services in more than one school or educational setting. Thus, educational speech-
language pathologists often function as “gatekeepers” in specially designed instruction aimed at linguistic growth in the sense that they have frequent contact with students of diverse ages and educational needs, as well as with other educators. In fact, ASHA (2012c) claims speech-language pathologists are often the “first professionals to identify the root cause of reading and writing problems through the child’s difficulty with language” (p. 1). Given the nature of service provision in speech-language pathology, involvement in literacy is viewed as necessary and appropriate.

In a description of a recent educational initiative, ASHA (2012b) summarized speech-language pathologists’ contribution in literacy and justified involvement in literacy with the following statement:

Researchers have long established that spoken language provides the foundation for the development of reading and writing, and spoken and written language have a reciprocal relationship such that each builds on the other to result in oral language and literacy competence-meaning children with spoken language disorders often have difficulty learning to read and write, and children with reading and writing problems often have difficulty with spoken language. Because of the fundamental connections between spoken and written language, intervention for language disorders must target both spoken and written language deficits. Thus, speech-language pathologists are uniquely trained and skilled to address both the spoken language and literacy needs of school-aged children.

(p. 5)
Statement of the Research Problem

Despite rationale for speech-language pathologists’ involvement in emergent literacy and endorsement for involvement by educational stakeholders and credentialing agencies, professionals have argued that speech-language pathologists may feel “less than confident” in their knowledge of literacy as many graduate programs are only beginning to offer coursework on literacy acquisition and many practitioners have limited opportunity for study of reading and writing development (Boudreau & Larsen, 2004, p. 9). In addition, professionals have asserted that speech-language pathologists possess wide ranges of experience and expertise in literacy learning (Weis, 2004) and that new speech-language pathologists lacking experience may be unlikely to possess the knowledge and skills in literacy described by ASHA (2002) (Schuele & Larrivee, 2004). In fact, Schuele and Larrivee (2004) asserted ASHA’s (2001, 2002) practice documents on literacy may serve as a “career roadmap” as speech-language pathologists’ perspectives and understanding of literacy learning evolves over years of professional practice (p. 6).

Given the significance of emergent literacy, one might expect to find a vast amount of research describing speech-language pathologists’ perceptions of involvement in emergent literacy and investigating speech-language pathologists’ understanding of emergent literacy instructional strategies. However, little is known about speech-language pathologists’ perceptions and knowledge regarding emergent literacy at present.

Understanding how speech-language pathologists perceive emergent literacy instruction is important as it provides valuable knowledge for administrators, policy makers, and early interventionists and supplies useful insight into ways to strengthen
current early childhood programs. In addition, understanding speech-language pathologists’ content and pedagogical knowledge of emergent literacy may supply insight regarding perceived constraints of evidence based emergent literacy practice and may provide knowledge of how to improve intervention services for children with disabilities and children considered at-risk for later reading difficulty.

**Purpose of the study**

The purpose of the study was to describe educational speech-language pathologists’ perceptions and knowledge of emergent literacy instructional practices. More specifically, the study was designed to describe speech-language pathologists’ perceptions regarding instructional practices in emergent literacy, while also identifying speech-language pathologists’ content and pedagogical knowledge of emergent literacy (see definitions below).

**Research Questions**

**Primary Research Question One**

What are speech-language pathologists’ perceptions of emergent literacy instructional practices?

Research Question 1.1. How do speech-language pathologists perceive their competency in emergent literacy?

Research Question 1.2. How do speech-language pathologists define their ideal role in provision of emergent literacy instruction?

Research Question 1.3. What skills do speech-language pathologists believe children must acquire in preschool in order to find success when entering school?
Research Question 1.4. What do speech-language pathologists identify as best practices in emergent literacy?

Research Question 1.5. What do speech-language pathologists identify as constraints to providing evidence based practice in emergent literacy?

Primary Research Question Two

What is speech-language pathologists’ knowledge of emergent literacy instructional practices?

Research Question 2.1. What is the range of emergent literacy knowledge that speech-language pathologists possess?

Research Question 2.2. How are speech-language pathologists providing emergent literacy instruction to preschool aged children?

Primary Research Question 3

To what extent do quantitative and qualitative findings of speech-language pathologists’ perceptions and knowledge of emergent literacy instructional practices converge?
Definition of Terms

The following definitions assist in binding the study and clarifying terminology used:

**Emergent Literacy:** Emergent literacy refers to children’s earliest awareness of the function and form of literacy (Teale & Sulzby, 1986). In other words, emergent literacy is defined as the “developmental precursors of formal reading that have their origins early in the life of a child” (Whitehurst & Lonigan, 2002, p. 12). More specifically, emergent literacy refers to “the reading and writing behaviors of young children before they become readers and writers in the conventional sense” (Justice, 2006, p. 3). Emergent literacy is comprised of four domains including: phonological awareness, written language awareness, emergent writing, and oral language.

**Emergent Literacy Content Knowledge:** For the purpose of this study, emergent literacy content knowledge refers to an individual’s ability to complete a specific emergent literacy skill (i.e., ability to blend syllables, identify phonemes, etc.).

**Emergent Literacy Instruction:** Emergent literacy instruction can be defined as training aimed at facilitating growth in one or more skills in the domains of phonological awareness, written language awareness, emergent writing, and oral language during the emergent literacy period.

**Emergent Literacy Pedagogical Knowledge:** Emergent literacy pedagogical knowledge refers to an individual’s familiarity with emergent literacy instructional practices supported by the literature and understanding how to apply knowledge to practice to provide effective emergent literacy instruction.
**Emergent Literacy Perceptions:** Emergent literacy perceptions consist of an individual’s attitudes, opinions, values, and ways of thinking regarding emergent literacy service provision. More specifically, emergent literacy perceptions refer to an individual’s opinions regarding the characteristics of effective emergent literacy instruction, including who should provide emergent literacy instruction and what skills should be targeted in education settings. In addition, emergent literacy perceptions include an individual’s attitudes regarding his or her competency in providing emergent literacy instruction and opinions regarding constraints to implementation of best practice in emergent literacy instruction.

**Literacy:** Literacy is defined as “the ability to identify, understand, interpret, create, communicate, and compute using printed and written materials associated with varying contexts” (United Nations Educational, Scientific, and Cultural Organization, 2005, p. 21).

**Educational Speech-Language Pathologist:** For the purpose of this study, an educational speech-language pathologist is one employed by a school system who provides intervention services to students with communication disorders in the context of a school setting.
CHAPTER TWO:
CONCEPTUAL FRAMEWORK AND REVIEW OF THE LITERATURE

This study investigated speech-language pathologists’ perceptions and knowledge of emergent literacy instructional practices through utilization of a mixed methods research design. In an effort to situate the study within existing theoretical models, this chapter presents a description of the conceptual framework supporting the study’s purpose, including a discussion of evidence based practice and emergent literacy theory.

To support the study’s significance and demonstrate the need for this investigation, the chapter also contains a comprehensive review of the literature. Containing four major sections, the literature review begins with a description of emergent literacy, including a discussion of the domains, development, and significance of emergent literacy. The second section provides a report of the research identifying evidence based practices in emergent literacy, including holistic interventions, domain specific interventions, and interventions for children considered at risk for reading difficulty. The third and fourth sections of the review contain a summary of research identifying knowledge and perceptions of emergent literacy instructional practices.

Conceptual Framework

The theoretical underpinnings of this study are drawn from various bodies of research and paradigms of thought including concepts from health care, linguistics, psychology, and education. More specifically, the conceptualizations of evidence based practice and emergent literacy served as the theoretical basis of this study as both impact speech-language pathologists’ knowledge and beliefs regarding service provision to preschool aged children with communication disorders in educational settings. Each
element of the conceptual framework will be briefly described to situate the study within existing theoretical models.

**Evidence Based Practice**

The conceptualization of evidence based medicine as described by Sackett, Straus, Richardson, Rosenberg, and Haynes (2000) and advocated by ASHA (2005) served as foundational concept in the study’s development and design. This conceptualization defines evidence based practice as the dynamic interaction among a practitioner’s clinical expertise, the findings of the best current evidence, and the client and family’s values (ASHA, 2005; Sacket et al., 2000). In other words, as ASHA (2005) explains, speech-language pathologists who employ evidence based practice “recognize the needs, abilities, values, preferences, and interests of individuals and families to whom they provide clinical services, and integrate those factors along with best current research evidence and expertise in making clinical decision” (p. 1). This paradigm also suggests that adoption of evidence based practice requires practitioners to obtain and maintain the knowledge and skills needed to render high quality professional services and monitor and incorporate the findings of new research into treatment planning (ASHA, 2005).

The notion of evidence based practice functions in this study’s conceptual framework in a multifaceted manner. Initially, the conceptualization of evidence based practice was instrumental in the development of this study as it prompted an investigation of the literature base to identify the best current research in emergent literacy. The conceptualization of evidence based practice then guided the study’s design as two of the secondary research questions were aimed at describing speech-language pathologists’ beliefs regarding best practice in emergent literacy and perceived constraints to providing
best practice in emergent literacy instruction. The conceptualization of evidence based practice also contributed to the manner in which participants’ perceptions and knowledge were identified and defined in the study. More specifically, the paradigm of evidence based practice influenced the decision to include beliefs regarding constraints to implementation of evidence based practice in the definition of emergent literacy perceptions and contributed to the selection of a quantitative measure that described participants’ perceptions of instructional practices supported by research. In addition, the notion of evidence based practice influenced the choice to define pedagogical knowledge as a participant’s familiarity of emergent literacy instructional practices supported by the literature and an understanding how to provide effective emergent literacy instruction. Finally, the conceptualization of evidence based practice was utilized in the interpretation of the study’s results as the quantitative and qualitative findings were used to identify factors relative to participants’ knowledge and beliefs that created barriers to adoption of best practice in emergent literacy instruction.

**Emergent Literacy Theory**

In addition to evidence based practice, emergent literacy theory served as conceptual support of this research study. First described by Clay in 1966 and later detailed in Teale and Sulzby’s (1986) seminal work, a central tenet of emergent literacy theory is the belief that the skills of reading, writing, speaking, and listening are interrelated (Teal & Sulzby, 1986; Tracey & Morrow, 2006). Thus, emergent literacy theorists often emphasize the relationships among spoken and written language and seek to heighten children’s awareness of these relationships. A second premise of the theory that guided development of this study is the notion that literacy development begins at
birth and is an ongoing process (Teale & Sulzby, 1986; Tracey & Morrow, 2006). Consequently, proponents of emergent literacy theory emphasize the significance of the home environment and the potential influence factors related to the home (e.g., parents’ education, occupation, socioeconomic status, etc.) may have on later reading success (Tracey & Morrow, 2006). Similarly, emergent literacy theorists also call attention to the significance of early learning environments, like preschools and child development centers, advocating for educators and related service providers to adopt instructional practices aimed at facilitating development of early reading and writing skills.

This study was conceptualized under the assumption that all communication modalities (i.e., speaking, listening, reading, writing) exist upon an oral-literate language continuum (Westby, 1991). In addition, the study was based upon the notion that knowledge of the oral-literate language continuum represents an essential component to effective practice as an educational speech-language pathologist and adoption of evidence based practice in the field. More specifically, the oral literate language continuum illustrates the interconnections among the four forms of communication, differentiates why and how language is used, and directs speech-language pathologists to provide intervention services aimed at empowering children with communication disorders to be successful communicators across the continuum (Westby, 1991).

Review of the Literature

Understanding Emergent Literacy

Emergent literacy, or a child’s earliest awareness of the function and form of literacy, represents an important domain of instruction in early childhood education programs (Teale & Sulzby, 1986). Also described as children’s understanding about
reading and writing before they learn to read and write, emergent literacy is distinctly different from other conceptualizations of reading development in which learning to read is believed to occur at the onset of school based instruction in elementary school (Gleason, 2001). More specifically, emergent literacy is described as the developmental period of literacy acquisition in which children acquire significant precursory skills in reading and writing (Justice, 2006). During the emergent literacy period, children do not yet possess conventional literacy ability, but possess “emerging interest in print and books” and “have acquired a rudimentary knowledge” of varied literacy skills (Justice, 2006, p. 8). In simple terms, children developing emergent literacy skills begin acting and thinking like readers and writers. As children learn to act and think like readers and writers, they attain varied early literacy milestones that set the stage for later literacy learning (see Appendix A for reading and writing milestones).

Emergent literacy is significant as numerous research studies have documented that emergent literacy skill can serve as a predictor of later reading ability (for review, see Adams, 1990, or Scarborough & Dobrich, 1994). In addition, the literature has documented that deficits in areas of emergent literacy can contribute to later reading failure and that language and literacy seem interrelated as the vast majority of reading problems are caused by underlying linguistic weakness (Catts & Kamhi, 1986; Torgesen, Wagner, & Rashotte, 1994; Vellutino, 1979). Studies have also revealed a “Matthew Effect” in literacy development indicating that children who initially exhibit difficulty learning to read often remain poor readers (Stanovich, 1986).
**Emergent Literacy Domains**

Emergent literacy involves several different skills and abilities. These behaviors range from conceptual knowledge about the functions of literacy to more specific skills related to print, language, and metalinguistic ability (Mason & Stewart, 1990). Emergent literacy skills and abilities can be categorized into the four general domains of phonological awareness, written language awareness, emergent writing, and oral language (Justice, 2006).

**Phonological awareness.** Phonological awareness refers to children’s knowledge about the sound structure of spoken language (Gillon, 2004). More specifically, phonological awareness is defined as the ability to reflect upon units of spoken language and the skills used to think about, compare, and manipulate sounds in words (Stahl, 2002; Stanovich, 1988).

Phonological awareness is composed of several distinct levels of perception (Gillon, 2004; Pullen & Justice, 2003). These include word awareness, syllable awareness, on-set rime awareness, and phoneme awareness (see Appendix B for definitions). Levels of phonological awareness have also been described as “deep” and “shallow” to illustrate the varying levels of complexity (Justice, Gillon, & Schuele, 2009, p. 358). Shallow levels of phonological awareness demonstrate an individual’s ability to recognize sound patterns that occur across and within words (Justice et al., 2009). Examples of tasks that represent shallow levels of phonological awareness include rhyme discrimination (i.e., knowing that the words “ball” and “tall rhyme) and alliteration awareness (i.e., knowing that “mouse” and “milk” begin with the same sound). Deep levels of phonological awareness are defined as “conscious levels of awareness regarding
a word or syllable’s phonological structure” (Justice et al., 2009). In other words, deep levels of phonological awareness entail comparing, contrasting, and manipulating sound units (Justice et al., 2009). Examples of phonological awareness tasks that portray deep levels of awareness include counting the number of sounds within a word and phoneme deletion (i.e., deleting the first sound in the word “star” to create “tar”).

Phonological awareness exists in varying levels and also entails command of numerous skills. Examples of these skills include alliteration awareness or recognizing common sounds across words, blending or combining smaller oral language units into larger language units, identifying a particular sound in a word, producing or discriminating rhyming patterns, segmenting or breaking larger units of language into smaller units, and recognizing syllable and word boundaries in spoken language (Justice & Pullen, 2003) (See Appendix C for definitions and examples of phonological awareness skills).

With respect to developmental acquisition, research supports the notion that phonological awareness skills develop early in life (Adams, 1990; Lonigan, Burgess, Anthony, & Barker, 1998; Stanovich, 1988). In fact, some children acquire these skills prior to receiving formal reading instruction. Lonigan and colleagues (1998) found that a period of accelerated growth in phonological awareness in children from middle income families occurs between the ages of three and four. Even though some children as young as two years of age can demonstrate skill in phonological awareness, research has determined that children demonstrate stability in these skills only after four years of age (Lonigan et al., 1998). Studies have also determined that while phonological awareness skills do not develop in a linear fashion or exact succession, a general developmental
progression does exist. Studies have confirmed that phonological awareness generally progresses from “whole to part” in the sense that tasks involving manipulations of larger language units (e.g., words, onset rimes, syllables) are typically acquired before tasks involving manipulations of smaller language units (e.g., phonemes) (Adams, 1990; Stanovich, 1988; Sterling-Orth, 2004).

**Written language awareness.** Written language awareness refers to children’s implicit and explicit knowledge about the nature of written language (Badian, 2000). McGinty, Sofka, Sutton, and Justice (2006) describe written language awareness as an “umbrella term that describes children’s early knowledge about print, much of which is developed long before children are introduced to formal reading instruction” (p. 78).

Written language awareness abilities are often described as existing within three main areas (Stewart & Lovelace, 2006). These areas include book conventions (i.e., skills that promote understanding of how books are created, their purpose, and organization), print conventions (i.e., skills that facilitate understanding of how print is organized), and print forms (i.e., skills that promote knowledge that words and letters can be named and are differentiated from other types of text like numbers or scribbles) (Stewart & Lovelace, 2006).

Examples of written language awareness skills within the domain of book conventions include knowledge of how to hold a book (i.e., right side up) and understanding the roles of a book’s author and illustrator (Stewart & Lovelace, 2006). Examples of print convention skills include knowing that you read from left to right across words on pages, from the top of the page to the bottom, and from the front of the book to the back (Stewart & Lovelace, 2006). Skills that demonstrate knowledge of print
forms include identifying letters of the alphabet and distinguishing printed words from letters (McGinty et al., 2006; Stewart & Lovelace, 2006) (See appendix D for definitions and additional example skills).

The development of written language awareness seems to occur as the result of at least two factors. The literature identifies interaction and exposure to print in everyday environments as one factor contributing to acquisition (Ambrose, Fey, & Eisenberg, 2012; Teale & Sulzby, 1986). In other words, children may obtain written language awareness skills through joint book reading experiences with parents and caregivers or through observation of adults or older children engaging in literacy acts. Explicit instruction targeting alphabet knowledge serves as a second factor contributing to development of written language awareness (Ehri, 1987).

*Emergent Writing.* The domain of emergent writing involves skills like name writing and invented spelling in which children learn “what they can do with writing, what it looks like, and how it is produced to represent ideas” (Ukrainetz, 2006, p. 226). Emergent writing skills can be categorized into abilities demonstrating knowledge of the function, form, and processes of print. Understanding the function of print entails knowledge that writing is used to organize thoughts, facilitate memory, communicate ideas and emotions, and document events (Ukrainetz, 2006). Writing skills that involve print form include crafting upper and lower case letters by hand, locating letters on a keyboard or electronic device, and using punctuation (Ukrainetz, 2006). Finally, understanding the processes of print encompasses abilities like sound letter correspondence and the alphabetic principle (i.e., understanding that print is comprised of letters representing sounds) (Ukrainetz, 2006).
The process of learning to write is thought to exist upon a developmental continuum from scribbling to conventional spelling or writing (Puranick & Lonigan, 2011). In fact, Gentry (1978) first described writing development across the five levels of pre-communicative, semi-phonetic, phonetic, transitional, and conventional writing. Recent accounts of writing development collapse Gentry’s (1978) five levels into three main levels: pre-communicative, phonetic, and conventional (Ukrainetz, 2006). Pre-communicative writing entails production of non-representative marks. Children at this level generate markings that eventually contain letter, number, and shape combinations resembling print patterns (e.g., appear to be situated in lists or lines), but the markings do not function to “represent ideas in a consistent way that can be shared with others” (Ukrainetz, 2006, p. 227). Although the markings generated by children in the pre-communicative writing phase do not function to exchange meaning with others, these early scribbles or writing are significant as they reflect children’s understanding of the function of print (Puranik & Lonigan, 2011). Puranik and Lonigan (2011) summarized the significance of early writing development as follows:

Children are actively trying to make sense of writing and their written productions reveal their understanding. Before being able to write conventionally, children attempt to convey meaning through scribbles (i.e., using dots, circles, and shapes) arranged linearly. These early scribbles or writing reflect their understanding that writing serves a symbolic function, that sequences of symbols represent sequences of linguistic units. (p. 584)

As children evolve from pre-communicative to phonetic writing, they apply their knowledge of the alphabetic principle to generate writing that contains letter-like symbols
and eventually use “phonetic” or “invented” spelling patterns that are largely based upon how words sound (Gentry, 1978; Ukrainetz, 2006). Finally, children have command of correct spelling and print forms as they enter conventional writing (Gentry, 1978; Ukrainetz, 2006).

**Oral language.** Oral language represents the final domain of emergent literacy. As it relates to emergent literacy, oral or spoken language consists of a child’s grammatical, morphological, lexical, and narrative abilities (Justice, 2006). Grammatical ability reflects a child’s functioning in syntax, or understanding of “the rule system that governs how words are combined into larger meaningful units of phrases, clauses, and sentences” (Catts & Kamhi, 1999, p. 3). Lexical ability, or vocabulary, relates to a child’s semantic functioning or understanding of the meaning of language (Catts & Kamhi, 1999; Owens, 2010). Morphological ability relates to a child’s understanding and use of units of meaning in language. Finally, narrative ability, an aspect of pragmatic language or the social use of language, includes a child’s ability to engage in storytelling of familiar tales, retell movies or television shows, and recount personal experiences (Owens, 2010).

The development of oral language is a complex process that occurs well beyond the emergent literacy period and involves more than acquisition of grammatical, morphological, lexical, and narrative abilities. While discussion of oral language development exceeds the focus of this review, use of Locke’s (1983) description of the phases of phonological acquisition may be helpful in understanding the general progression of spoken language development during the early years of a child’s life. The pragmatic stage, typically occurring during the first year of life before the onset of
production of true words, involves use of vocal movements (e.g., crying, cooing, babbling, etc.) to influence and gain control of the environment. During the cognitive stage of development, children utilize cognitive abilities such as attention and memory to develop a lexicon or vocabulary to communicate their thoughts, wants, and needs. Throughout the preschool years, children are described as being in the systemic period of development as they move toward utilization of an adult like form of language.

**Emergent Literacy Development**

In their description of emergent literacy development, Whitehurst and Lonigan (1998, 2002) argued that development of emergent and conventional literacy originates from acquisition of two interdependent domains of information: inside-out and outside-in information. Inside-out information is found within print and corresponds to children’s knowledge of the rules for decoding or translating print into sounds (e.g., letter knowledge and phonemic awareness) (Whitehurst & Lonigan, 1998, 2002). Outside-in information is drawn from outside of the text and involves skills needed to understand what is read (e.g., vocabulary and conceptual knowledge). In addition, Whitehurst and Lonigan (2002) argued that development of emergent and conventional literacy requires “information from each domain [to] penetrate into the processing of information from the other” (p. 13).

Not only is the acquisition of emergent literacy skills complex in the sense that development involves growth in interconnected domains of skills, but emergent literacy acquisition is multifaceted as several factors can influence development. In fact, two types of factors, extrinsic and intrinsic, are thought to contribute to the acquisition of emergent literacy skills (Catts & Kamhi, 1999). Extrinsic factors are those related to
children’s early literacy experiences across home and school settings. For example, studies have determined that both the quantity and quality of joint book reading experiences are significant to the acquisition of emergent literacy skills and oral language development (Whitehurst & Lonigan, 1998). In addition, factors intrinsic to a child, such as genetic predisposition for reading difficulty, neurological impairment, and visual-based, attention-based, and language-based deficits, can impact a child’s acquisition of emergent literacy skills as they may interfere with the child’s ability to benefit from early literacy experiences (Catts & Kamhi, 1999; Stewart & Lovelace, 2006).

Further complicating the task of describing the development of emergent literacy is the fact that literacy acquisition, like other aspects of development, does not appear to progress as a series of distinct, concise phases. In fact, Justice (2006) argued that it is more “appropriate to view development as proceeding along a generally linear pathway in which there are no putative endpoints between stages and achievements characteristic of one stage blur with achievements characteristic of another stage” (p. 8). The transition from emergent literacy to the developmental phase of early reading is characterized by the application of the alphabetic principle (i.e., knowledge that words consist of discrete sounds represented by letters in print) to decode (i.e., read) unknown words and encode (i.e., spell) words in writing (Catts & Kahmi, 1999; Justice, 2006).

**Emergent Literacy Facilitation**

As indicated, a great deal of research has examined what constitutes best practice in emergent literacy instruction. In fact, the National Early Literacy Panel (2008) conducted a meta-analysis of approximately 500 articles to examine the scientific evidence related to early literacy instruction and to identify interventions, parenting
activities, and instructional practices that promoted development of children’s early literacy skills. The Panel (2008) concluded that the following emergent literacy instructional practices were effective in improving and developing children’s emergent literacy skill: code-focused interventions (including interventions aimed at development of phonological awareness, alphabet knowledge, and early decoding skill); shared-reading interventions (including shared book reading involving parents, teachers, and a combination of parents and teachers); parent and home programs; preschool and kindergarten programs; and language-enhancement interventions (including interventions aimed at vocabulary development, syntactic development, and listening comprehension).

Specific strategies identified in the literature, including holistic, domain specific, and instructional techniques for children considered at-risk for reading difficulty, are discussed below.

**Holistic Instructional Strategies**

Holistic emergent literacy instructional strategies facilitate growth across the domains of emergent literacy. In other words, rather than targeting acquisition of skills in one particular domain of emergent literacy, holistic instructional strategies can be used to enable early literacy growth in phonological awareness, written language awareness, emergent writing, and oral language.

*Literacy-rich environments.* Utilization of literacy rich environments, or classrooms or homes that are abundant with literacy and language materials and possess multiple and varied opportunities for children to engage in literacy experiences, has been identified as a strategy for fostering emergent literacy development (McMahon, Howe, & Knight, 1996; Strickland & Morrow, 1989). In their review of the literature, Casbergue,
McGee, and Bedford (2008) identified four categories of high quality language and literacy-rich environments: teacher practices and language (i.e., including factors related to teachers’ language use); reading and writing routines (i.e., including factors related to instructional techniques and classroom materials); literacy materials and classroom space (i.e., including factors related to classroom arrangement and materials); and classroom displays (i.e., including factors related to print displays within a classroom). Casbergue and colleagues (2008) spoke of the importance of recognition of all aspects of a classroom environment, noting that facilitation of emergent literacy skill cannot be achieved by enhancement of the physical environment alone. Rather, growth of emergent literacy results primarily from meaningful linguistic interactions among children and adults and repeated exposure to opportunities for children to engage in reading, writing, speaking, and listening.

*Shared book reading.* Shared book reading serves as a cornerstone of emergent literacy instruction as studies have shown that book reading is considered “one of the most important activities for developing knowledge required for eventual success in reading” (Bus, Ijzendoorn, & Pellegrini, 1995, p. 15). More specifically, research has confirmed that shared book reading can result in significant gains in vocabulary, text comprehension, print awareness, syntax, morphology, and decontextualized language (Ard & Beverly, 2004; Dickinson & Smith, 1994; Doyle & Bramwell, 2006; Hindman & Wasik, 2006; Justice & Ezell, 2000; Senechal, Pagan, Lever, & Ouellette, 2008; Snow & Goldfield, 1983). The evidence on shared book reading has also indicated that book readings involving quality interactions in which adults assist children in understanding and interpreting text through questions and feedback results in greater language and
literacy gains (Dickinson & Smith, 1994; Doyle & Bramwell, 2006; Wasik & Bond, 2001). Studies have also shown that repeated readings of books or stories strengthen children’s emergent literacy skills as children typically ask more questions, become more involved in dialogue, and demonstrate improved comprehension of familiar books (Doyle & Bramwell, 2006; Martinez & Roser, 1985; Pappas, 1991; Phillips & McNaughton, 1990).

**Dialogic reading.** In their seminal study, Whitehurst, Falco, Lonigan, Fischel, DeBaryshe, Valdez-Menchaca, et al. (1988), examined the effect of a book reading intervention on children’s linguistic development. Whitehurst and colleagues (1988) determined dialogic reading, or a book reading intervention that utilizes evocative techniques to elicit a child’s use of language and specific feedback involving expansion upon the child’s utterances, corrective feedback, and progressive changes in adult feedback that is sensitive to the child development, resulted in growth in expressive language ability, specifically in vocabulary. As described by Whitehurst and colleagues (1999), dialogic book reading differs from typical shared book reading as the adult and child switch roles and the “adult assumes the role of an active listener, asking questions, adding information, and prompting the child to increase the sophistication of descriptions of the material in the picture book” (p. 262). The effectiveness of dialogic book reading has been systematically studied in a variety of populations of children, including children of low socioeconomic status and children considered at-risk for reading difficulty (Mol, Bus, Jong, & Smeets, 2008; Morgan & Meier, 2008; Whitehurst, Arnold, Epstein, Angell, Smith, & Fischel, 1994; Whitehurst, Epstein, Angell, Payne, Crone, & Fischel, 1994; Whitehurst et al., 1988; Whitehurst et al., 1999). Studies have also revealed the efficacy
of dialogic book reading in combination with other emergent literacy strategies, including phonological awareness training (Davis, 2004; Whitehurst et al., 1999). Consequently, dialogic book reading serves as a primary way to promote vocabulary and development of emergent literacy skills.

_Predictable books._ The use of predictable books has also been identified as an effective strategy to promote development of emergent literacy skills. Also known as “pattern books,” predictable books utilize repetition of particular phrases, scenes, sequences, or episodes (Educational Oasis, 2010). Examples of predictable books include: _I Went Walking_ (Williams, 1989), _There was an Old Lady who Swallowed a Fly_ (Taback, 1997), and _We’re Going on a Bear Hunt_ (Rosen & Oxenbury, 2003). Research has shown use of predictable books with children has several advantages including acquisition of sight words, improved comprehension, exposure to quality literature, and development of oral reading skills (for review, see Love, Batts, Love-Owens, 1995). Predictable books also serve as a strategy for promotion of emergent literacy skills as they provide an excellent context for story-retelling and promote inferential language growth as students can be prompted to predict what will happen. Predictable books may also lend themselves to oral language development as students can repeat recurrent phrases. Studies have also indicated that integrating pattern books into speech and language therapy yields effective outcomes for children with phonological disorders (Parson, Gonzalez, & Stewart, 1998).

_Inferential language prompts._ The practice of embedding inferential language prompts, or prompts that require children to make predictions or draw conclusions during book reading, has also been identified as effective in promoting emergent literacy (van
Inferencing, or the ability to generate an educated guess by connecting what is in the text to what is in your mind, represents an important component of literacy as reading comprehension requires the ability to make correct inferences (Beers, 2002). In addition, students considered at risk for reading disorders often exhibit difficulty with inferential language (van Kleeck, Vander Woude, & Hammett, 2006). Studies have indicated that joint book reading interventions integrating the use of varying levels of inferential questions produced expedited growth in receptive language (van Kleeck et al., 2006). Examples of inferential language questions cited in the literature include “Why do you think that happened?”, “What do you think will happen next?”, “Do you know what that word means?”, and “How do you think the character feels?” (van Kleeck et al., 2006). According to van Kleeck (2008), embedding inferential questions into story book reading serves as a noteworthy emergent literacy strategy as it fosters inferential language growth, vocabulary development, story comprehension, and understanding of classroom discourse.

**Domain Specific Instructional Techniques**

In addition to holistic instructional techniques, domain specific instruction can be used to facilitate emergent literacy growth. Domain specific interventions differ from holistic instructional techniques in that they possess a primary focus and result in growth in a specific domain of emergent literacy.

*Phonological awareness training.* A substantial body of evidence exists regarding the effectiveness of phonological awareness training (Bus & IJzendoorn, 1999; National Reading Panel, 2000; Ehri, Nunes, Willows, Schuster, Yaghoub-Zadeh, & Shannahan, 2001). Studies have confirmed that phonological awareness instruction
improves children’s phonological awareness, reading, and spelling skills and that typically developing children as well as children considered at-risk for reading difficulty benefit from such instruction (Bus & IJzendoorn, 1999; National Reading Panel, 2000; Ehri et al., 2001).

Research has also established properties of effective phonological awareness training. Studies have shown that incorporating use of letters when training phonological awareness is most effective (Bus & IJzendoorn, 1999; National Reading Panel, 2000; Ehri et al., 2001). In addition, instruction focusing on one or two phonological awareness skills and conducted in small groups has been shown to be effective (National Reading Panel, 2000). Finally, effective phonological awareness instruction should be explicit (Ehri et al., 2001; National Reading Panel, 2000). Explicit instruction refers to consistent training that directly targets phonological awareness through use of structured tasks (Justice, Chow, Capellini, Flanigan, & Colton, 2003). In other words, explicit instruction provides children with a specific amount of phonological awareness training each day or week using formalized or structured opportunities (Justice et al., 2003).

Written language awareness interventions. Several instructional techniques to facilitate development of written language awareness are described in the literature. Print referencing prompts serve as one strategy (Ezell & Justice, 2000; Justice & Ezell, 2004; Stewart & Lovelace, 2006). Print referencing is defined as “an adult’s use of nonverbal and verbal cues to direct a child’s attention to the forms, features, and functions of written language” (Justice & Ezell, 2004, p. 186). Print referencing prompts are embedded into shared book readings and may include verbal and non-verbal prompts (Ezell & Justice, 2000). Verbal print referencing prompts include questions (e.g., Where
is the title of the book?), comments (e.g., “I see the letter ‘M’ on this page.”), and requests (e.g., “Show me the letter ‘B’ on this page.”) about print, while tracking print during book reading by tracing a finger under the words being read aloud and pointing to print are non-verbal print referencing prompts (Justice & Ezell, 2004). Print referencing prompts can also be classified as evocative and non-evocative. Evocative prompts from adults require a response from the child (e.g., questions about print, requests about print), while non-evocative prompts do not require the child to take action (e.g., comments about print, tracking print, pointing to print) (Stewart & Lovelace, 2006). Print referencing represents an important instructional strategy in emergent literacy as studies have indicated that verbal, non-verbal, evocative, and non-evocative print referencing prompts can facilitate print awareness (Ezell & Justice, 2000; Justice & Ezell, 2000; Justice, Weber, Ezell, & Bakeman, 2002; Lovelace & Stewart, 2007).

Knowledge of letter names has been identified as a strong predictor of later reading ability (National Early Reading Panel, 2008; Snow, Burns, & Griffin, 1998). Thus, fostering letter knowledge represents an important emergent literacy strategy. However, as Piasta and Wagner (2010) noted in their recent meta-analysis of the effects of alphabet instruction, little is known about the influence of early alphabet instruction and disagreement about approaches to alphabet teaching has been noted. Van Kleeck (2006b) argued that although letter knowledge has not been adequately researched, teaching letter knowledge is beneficial as recent studies with preschool aged children have indicated teaching letters names resulted in gains in emergent literacy skill and letter knowledge acquisition may influence development of letter-sound correspondences and phonological awareness. Van Kleeck (2006b) contended that use of book reading
interactions to facilitate letter knowledge will likely be most effective if educators emphasize the fact that print carries meaning before directly targeting letter name knowledge, if educators acknowledge the development of letter name knowledge by targeting uppercase letters before lower case letters and focusing on letter names before letter sounds, and if educators make attempts to connect letter knowledge to meaningful, authentic texts.

An additional strategy to promote written language development in young children that holds promise is combined use of print salient books. Print salient books contain print that is a predominant design characteristic (Cabell, Justice, Vukelich, Buell, & Han, 2008). Print salient books promote a child’s attention to print through integration of print into illustrations or by making the print in a book more noticeable through the use of varying colors, fonts, sizes, and orientations (Cabell et al., 2008). An example of a print salient book is *Chicka Chicka Boom Boom* (Martin & Archambault, 1989). Although studies investigating the effect of use of print salient books are needed, utilization of print salient books is thought to heighten children’s awareness of print and may provide opportunities for adults to use print referencing prompts as the print becomes a topic of interest (Cabell et al., 2009).

Finally, print enriched play, or integration of literacy artifacts in structured or unstructured play, represents a final strategy for the facilitation of written language awareness (Watkins & Bunce, 1996; Pullen & Justice, 2003). Literacy artifacts used during print enriched play may include functional objects like signs and labels and literacy tools like pens, paper, and books (Pullen & Justice, 2003; Strickland & Morrow, 1989). Print enriched play can be easily used in classrooms utilizing a thematic
approach. For example, if the theme for the day or week is the dairy food group, educators could transform the dramatic play area of a preschool classroom into an ice cream parlor equipped with signs (i.e., “Place order here,” “Open,” “Today’s Special”) menus, pens, and order pads. Integrating literacy artifacts in play is an effective strategy to promote children’s print awareness skill (Neuman & Roskos, 1992). However, adult modeling of how to use literacy artifacts is also important as studies have indicated adult involvement in print enriched play may have an even more positive impact of print awareness than simply providing literacy materials for children’s use during play (Christie & Enz, 1992).

**Instructional Techniques for At Risk Children**

Although research has indicated that many children acquire advanced language and literacy skills without intense instruction, risk factors exist that make some children vulnerable to difficulty in acquiring early literacy skills (Justice & Pullen, 2003; Whitehurst & Lonigan, 1998). These factors include: presence of a developmental disability, family history of reading impairment, speaking a language or dialect that is different from the school curriculum, and being reared in a household with limited experiences in language and literacy (Justice & Pullen, 2003).

Given the significance of emergent literacy, identification of emergent literacy practices for children considered at risk for reading difficulty has been the focus of numerous research studies (Justice & Kaderavek, 2004). Research has indicated that use of holistic and domain specific instructional strategies described above are beneficial for typically developing children and for those considered at risk for reading difficulty. Based on the findings of several studies of emergent literacy intervention, Justice and
Kaderavek (2004) have advocated for use of an embedded-explicit model. Rather than assuming either a “top-down” or “bottom-up” model of learning, the embedded-explicit model of emergent literacy intervention maintains a joint focus on both embedded or naturalistic, contextualized approaches and explicit approaches in which children receive direct instruction (Justice & Kaderavek, 2004; Kaderavek & Justice, 2004).

**Perceptions and Knowledge of Emergent Literacy**

The remaining sections of the literature review are focused on analysis of the research investigating speech-language pathologists’ emergent literacy perceptions and knowledge. A thorough investigation of the literature base yielded few studies. Consequently, the review of the literature to support this study was broadened in two ways. First, the review was expanded to include speech-language pathologists’ perceptions and knowledge related to literacy instructional practices in general (i.e., not limited to emergent literacy instructional practices). Secondly, the review was extended to include early childhood educators’ perceptions and knowledge of emergent literacy instructional practices. Broadening the research to include examination of early childhood educators’ perceptions and knowledge of early literacy instruction was relevant to this study as interdisciplinary, collaborative practices with early childhood educators and speech-language pathologists are frequently utilized in educational settings. In addition, speech-language pathologists and early childhood educators are employed in the same contexts, work with the same populations of student, and practice jointly under the influence of legislative reform and educational initiatives. Expanding the literature review to include studies examining early childhood educators’ perceptions and knowledge of emergent literacy instructional practices also provided an opportunity for
the researcher to identify and examine research methodologies (i.e., design, data sources, etc.) used to study perceptions and knowledge of emergent literacy instructional practices.

**Speech-Language Pathologists’ Emergent Literacy Perceptions**

Review of the literature of speech-language pathologists’ perceptions of literacy yielded five studies (Casby, 1988; Conner & Coover, 2001; Daniel & Reynolds, 2007; Hammond, Prelock, Roberts, & Lipson, 2005; Wellman, 2006). All studies utilized a survey research design with speech-language pathologists working in the public schools as participants. Studies ranged from use of 54 participants (Conner & Coover, 2001) to 250 participants (Wellman, 2006).

None of the studies found in the literature review examined speech-language pathologists’ beliefs specifically regarding emergent literacy, but focused on speech-language pathologists’ perceptions regarding literacy in general. For example, Casby’s (1988) survey identified speech-language pathologists’ attitudes and perceptions regarding oral language and reading. Likewise, Hammond et al. (2005) examined speech-language pathologists’ perceived importance of knowledge of literacy, and Conner and Coover’s (2001) study investigated self-reported competencies of school based speech-language pathologists and provided insight into their perceptions of their abilities with respect to literacy in other contexts. Similarly, Daniel and Reynold’s (2007) survey focused on phonological awareness, but did not specify the age of children served by the speech-language pathologists and did not focus on other domains of emergent literacy. Finally, while Wellman’s (2006) study is most aligned with an investigation of speech-language pathologists’ perceptions of emergent literacy as her survey sought to
investigate speech-language pathologists’ definitions of reading development and instruction and to identify their perceived roles of literacy, the majority of Wellman’s (2006) participants worked with school aged children, and the survey did not focus only on emergent literacy instruction in early childhood education settings.

While insight into speech-language pathologists’ perceptions of emergent literacy specifically cannot be gained from a review of the present evidence base, analysis of research on speech-language pathologists’ beliefs regarding literacy resulted in identification of several persistent themes and relevant findings. The findings, including perceived competency in limited areas of literacy and varied views of speech-language pathologists’ involvement in literacy, are discussed below.

**Perceived competency in limited areas of literacy.** As noted, three of five studies reviewed investigated speech-language pathologists’ perceptions of their knowledge of literacy instructional practices. A common finding among the studies was that speech-language pathologists viewed themselves as possessing competency in limited areas of literacy. Casby’s (1988) survey indicated that speech-language pathologists reported knowledge of oral language was significantly higher than knowledge of the oral language and reading connection (Casby, 1988). Several years later, Conner and Coover’s (2001) study indicated similar results as speech-language pathologists indicated seven school based competencies in which they felt least comfortable completing, several of which were related to written language and reading. Likewise, Hammond et al. (2005) found that while speech-language pathologists viewed knowledge of literacy learning as “very important,” they reported being only “fairly” knowledgeable of literacy learning and reported more competency in aspects of literacy instruction traditionally considered part
of the treatment of language disorders (i.e., phonological awareness, vocabulary). Thus, as suggested by these studies (Casby, 1988; Conner & Coover, 2001; Hammond et al., 2005), speech-language pathologists reported proficiency in limited aspects of literacy instruction.

*Varied views of speech-language pathologists’ involvement in literacy.* A second finding was the presence of differing views regarding speech-language pathologists’ involvement in literacy instruction. While speech-language pathologists in Wellman’s (2006) study agreed on their roles in the majority of areas of service provision (e.g., providing language intervention, advocacy, research, and assisting teachers, parents, and students), participants did not agree on their roles in assessment of reading and writing. In addition, responses varied greatly when asked about speech-language pathologists’ roles in prevention and identification of students with reading disorders. Similarly, speech-language pathologists in Daniel and Reynold’s (2007) study reported varied levels of involvement in phonological awareness instruction. In their survey, 34% of speech-language pathology respondents reported providing phonological awareness instruction to children with articulation and phonological disorders, 36% to children with language disorders, and 29% reported not providing phonological awareness instruction to any children (Daniel & Reynold, 2007). Collectively, these studies (David & Reynold, 2007; Wellman, 2006) indicate that speech-language pathologists possess varying views of involvement in literacy instruction and assume varied levels of involvement in instruction.
Early Childhood Educators’ Emergent Literacy Perceptions

Numerous studies have examined early childhood educators’ beliefs surrounding early literacy development and instruction (Burgess, Lundgren, Lloyd, & Pianta, 2001; Foote, Smith, & Ellis, 2004; Guimaraes & Youngman, 1995; Hawken et al., 2005; Hindman & Wasik, 2008; Islam, 1999; Kim & Kwon, 2002; Korth, Sharp, & Culatta, 2010; Lee & Ginsburg, 2007; Lim, 2010; Lim & Torr, 2007; Lynch, 2009; Madison & Speaker, 1994; Makin et al., 1999; McLachlan, Carvalho, Lautour, & Kumar, 2006; McMullen et al., 2006; Miller & Smith, 2004; Powell, Diamond, Bojczyk, & Gerde, 2008; Schweiker & Schweiker, 1993; Stoner, Parette, Watts, Wojcik, & Fogal, 2008; Ure & Raban, 2001). Research has explored how early childhood educators perceive literacy development and instructional practices for several years, in a variety of early childhood settings, and with early childhood educators of varying levels of education and years of experience.

This research has used a variety of research methodologies and designs, including surveys (Burgess et al., 2001; Guimaraes & Youngman, 1995; Hawken et al., 2005; Hindman & Wasik, 2008; Islam, 1999; Kim & Kwon, 2002; Lim & Torr, 2007; Madison & Speaker, 1994; Makin et al., 1999; McLachlan et al., 2006), qualitative designs (Foote et al., 2004; Korth et al., 2010; Lee & Ginsburg, 2007; Lynch, 2009; Miller & Smith, 2004; Powell et al., 2008; Schweiker & Schweiker, 1993; Stoner et al., 2008), and mixed methodology designs using several different data collection techniques (Lim, 2010; McMullen et al., 2006; Ure & Raban, 2001). The studies provide numerous descriptions of varied methods of identifying perceptions of emergent literacy and identify quantitative (i.e., surveys) and qualitative data sources (i.e., interviews, focus groups,
observation, artifact analysis, field notes) that can be utilized in investigations of emergent literacy perceptions.

Analysis of research investigating early childhood educators’ perceptions of emergent literacy revealed similar findings across studies and the presence of several recurring themes. The existence of diverse views among early childhood educators, the influence of several factors on early childhood educators’ perceptions, lack of a comprehensive view of emergent literacy, reported uncertainty and confusion, and positive perceptions regarding involvement in literacy instruction were identified as common themes and will be discussed below.

*Diverse views among early childhood educators.* The presence of diverse views among early childhood educators served as one common finding in the review of the literature (Burgess et al., 2001; Foote et al., 2004; Hindman & Wasik, 2008; Islam, 1999; Lim & Torr, 2007; Lim, 2010; Lynch, 2009; Madison & Speaker, 1994; McMullen et al., 2006; Powell et al., 2008; Schweiker & Schweiker, 1993). The literature review evidenced variability in terms of early childhood educators’ theoretical approaches and instructional techniques in early literacy. For example, Hindman and Wasik (2008) found variation in teachers’ reported beliefs surrounding writing and code-related tasks noting that teachers indicated mixed feelings regarding whether children should learn to write without worrying about spelling. In Powell et al.’s (2008) focus group, three thematic categories of Head Start teachers’ views emerged. These categories revealed striking differences in teachers’ perceptions of emergent literacy as they included the belief that literacy instruction should be provided after children demonstrate competence in other developmental areas, the notion that teachers should maintain a joint focus on literacy
and other areas of development, and the thought that literacy is a foundation for growth in other areas of development. Foote et al. (2004) determined that teachers adopted differing pedagogical approaches to early literacy learning noting that some emphasized play-based activities and experiential learning, while others favored skill-based activities. Similarly, Lynch (2009) found that teachers reported great variation in instructional practices to promote literacy development with activities ranging from phonics based to modeling writing.

Close inspection of the research results regarding early literacy learning of early childhood educators revealed that beliefs about early reading instruction seemed to exist on a continuum from skill-based approaches to play-based approaches. Madison and Speaker (1994) identified three types of early childhood literacy environments representing teachers’ varying views of literacy learning. These included a skill-based cluster characterized by teacher directed activity and instruction focused on letters or predetermined skills; an emergent literacy cluster characterized by use of holistic, thematic, and integrated instructional approaches and utilization of several learning centers and literacy materials; and an eclectic literacy cluster emphasizing the need for direct instruction, skills attainment, and naturalistic opportunities for language and literacy learning. Similarly, Lim and Torr (2007) described early childhood educators’ orientations of literacy learning as possessing a code emphasis or meaning emphasis and Lim (2010) categorized teachers’ responses into four different perspectives, including child-centered pedagogy, communicative development, child development, and emergent literacy, noting differences between perspectives in terms of teachers’ views of children’s needs and abilities and best instructional practices. Figure 2.1 depicts the continuum of
Collectively, the findings of these studies (Burgess et al., 2001; Foote et al., 2004; Hindman & Wasik, 2008; Islam, 1999; Lim, 2010; Lim & Torr, 2007; Lynch, 2009; Madison & Speaker, 1994; McMullen et al., 2006; Powell et al., 2008; Schweiker & Schweiker, 1993) suggest that early childhood educators possess varying views with respect to how literacy is acquired and how reading instruction should be provided with young children. In addition, preschool teachers are using varied instructional techniques and classroom materials to promote literacy and language learning.

**Influence of several factors on early childhood educators’ perceptions.** The research on early childhood educators’ beliefs regarding emergent literacy revealed the influence of several factors on teachers’ perceptions (Foote et al., 2004; Hindman & Wasik, 2008; Korth et al., 2010; Lee & Ginsburg, 2007; Lim & Torr, 2007; Schweiker & Schweiker, 1993). Researchers investigating preschool teachers’ literacy beliefs spoke of many potential factors including those related to teacher characteristics (e.g., educational background, years of experience, participation in professional development, ethnicity, etc.) and school characteristics (e.g., school culture, administrative support, student population, etc.). Schweiker and Schweiker’s (1993) qualitative study cited teacher knowledge, autonomy in teaching, professional development, and school culture as factors influencing preschool teachers’ literacy beliefs, while Lim and Torr (2007) identified internal factors (e.g., theoretical beliefs, pedagogical beliefs, motivation, confidence, self-efficacy) and external factors (e.g., demographics of students, grade
level of students, pressure from parents, pre-service education) as probable influences on teacher perceptions.

Burgess et al.’s (2001) and Lee and Ginsburg’s (2007) studies contributed more specific information regarding the influence of factors to teacher’s perceptions of emergent literacy by providing comparisons. Burgess et al. (2001) found that teachers with higher levels of training placed greater emphasis on techniques promoting verbal language than teachers less education, teachers with more years of experience placed greater emphasis on story-related practices than teachers with less teaching experience, and African-American teachers placed greater value on alphabet knowledge tasks than word and story knowledge than teachers of Caucasian descent. Lee and Ginsburg’s (2007) study of the instructional practices of teachers of students of varying levels of socioeconomic status (SES) revealed teachers of low SES children tended to exhibit more emphasis on literacy and mathematics in an effort to prepare students for kindergarten, while teachers of middle SES students supported literacy and mathematics instruction that valued individualism and student preference.

It is important to note that the literature review revealed some disagreement among researchers with respect to the influence of teachers’ characteristics on their beliefs of emergent literacy. Many researchers reported teachers’ level of education as a potential influence on literacy beliefs (Lim & Torr, 2007). In fact, respondents in Lim and Torr’s (2007) survey ranked professional coursework and teaching experience as the highest among factors thought to contribute to teachers’ beliefs. However, Hindman and Wasik (2008) found that while teachers’ years of experience were positively linked to agreement with evidence based beliefs in oral language, no other relationships between
teachers’ educational backgrounds (e.g., level of education, specialization in early childhood) and reported beliefs were found. Thus, the exact influence of each factor on early childhood educators’ views and the relationship among each factor remains unknown as the literature review evidenced conflicting findings. Despite the need for additional research in this area, the literature reviewed suggests, at present, that early childhood educators’ beliefs regarding emergent literacy are multifaceted and complex as perceptions seem impacted by several different factors.

Lack of a comprehensive view of emergent literacy. A lack of a comprehensive view of emergent literacy was evidenced in the literature review as limited support for instructional practices encompassing all domains of emergent literacy was also a common finding (Burgess et al., 2001; Guimaraes & Youngman, 1995; Hawken et al., 2005; Islam, 1999; Lynch, 2009; McLachlan et al., 2006; Powell et al., 2008; Schweiker & Schweiker, 1993; Stoner et al., 2008). Despite the fact that the literature has demonstrated the importance of instruction in all four domains of emergent literacy, data indicated that early childhood educators do not always report use of instructional strategies across all emergent literacy domains. For example, Stoner et al. (2008) found that preschool teachers described emergent literacy in terms reading activities and did not mention incorporation of writing or other domains of emergent literacy. Participants in Guimaraes and Youngman’s (1995) study classified knowledge of how written language is organized, phonological awareness, and letter naming as less important skills for preschool students to acquire. Likewise, preschool teachers in Burgess et al.’s (2001) study did not consider letter naming, letter production, sound letter correspondence, and phonological awareness to be of primary importance and reported spending minimal time
on writing. The dominant view of participants in Powell et al.’s (2008) study was that alphabet knowledge is a key early literacy skill. While knowledge of print concepts was also identified as a key literacy concept, minimal attention to phonological awareness was reported. Finally, Hawken et al.’s (2005) survey of Head Start teachers showed that while teachers in Head Start programs focus on some domains of emergent literacy, teachers do not always deliver instruction across all emergent literacy domains, namely in phonological awareness.

Collectively, these findings (Burgess et al., 2001; Guimaraes & Youngman, 1995; Hawken et al., 2005; Islam, 1999; Lynch, 2009; McLachlan et al., 2006; Powell et al., 2008; Schweiker & Schweiker, 1993; Stoner et al., 2008) support the notion that some early childhood educators may not be knowledgeable of all domains of emergent literacy. The exclusion or limited attention to phonological awareness and emergent writing was an alarming trend. These findings indicate early childhood educators’ views regarding early literacy learning may not always be aligned with evidence based practice in emergent literacy.

Reported uncertainty and confusion. A fourth theme evident in the literature review was reported feelings of uncertainty and confusion regarding emergent literacy instruction. Several researchers spoke of early childhood educators’ expression of uncertainty when approached with inquiries regarding their beliefs of emergent literacy. Schweiker and Schweiker (1993) found that not all teachers could define emergent literacy and were not familiar with emergent literacy approaches. Likewise, the majority of participants in Burgess et al.’s (1999) study expressed confusion regarding how to facilitate reading development, and respondents in Lim and Torr’s (2007) survey
indicated uncertainty about aspects of literacy assessment and instruction. Ure and Raban (2001) found that preschool teachers reported uncertainty regarding the role of literacy in preschool programs. Finally, Lynch’s (2009) qualitative study identified uncertainty and variation in beliefs about literacy among preschool teachers as a finding and noted that preschool teachers reported feeling isolated and having limited access to resources that would strengthen literacy knowledge. Collectively, these studies support the notion that emergent literacy serves as an area of growth for many preschool teachers. This is a significant finding as feelings of confusion and uncertainty expressed by early childhood educators may be indicative of lack of knowledge of emergent literacy.

*Positive perception of involvement in literacy instruction.* Finally, analysis of the literature revealed positive attitudes regarding involvement with emergent literacy among teachers as a recurrent theme (Hawken et al., 2005; Kim & Kwon, 2002; Korth et al., 2010; Miller & Smith, 2004; McLachlan et al. 2006; Powell et al., 2008). Kim and Kwon (2002) demonstrated that teachers of preschool children were more likely to exhibit positive attitudes toward emergent literacy learning for young children than parents. Likewise, Hawken et al. (2005) and Powell et al. (2008) concluded that Head Start teachers serving as participants in their studies generally supported the inclusion of literacy goals in Head Start programs. McLachlan et al. (2006) reported that teachers in their survey were enthusiastic about literacy and noted few negative comments regarding instruction to promote acquisition of emergent literacy skills. Korth et al. (2010) concluded that teachers participating in a structured emergent literacy program valued language and literacy instructional techniques and spoke positively of their use. Similarly, Miller and Smith (2003) reported teachers across early childhood settings in
England exhibited support for instructional practices in emergent literacy (i.e., book reading, emergent writing, play with letters). As a group, these studies (Hawken et al., 2005; Kim & Kwon, 2002; Korth et al., 2010; McLachlan et al., 2006; Miller & Smith, 2004; Powell et al., 2008) indicate that preschool teachers seem to support involvement in emergent literacy instruction.

**Speech-Language Pathologists’ Emergent Literacy Knowledge**

As noted, discernment of speech-language pathologists’ knowledge of emergent literacy is meaningful as educational speech-language pathologists are assuming roles in the prevention of literacy disorders and are actively involved in the provision of intervention services for children considered at risk for reading difficulty. Despite its significance, few studies have investigated speech-language pathologists’ knowledge of emergent literacy. In fact, review of the literature of speech-language pathologists’ understanding of emergent literacy resulted in analysis of one survey study (Spencer, Schuele, Guillot, & Lee, 2008). Spencer et al.’s (2008) study of 160 speech-language pathologists and 381 other educators (e.g., kindergarten, first grade, reading, and special education teachers) assessed and compared participants’ performance on varied phonological awareness tasks.

**Need for continued growth.** A notable finding in the review of the literature of speech-language pathologists’ knowledge of emergent literacy is the need for continued growth in phonemic awareness ability among speech-language pathologists. While the speech-language pathologists in Spencer et al.’s (2008) study outperformed all other educators (i.e., kindergarten teachers, first grade teachers, reading teachers, and special education teachers) on all measures of phonemic awareness, speech-language
pathologists, as a group, did not exhibit “expert knowledge” in phonemic awareness as mean performance was well below ceiling (37.34 of 47 possible points). Spencer et al.’s findings (2008) speak to the fact that while speech-language pathologists may possess a unique understanding of the sound system of spoken language, the need for improvement exists.

**Early Childhood Educators’ Emergent Literacy Knowledge**

While several studies have examined primary school teachers’ knowledge related to literacy instruction (for review, see Cunningham, Zibulsky, & Callahan, 2009), research of early childhood educators’ knowledge of emergent literacy instructional practice is limited. Cunningham et al. (2009) contended that studies of teachers’ knowledge of literacy content knowledge are in early stages and studies of teachers’ knowledge of literacy constructs in the early childhood setting are scarce. Cunningham et al.’s (2009) assertion was confirmed in this review as analysis of studies of early childhood educators’ knowledge of emergent literacy identified only three studies (Crim, Hawkins, Thornton, Rosof, Copley, & Thomas, 2008; Cunningham et al., 2009; Neuman & Cunningham, 2009).

All studies (Crim et al., 2008; Cunningham et al., 2009; Neuman & Cunningham, 2009) utilized participants with varying levels of education and teaching experience. Studies by Cunningham et al. (2008) and Neuman and Cunningham (2009) were similar in that the researchers administered an instrument assessing emergent literacy knowledge to a group of early childhood educators before and after involvement in a professional development and mentoring opportunity. Participants in Cunningham et al.’s (2008) study participated in monthly professional development meetings, completed classroom
observations, and received mentoring from trained literacy experts, while participants in Neuman and Cunningham’s (2009) study completed a language and literacy course and received coaching interventions from trained literacy experts. Similarly, participants in Crim et al.’s (2008) study completed professional development sessions, but only completed an assessment aimed at identifying early childhood educators’ knowledge in phonological awareness before involvement in the professional development opportunity. Studies were also alike in that Crim et al. (2008) utilized the Informal Survey of Linguistic Knowledge (Moats, 1994) as the measure of knowledge, while Cunningham et al. (2008) used a variation of the same instrument. However, Neuman and Cunningham (2009) utilized the Teacher Knowledge Assessment of Early Language and Literacy Knowledge (Neuman & Cunningham, 2009), an assessment of knowledge in numerous aspects of early childhood development, including emergent literacy.

Although few studies have examined early childhood educators’ knowledge of emergent literacy, analysis of research revealed common themes. These findings, limited understanding and a broad range of emergent literacy knowledge, are described below.

Limited understanding. One common finding evidenced in the literature review is limited understanding of emergent literacy. In their study investigating early childhood educators’ knowledge of phonological awareness, Crim et al. (2008) concluded that preschool teachers possessed “an overall lack of knowledge in basic early literacy skills” as participants’ demonstrated difficulty in syllabication and phoneme identification (p. 27). Similarly, teachers in Cunningham et al.’s (2009) study demonstrated difficulty with tasks requiring identification of the number of phonemes in words and reversal of phonemes in words. For example, more than half of teachers correctly responded to zero
or one of seven questions requiring identification of the number of speech sounds in words. Additionally, participants in Neuman and Cunningham’s (2009) study demonstrated a lack of knowledge in emergent literacy as participants’ mean score on the Teacher Knowledge Assessment of Early Language and Literacy Knowledge (Neuman & Cunningham, 2009) was 57.5 prior to involvement in professional development.

Broad range of emergent literacy knowledge. Review of the literature of early childhood educators’ understanding of emergent literacy also revealed a broad range of understanding among preschool teachers. Results of Crim et al.’s (2008) survey indicated early childhood educators’ accuracy in syllabication ranged from 67.5% to 95%, while accuracy in phoneme identification ranged from 15% to 60%. Likewise, preschool teachers in Cunningham et al.’s (2009) study demonstrated variability in understanding phonological awareness. Half of the preschool teachers correctly answered six or more of nine questions requiring reversal of phonemes in a word, while the remaining half correctly answered less than six questions. Thus, the studies reviewed (Crim et al., 2008; Cunningham et al., 2009) speak to the fact that early childhood educators possess varying degrees of knowledge in emergent literacy, with some preschool teachers demonstrating sufficient understanding and some early childhood educators exhibiting poor levels of knowledge.

Summary of Findings

Several limitations to the review of the literature of speech-language pathologists’ and early childhood educators’ perceptions and knowledge of emergent literacy exist. Close inspection of the literature reviewed indicates that authors differed with respect to how beliefs were defined and measured. For example, some researchers identified
participants’ beliefs regarding literacy in terms of their perceived competency in specific areas of literacy instruction, while others reported beliefs in terms of participants’ endorsement of certain literacy instructional techniques or instructional targets. In addition, some researchers compared participants’ definitions of reading development and appropriate practice. A lack of agreement of definitions of belief and knowledge and utilization of overlapping definitions by researchers has been cited in the literature in the past (Pajareas, 1992). Also, some researchers have contended that teachers’ beliefs and knowledge may be interconnected and that distinguishing between the two may be problematic (Kagan, 1992; Madison & Speaker 1994). These observations remain valid and serve as a possible limitation of the literature review. Varying conceptualizations of “belief” among researchers could weaken comparisons of findings and could have limited search results.

Secondly, studies included in the review varied with respect to the setting. The context of studies of early childhood educators’ beliefs of emergent literacy included Asia (Kim & Kwon, 2002; Lim, 2010; Lim & Torr, 2007), Australia (Makin et al.,1999; Ure & Raban, 2001), Europe (Guimaraes & Youngman, 1995; Miller & Smith, 2004), New Zealand (Foote et al., 2004; McLachlan et al.,2006), and North America (Burgess et al., 2001; Islam, 1999; Hawken et al., 2005; Hindman & Wasik, 2008; Korth et al., 2010; Lee & Ginsburg, 2007; Lynch, 2009; Madison & Speaker, McMullen et al., 2006; Powell et al., 2008; Schweiker & Schweiker, 1993; Stoner et al., 2008). All studies of speech-language pathologists’ perceptions of literacy were conducted in the United States of America (Casby, 1988; Conner & Coover, 2001; Daniel & Reynolds, 2007; Hammond et al., 2005; Wellman, 2006). Thus, results from studies conducted in the context of one
culture should be compared to studies occurring in other cultures with caution as culture is known to influence literacy behavior (Tracey & Morrow, 2006).

The lack of research of speech-language pathologists’ and early childhood educators’ perceptions and knowledge of emergent literacy serves as a definite limitation of the body of research. Also, studies of emergent literacy knowledge (Crim et al., 2008; Cunningham et al., 2009; Spencer et al., 2008) did not always include concentration on all domains of emergent literacy. Thus, results should be interpreted carefully.

Finally, as noted, studies reviewed did not specifically address speech-language pathologists’ perceptions of emergent literacy and studies examining perceptions of literacy in general were included. Thus, as generalizability to early childhood settings is questionable, caution should be used in interpretation of results.

Although extensive research investigating speech-language pathologists’ perceptions and knowledge of emergent literacy has not been conducted and the expansion of the literature review to include speech-language pathologists’ perceptions of knowledge of literacy in general and early childhood educators’ perceptions and knowledge of emergent literacy is difficult to use, review of the literature does provide information regarding research methodologies used to explore emergent literacy perceptions and knowledge. More specifically, prior research gives insight into tools used to identify perceptions and knowledge of emergent literacy.
Figure 2.1

*Continuum of Early Childhood Educators’ Beliefs Regarding Early Literacy*

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<thead>
<tr>
<th>Teacher as Director</th>
<th>Eclectic Teacher*</th>
<th>Teacher as Facilitator</th>
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</thead>
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<tr>
<td>-Skill Based</td>
<td>*borrows from both</td>
<td>-Play and meaning based</td>
</tr>
<tr>
<td>-Teacher Directed</td>
<td></td>
<td>-Child Directed</td>
</tr>
<tr>
<td>-Explicit, Direct,</td>
<td></td>
<td>-Holistic, Integrated</td>
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<tr>
<td>Systematic Instruction</td>
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<td>Instruction</td>
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<tr>
<td>-Emphasis on</td>
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<td>developmental readiness</td>
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CHAPTER THREE: METHODS

This chapter describes the methodology utilized in this mixed methods study of speech-language pathologists’ perceptions and knowledge of emergent literacy instructional practices. The chapter begins with a description of the research design. The chapter then explains the sampling paradigm and method of participant selection. Following this information, the data sources and the approach to data analysis are described. The chapter concludes with an explanation of the measures taken to ensure trustworthiness of findings, including the researcher’s bracketing statement.

Research Design

This study utilized a concurrent triangulation mixed methods research design as described by Tashakari and Teddlie (2003), Creswell and Clark (2007), and Creswell (2009). The study involved collection and analysis of three quantitative measures and two qualitative measures. As described by Creswell (2009), a concurrent triangulation design is characterized by collection of both quantitative and qualitative data in an attempt to determine if there is convergence, differences, or some combination of findings. A concurrent triangulation mixed methodology research design was selected for this research study as its purpose is to collect different, but complimentary data to answer the research questions (Morse, 1991). In addition, use of quantitative and qualitative methods serves as “a means to offset the weaknesses inherent within one method” (Tashakari & Teddlie, 2003, p. 229). Finally, concurrent triangulation designs integrating qualitative and quantitative data often yield well validated and substantiated findings (Tashakari & Teddlie, 2003).
As described by Tashakari and Teddlie (2003) and Creswell (2009), this study involved one phase of data collection in which quantitative and qualitative data sources were gathered concurrently. In addition, the “mixing” or integration of the quantitative and qualitative data occurred during the interpretation phase of the study. As noted by Creswell and Clark (2007), concurrent, but separate, collection and analysis of data allows the researcher to “best understand the research problem” (p. 64).

**Sampling Paradigm and Participant Selection**

This study utilized a criterion and purposive sampling of five educational speech-language pathologists working with preschool aged children in rural Appalachia. As Creswell (2007) explains, research utilizing qualitative measures may involve more than one sampling paradigm within a single study. Criterion and purposive sampling were utilized in this study in an effort to identify participants who met a specific inclusion criteria related to educational and work history and who were employed in similar educational settings. The use of five participants in a study entailing varied forms of data reflects the spirit of research involving qualitative methodologies in that the study maintained a focus on “depth” rather than “breadth.” As Creswell (2007) noted, the aim of research involving qualitative methodologies is not to generalize findings, but to “elucidate the particular” (p. 126).

**Criterion Sampling**

With respect to use of a criterion sampling paradigm, inclusion criteria for participants were established for quality assurance (Creswell, 2007). In other words, criterion sampling was used to ensure the educational backgrounds and work experiences of participants were similar. Inclusion criteria for participants consisted of possessing at
least a Master’s Degree in Communication Disorders, possessing or being eligible for a Certificate of Clinical Competence in speech-language pathology through ASHA, currently providing intervention services in an educational setting with at least 20% of caseload consisting of preschool aged children with communication disorders, and speaking English as a native language.

**Purposive Sampling**

With respect to use of a purposive sampling paradigm, all participants were recruited from an Appalachian region of a southeastern state. Purposive sampling was utilized to ensure variables related to the employment setting of participants remained comparable. Variables related to participants’ caseloads (i.e., number of children served, number of schools served, types and severity of disorders treated), school culture (i.e., dialect spoken, percentage of students receiving free or reduced lunch), and culture of the community (i.e., dialect spoken, socioeconomic status of residents, educational level of residents) were held constant across participants.

**Participant Selection**

Participants were recruited from the service region of a special education cooperative in a southeastern state. Eleven special education cooperatives exist within the state in which the study was conducted. The special education cooperative utilized in this study maintains a 14 county service area region and functions to collaborate with school districts to provide support services and programs for students, schools, and communities.

Participants were recruited using a recruitment letter distributed electronically using the list-serve of the special education cooperative (see Appendix E). Recruitment letters were also distributed at a regional professional development session sponsored by
the special education cooperative for speech-language pathologists in the service region. In addition to distributing the recruitment letter at the instructional session, the researcher recruited participants by delivering a short, informative speech regarding the purpose of the study and need for participants prior to the beginning of the professional development session. Approximately 50 speech-language pathologists were in attendance at the professional development session. Of the 50 attendees, five speech-language pathologists indicated interest and met the established inclusion criteria. Consequently, all attendees meeting the inclusion criteria and indicating agreement to participate were consented.

The researcher explained the consent form (see Appendix F) to the five participants prior to its completion and supplied a copy of the form after signatures were gained.

**Data and Data Collection**

As described, the study assumed a concurrent triangulation mixed methodology research design with concurrent quantitative and qualitative data collection with an interpretation of all results at the conclusion of the project. Figure 3.1 depicts a visual model of the study’s design.

**Data Sources**

Five sources of data were collected and analyzed in this study including three quantitative measures and two qualitative measures. Quantitative measures included the *Preschool Literacy Beliefs Questionnaire* (Seefeldt, 2004), *Teacher Knowledge Assessment of Early Language and Literacy Development* (Neuman & Cunningham, 2009), and *Informal Survey of Linguistic Knowledge* (Moats, 1994). Completion of a photography assignment and semi-structured interviews served as the qualitative measures. Each of the data sources will be described below.
Preschool Literacy Beliefs Questionnaire. The Preschool Literacy Beliefs Questionnaire (PLBQ) (Seefeldt, 2004), a 30 item questionnaire with adequate reliability and validity (Wasik & Hindman, 2008), was administered to all participants during the data collection phase of the study to identify participants’ perceptions of emergent literacy instructional practices (see Appendix G). Completion of the PLBQ (Seefeldt, 2004) involves use of a Likert scale to report level of agreement with statements regarding emergent literacy with responses ranging from “strongly agree,” “agree, neutral,” “disagree”, and “strongly disagree.” When scoring responses on the PLBQ (Seefeldt, 2004), “strongly agree” yields a score of five, “agree” equals a score of four, “neutral” is equivalent to a score of three, “disagree” yields a score of two, and “strongly disagree” is equal to a score of one. Twelve items on the PLBQ (Seefeldt, 2004) not reflective of evidence based practices (e.g., “As a teacher, I believe children should not ask questions or talk about stories when teachers read to them.”) are reverse-coded. With a total possible score of 150, higher scores on the PLBQ (Seefeldt, 2004) are believed to represent beliefs aligned with best practices evidenced through research in emergent literacy, while lower scores are associated with endorsement of “generally less effective drill-and-practice classroom activities and/or little affirmation of the value of early literacy skills for later learning” (Hindman & Wasik, 2008).

The PLBQ (Seefeldt, 2004) contains four subscales related to emergent literacy, including decoding-related knowledge, oral language and vocabulary, book reading, and writing subscales. The decoding related knowledge subscale of the PLBQ (Seefeldt, 2004) focuses on alphabet knowledge and phonemic awareness (Hindman & Wasik, 2008). Nine items on the PLBQ (Seefeldt, 2004) constitute the decoding-related
knowledge subscale and center on how teachers should provide instruction in alphabet knowledge and phonemic awareness and the significance of these skills in the process of learning to read (Hindman & Wasik, 2008). The oral-language subscale of the PLBQ (Seefeldt, 2004) contains nine items focusing on vocabulary and instructional techniques to increase a preschool child’s vocabulary (Hindman & Wasik, 2008). The book reading subscale of the PLBQ (Seefeldt, 2004) contains five items centering on how teachers should read books to preschool children to promote emergent literacy growth and the usefulness of book reading in the process of learning to read (Hindman & Wasik, 2008). Finally, six items on the PLBQ (Seefeldt, 2004) constitute the writing subscale. This subscale collects information regarding teachers’ beliefs regarding how children learn to write (Hindman & Wasik, 2008).

The utility of use of the PLBQ (Seefeldt, 2004) has been demonstrated in prior research examining early childhood educators’ perceptions of emergent literacy. Hindman and Wasik (2008) reported use of the PLBQ (Seefeldt, 2004) in their study of Head Start teachers’ beliefs about emergent literacy. In a study investigating the efficiency of the PLBQ (Seefeldt, 2004), Hindman and Wasik (2008) determined the questionnaire possessed adequate internal consistency with a Cronbach’s alpha value of .87. The researchers examined the reliability of each subscale and noted a range of Cronbach’s alpha values from .60 on the writing subscale to .73 on the book reading subscale. The decoding-related knowledge subscale possessed an alpha value of .67, while the oral language and vocabulary subscale possessed a Cronbach’s alpha value of .72. Hindman and Wasik (2008) also determined correlational values between the subscales on the PLBQ (Seefeldt, 2004). The researchers determined the subscales
measured respondents’ beliefs regarding “independent but interrelated constructs” (Hindman & Wasik, 2008, p. 484).

Teacher Knowledge Assessment of Early Language and Literacy Development. The Teacher Knowledge Assessment of Early Language and Literacy Development (TKA) (Neuman & Cunningham, 2009) served as a second source of quantitative data in this study (see Appendix H). The TKA (Neuman & Cunningham, 2009) is a 70 item multiple-choice, true-false assessment of individual’s pedagogical knowledge in early language and literacy with an average completion time of 45 minutes (Neuman & Cunningham, 2009). Per the authors’ description, the large majority of the items are focused on “core competencies in language and literacy,” or oral language comprehension, phonological awareness, letter knowledge, print convention, strategies for working with second language learners, literacy assessments, parents’ roles in language and literacy development, and aspects of literacy curriculum (Neuman & Cunningham, 2009, p. 544). The remaining items focus on “foundational knowledge in child development based on NAEYC standards” (Neuman & Cunningham, 2009, p. 544).

According to the authors, the TKA (Neuman & Cunningham, 2009) was designed to assess “knowledge encountered in the work or practice of teaching language and literacy” (Neuman & Cunningham, 2009, p. 544). Given that the nature of the assessment is to evaluate an educator’s practical application of literacy instruction, the TKA (Neuman & Cunningham, 2009) was selected for this research study as it yielded information about participants’ emergent literacy pedagogical knowledge, or familiarity of emergent literacy instructional practices supported by the literature and understanding how to provide effective emergent literacy instruction.
The TKA (Neuman & Cunningham, 2009) consists of three parts. The first section, comprised of questions regarding one’s background information, was not used in the research study. Parts two and three of the TKA (Neuman & Cunningham, 2009), including a section of multiple-choice questions and true-false questions, were not modified in their use in this study.

The utility of the TKA (Neuman and Cunningham, 2009) has been demonstrated in prior studies of early childhood educators’ knowledge of emergent literacy. In fact, Neuman and Cunningham (2009) developed the TKA to assess preschool teachers’ knowledge of early language and literacy prior to and after completion of a language and literacy course and involvement in a coaching intervention. Additionally, the validity and reliability of the TKA has been demonstrated in the literature (Neuman & Cunningham, 2009). Content validity was established through review of the instrument by several experts in the field of early literacy (Neuman & Cunningham, 2009). In addition, the instrument demonstrated excellent overall reliability (Cronbach’s alpha = .96) in a pilot study with 302 participants (Neuman & Cunningham, 2009).

**Informal Survey of Linguistic Knowledge.** The *Informal Survey of Linguistic Knowledge* (SLK) (Moats, 1994) provided a third source of quantitative data in this study (see Appendix I). The SLK (Moats, 1994, Moats & Lyon, 1996) is a 64-item survey assessing ability in phonemic awareness and structural aspects of the English language (i.e., morphology, syllable structure, historical aspects of spelling). Example tasks include determining of the number of syllables, phonemes, and morphemes in a word, identifying phonemes, diagraphs, consonant blends, and listing spelling patterns of specific graphemes. Because the SLK (Moats, 1994) taps into an individual’s ability to perform
emergent literacy tasks (i.e., syllable blending, manipulating phonemes), the survey was selected for use in the study as a measure of participants’ emergent literacy content knowledge.

The SLK (Moats, 1994) is cited frequently throughout educational literature and has been used in various studies examining teacher knowledge (Bos, Mather, Dickson, Podhajski, & Chard, 2001; Bos, Mather, Narr, & Babur, 1999; McCutchen, Abbott, Green, Beretvas, Cox, Potter, Quiroga, & Gray, 2002; McCutchen & Berninger, 1999; McCutchen, Green, Abbot, & Sanders, 2009; McCutchen, Harry, Cunningham, Cox, Sidman, & Covill, 2002). In fact, recent studies have also adapted the instrument for use with early childhood educators (Cunningham, Perry, Stanovich, & Stanovich, 2004; Cunningham, Zibulsky, & Callahan, 2009). Thus, the SLK (Moats, 1994) was an ideal tool for this research study as it has applicability to emergent literacy instruction. In addition, the reliability of the SLK (Moats, 1994) has been demonstrated in the literature. McCutchen et al. (2002) reported internal consistency reliability coefficients ranging from .70 to .84.

Photography. Photography served as a qualitative measure in this research study. The use of photography as a qualitative data source is a relatively new form of data collection. Although photography is not frequently described in the research, its use has been promoted by researchers. For example, Creswell (2007) suggested that researchers “include new and creative data collection methods that will encourage readers and editors to examine their studies” (p. 129). Photography was selected as a data source for this study because it provides an innovative approach that captures information regarding how participants address emergent literacy in intervention sessions with preschool
children with communication disorders. Consequently, photography served to identify participants’ emergent literacy pedagogical knowledge.

Participants received instructional prompts (see Appendix J) directing them to take fifteen photographs of materials or supplies used to address emergent literacy in intervention sessions with preschool aged children with communication disorders. Participants were instructed not to include children in the photographs taken and to complete the photography assignment within one week of receiving the instructional prompts.

*Semi-structured Interview.* Semi-structured interviews served as the second form of qualitative data and were selected because interviews often supply in depth descriptions of a topic of interest (Creswell, 2007). Semi-structured interviews were conducted in an effort to identify and describe participants’ emergent literacy perceptions and to examine participants’ emergent literacy pedagogical knowledge. More specifically, interviews identified participants’ beliefs regarding what constitutes best practice in emergent literacy and their perceptions of speech-language pathologists’ involvement, competency, and constraints in provision of emergent literacy instructional practices. In addition, use of semi-structured interviews allowed the researcher to examine emergent literacy pedagogical knowledge as several interview questions prompted a discussion of how participants were providing intervention in emergent literacy.

One semi-structured interview was completed with each participant at the school in which the participant was employed. Interviews ranged in length from approximately 45 to 60 minutes. All interviews were audio/video taped. Before beginning the interview,
the researcher reviewed the purpose of the study with the participant. An interview protocol (see Appendix K) was utilized to guide the discussion in each interview. In addition to these prompts, the photographs taken by each participant were used as a conversational aide. Prior to the initiation of the semi-structured interviews, the researcher developed the photographs generated in the photography assignment and developed descriptive codes of the items photographed (further described in data analysis section). During the semi-structured interviews, the researcher asked participants to describe each picture and explain how it is used in therapy. The researcher also shared descriptive codes for each photograph with participants in the interview as a method of member checking.

Data Analysis

An inductive form of data analysis was utilized in this mixed methods research design as the researcher aimed to go from the specific to the general by collecting data without making prior assumptions, analyzing the results, and generating meaning from the findings (Holloway, 1997). As noted, five sources of data, consisting of quantitative and qualitative forms, were collected in this study. An explanation how each data source was analyzed is provided below.

Quantitative Methods

The PLBQ (Seefeldt, 2004) was analyzed by calculating each participant’s total score. Likert scale responses for each survey item were converted to numbers and added to yield a total score with the maximum total score possible was 30. As described in the literature, twelve items (i.e., items 1, 3, 5, 6, 7, 9, 11, 13, 16, 20, 21, and 26) were reverse-coded prior to calculation. In addition, mean scores for each participant were
calculated on each subscale (i.e., decoding knowledge, oral language and vocabulary, book reading, writing). Participants’ means were then averaged to obtain a grand mean across all participants on each subscale.

The TKA (Neuman & Cunningham, 2009) was analyzed by determining the total number of incorrect items and percentage correct for each participant. In addition, the average number of incorrect items and average percentage correct across participants were calculated.

The SLK (Moats, 1994) was analyzed by determining the total number of incorrect responses and overall percentage correct for each participant. Each participant’s total number of correct items and overall percentage correct were averaged to yield mean scores. In addition, the range and average of participants’ percentages of accuracy on specific items on the SLK (Moats, 1994) were reported to reflect Moats’ (1994) use of the SLK.

**Qualitative Methods**

Qualitative data sources were analyzed through use of a cyclical coding scheme and analytic memo writing (Saldaña, 2009). Both coding and analytic memos were used in this study as they represent concurrent forms of data analysis possessing a reciprocal relationship (Saldaña, 2009). While the methods for completing and examining analytic memos were held constant throughout the study, different coding schemes were used in the analysis of photography and interview data.

*Photography.* Analysis of the photography data involved a cyclical coding scheme described by Saldaña (2009) as the researcher engaged in two cycles of coding. Various types of codes, or “[words] or [phrases] that symbolically [assign] a summative,
salient, essence-capturing, and or evocative attribute for a portion of language based or visual data” (Saldaña, 2009, p. 3), were generated during analysis of photography data. Figure 3.2 depicts the analytic scheme used during the analysis of the photography data.

During the first cycle of coding, the researcher generated descriptive codes for the therapy materials depicted in the participants’ photographs. As Saldaña (2009) explains, descriptive codes are appropriate for use in studies involving a wide variety of data forms as they function to summarize the basic topic of qualitative data. For the purpose of this study, descriptive codes of photography data consisted of phrases describing the therapy material depicted in the photograph including information regarding the material’s publisher/author, physical attributes, targeted age range, and intended therapy target.

After generating descriptive codes for photographs, the researcher utilized the codes and photographs as conversational prompts during the semi-structured interviews with participants. The researcher shared the descriptive codes of the photographs with each participant to ensure accurate interpretation. In addition, during the semi-structured interviews, the researcher asked participants to describe how they used the therapy material depicted in intervention with preschool aged children.

Upon completion of the semi-structured interview, the researcher formulated process codes for each of the photographs submitted by participants. Process codes are those involving the use of “-ing” words to denote action in the data (Saldaña, 2009). As described, one of the purposes of this study was to describe speech-language pathologists’ emergent literacy pedagogical knowledge. Pedagogical knowledge was defined as an individual’s familiarity with emergent literacy instructional practices supported by the literature and understanding how to apply knowledge to practice to
provide effective emergent literacy instruction. Thus, utilization of process codes enabled the researcher to analyze the photographs and data from the semi-structured interview in a fashion that yielded information regarding how participants were providing intervention in emergent literacy. More specifically, process codes were generated to describe what intervention goal the therapy materials depicted in the photographs were used to target. Table 3.1 shows examples of descriptive and process codes used during the first cycle of coding during analysis of photography data for Participant One.

After completing the first cycle of coding described above, the researcher further analyzed the photography data in a second coding cycle. As described by Saldaña (2009), second cycle coding is completed in an effort to develop categorical or conceptual organization from the group of codes generated in the first cycle. Pattern coding, or one method of engaging in second cycle coding, was used in this study as it functioned to identify a “meta code” or category labels that identified similarly coded information (Saldaña, 2009, p. 150). In this study, two types of categories of information were produced in the second cycle of coding. The descriptive codes from the first cycle of coding were further analyzed to produce categories related to the type of material depicted in the photographs. The researcher identified these categories as “what” materials are being used to address emergent literacy. Process codes generated during the first cycle of coding were also further analyzed to produce categories related to the intervention material’s target or “how” materials are used in emergent literacy instruction. More specifically, the researcher reviewed the process codes from cycle one to identify the domains of emergent literacy (i.e., phonological awareness, written language awareness, emergent writing, oral language) the materials depicted in each
photograph were used to address. Table 3.2 depicts the categories that were developed through pattern coding used during the second cycle of coding.

Upon completion of the two cycles of coding, the researcher identified relevant themes from the photography data. According to Saldaña (2009), a theme is an “outcome of coding, categorization, and analytic reflection” (p. 13). In other words, themes reflect the meaning created from the process of coding and reflecting upon the data. One theme was generated from the photography data. The theme, “Narrow Focus of Intervention,” will be explained in more depth in chapter four of this dissertation.

**Semi-structured interviews.** Semi-structured interviews were analyzed using the constant comparative analytic scheme as the researcher interviewed a participant, transcribed the interview verbatim, analyzed the data using Colaizzi’s (1978) method (described below), and utilized the reflection to guide interviews with other participants. Interview data were analyzed using the method described by Colaizzi (1978) as the researcher read the interview transcript several times to acquire an overall understanding of the responses, identified significant phrases or sentences in the transcripts directly related to the research questions, formulated meaning from the significant statements and phrases, and clustered the formulated meanings to allow for emergence of themes across participants. Figure 3.3 depicts the analytic scheme used during analysis of the interview data.

After reading the interviews several times using Colaizzi’s method described above, the researcher engaged in a multi-cyclical coding scheme (Saldaña, 2009). Initially, the researcher developed In Vivo Codes of significant phrases or sentences expressed by the participants that directly related to the study’s research questions.
Vivo Codes, or “verbatim codes,” are codes containing words or short phrases spoken by the participants (Saldaña, 2009). In Vivo codes were selected in this study as they “prioritize and honor the participant’s voice” and often generate rich categories and themes of findings (Saldaña, 2009, p. 74).

After In Vivo Codes were developed, the researcher engaged in a second cycle of coding to further analyze the interview data in an effort to develop a “coherent synthesis of the data corpus” (Saldaña, 2009, p. 149). In this study, the researcher utilized values coding during the second cycle of coding. Saldaña (2009) defined values coding as the “application of codes onto qualitative data that reflect a participant’s values, attitudes, or beliefs…” (p. 74). Saldaña (2009) defined a “value” as the “importance [participants] attribute to oneself, another person, thing, or idea,” while associating an “attitude” as “the way [participants] think and feel about [themselves], another person, thing, or idea” (p. 89). During the second cycle of coding in this study, the researcher coded interview data as “values” regarding emergent literacy instructional practices or “attitudes” regarding service provision. More specifically, “value” codes were used to denote instructional practices and intervention goals in which participants attributed importance and “attitude” codes were used to reflect the way participants think and feel about emergent literacy service provision. Since a primary aim of this study was to identify speech-language pathologists’ perceptions of emergent literacy instructional practices and many of the secondary research questions were directly aimed at identification of participants’ values and attitudes, the use of values coding was an appropriate choice for this research study and provided a mechanism to inductively analyze interview data from the specific (i.e., participants’ words) to the more general (i.e., categories). Table 3.3 provides examples of
how participants’ In Vivo codes were further coded into categories reflecting values codes.

Next, the researcher analyzed the In Vivo codes and categories of values codes to cluster similarly coded information to create overall themes that represented the data. As noted, themes reflect the meaning created from the process of coding and reflecting upon the data. Table 3.4 depicts the eight themes generated from the interview data. A detailed explanation of each theme will be provided in chapter four of this dissertation.

Analytic memos. In addition to analysis of the interview data, qualitative data analysis included use of analytic memos. Analytic memos, or a researcher’s self-reflective questions, comments, speculations, and personal reactions, were recorded throughout phase of the research project and were compiled in an analytic journal. For example, analytic memos were recorded after initial coding of photography, after interviews with participants, and while transcribing interview data. As Saldaña (2009) explains, the purpose of writing an analytic memo is to “document and reflect on: your coding process and code choices; how the inquiry is taking shape; and the emergent patterns, categories and subcategories, themes, and concepts in your data” (p. 32). Analytic memos were recorded throughout this study as the use of memos provided a way for the researcher to critically think about and record thoughts and ideas while engaged in various phases of the research study. The analytic memos were used in the development of the themes produced from the analysis of photography and interview data and in identification of clinical implications drawn from the study’s completion. In addition, analytic memos were used for cross-referencing codes and themes to ensure trustworthiness of findings.
Quantitative and Qualitative Analysis

In addition to analysis of the quantitative and qualitative data separately, the researcher analyzed the data collectively to identify convergence of findings. In other words, the researcher compared qualitative and quantitative findings of participants’ emergent literacy perceptions and beliefs. More specifically, results from the PLBQ (Seefeldt, 2004) and semi-structured interviews were compared as both data sources examined emergent literacy perceptions. Performance on the TKA (Neuman & Cunningham, 2009) and results from the analysis of photography and semi-structured interview data were compared as all three data sources examined emergent literacy pedagogical knowledge. Finally, the researcher used cross-case comparisons to examine if participants who demonstrated more emergent literacy knowledge possessed different beliefs and values regarding emergent literacy than participants demonstrating less emergent literacy knowledge.

Verification

In order to ensure trustworthiness of findings, the researcher utilized a concurrent method of member checking (Tashakkari & Teddlie, 2003) as she corresponded with participants throughout the course of the study. In other words, the researcher completed member checking after each qualitative method was completed (i.e., photography and interviews). More specifically, after developing photographs taken by participants and generating descriptive codes, the researcher shared descriptive codes with participants during the semi-structured interviews. If participants expressed disagreement with the descriptive codes generated by the researcher or provided additional information regarding the therapy material depicted in the photograph in the semi-structured
interview, the researcher altered the descriptive codes to convey the new information from member checking. Secondly, upon completion of analysis of semi-structured interviews, the researcher provided participants with the opportunity to review the interpretation of the interviews (i.e., codes, themes) and asked participants to judge the accuracy of her analysis. Member checking of the interview analysis was facilitated through use of written correspondence in which participants received a document explaining the interpretation and were asked to assess the accuracy of the analysis by answering open ended questions.

In addition to member checking, verification was addressed through application of a comprehensive review and analysis of the literature base related to speech-language pathologists’ perceptions and knowledge of emergent literacy instructional practices, adherence to the mixed methodological design, bracketing of the researcher’s past experiences and beliefs (see below), use of an adequate sample, and interviewing until saturation of data was obtained. Additionally, analytic memos also contributed to the study’s verification as the memos recorded throughout each phase of the research project were used for cross-referencing codes and emerging themes. In addition, data were triangulated in that data from five sources (i.e., three quantitative data sources and two qualitative data sources) were included in the analysis. Finally, validation was attained as the codes and themes generated from the interviews were reviewed by a second researcher with experience in qualitative research design and knowledge of emergent literacy theory and early childhood education.
Bracketing Statement

The following bracketing statement was written prior to initiation of this study and contains a description of the researcher’s personal and professional experiences that may have impacted analysis of the research findings:

“As I study speech-language pathologists’ perceptions and understanding of emergent literacy instructional practices, I, as researcher, must acknowledge certain biases that may impact my research and interpretation of findings. First, my experience working with children with communication disorders as a speech-language pathologist has provided me with insight regarding the impact of early intervention services. I view early intervention positively as I have witnessed firsthand how carefully designed therapeutic services have resulted in positive gains for children with communication disorders. In addition, my experience as a speech-language pathologist has consisted of eight years working closely with Head Start teachers. Thus, I also possess a positive regard for educators who work collaboratively in interdisciplinary teams. My bias regarding early intervention and collaboration may impact the research process in the sense that I may establish better rapport during interviews with speech-language pathologists who share similar beliefs. My biases may also cause me to view the information from interviews with participants who share similar beliefs in a more positive manner than information from interviews with participants who do not view early intervention and collaboration favorably.

Second, my experience studying emergent literacy research over the past eight years as a doctoral student has also given me an understanding of early reading instructional techniques deemed to be evidence based practices that result in accelerated
language and literacy growth. Like my beliefs surrounding intervention, this bias may also impact the research process. My bias may cause me to establish better rapport with therapists who hold to theoretical perspectives and possess professional philosophies that are closely aligned with research findings. The bias toward evidence based literacy practices may also cause me to view the information from interviews with participants who possess similar views in a more positive way than information gained from interactions with participants who do possess similar views.

Third, my experience serving in various professional leadership roles has provided me with a unique understanding of the demands of school-based speech-language pathology. As a former chair of the Kentucky Board of Speech-Language Pathology and Audiology and current President of the Kentucky Speech-Language Hearing Association, I have encountered several situations in which school-based speech-language pathologists have expressed their concerns with varying factors that impact the provision of services in school settings (e.g., staff shortages, high caseloads, etc.). In addition, I have invested a great deal of time reading and researching the use of alternative models of service delivery. While my experience has provided me with a thorough understanding of professional issues in school-based speech-language pathology, my experience may also cause me to possess biases regarding the use of particular models of service delivery, scheduling of intervention services, and collaboration among educational stakeholders.

Last, I must acknowledge my cultural background. Being reared in the culture of Appalachia has provided me with an understanding of the cultural group in which the participants I wish to study are employed. Identifying myself as a member of the
Appalachian culture provides me with an appreciation and understanding of difference. This may also assist me in overcoming communication barriers when visiting and interacting with others during interviews conducted in participants’ places of employment. In addition, my cultural background may assist me in interacting with participants who also identify themselves as members of the Appalachian culture. However, I should note that I was reared in a home that would be considered to be “professional middle class” and was not representative of the typical Appalachian home. Thus, it is probable that participants in the study may have been reared in homes that are more representative of Appalachia as they may have faced obstacles associated being reared in impoverished homes or in homes in which their parents or caregivers possessed low levels of education. Thus, my experience and background may not lend itself as well to the situation as it would were I a typical Appalachian.”
Table 3.1

*Coding Examples for Participant One*

<table>
<thead>
<tr>
<th>Photograph</th>
<th>Descriptive Coding</th>
<th>Process Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Curriculum Aligned Thematic Phonological Awareness Treatment</em>; Floyd &amp; Yates (2001); Resource manual providing phonological awareness activities based using a thematic approach using children’s literature</td>
<td>Targeting rhyming; Targeting alliteration awareness; Targeting syllable blending</td>
</tr>
<tr>
<td>2</td>
<td>A, B, C picture cards; Depicts upper and lower case letter; Contains a picture that contains the sound produced by the letter depicted</td>
<td>Targeting sound-letter correspondence; Targeting speech sound production</td>
</tr>
<tr>
<td>9</td>
<td><em>There was an old lady who swallowed a fly</em>; Taback (2009); Repetitive pattern book with rhyme; Main character swallows several animals and insect</td>
<td>Targeting vocabulary; Targeting sequencing; Targeting rhyming</td>
</tr>
</tbody>
</table>
Table 3.2

*Categories in Photography Data Analysis*

<table>
<thead>
<tr>
<th>“What” Materials are being used in Emergent Literacy Instruction</th>
<th>“How” Materials are Used in Emergent Literacy Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alphabet Cards</td>
<td>Phonological Awareness</td>
</tr>
<tr>
<td>Books</td>
<td>Written Language Awareness</td>
</tr>
<tr>
<td>Compact Discs</td>
<td>Emergent Writing</td>
</tr>
<tr>
<td>Flash Cards</td>
<td>Oral Language</td>
</tr>
<tr>
<td>Games</td>
<td></td>
</tr>
<tr>
<td>Resource Manuals</td>
<td></td>
</tr>
<tr>
<td>Technology/Interactive Software</td>
<td></td>
</tr>
<tr>
<td>Workbooks</td>
<td></td>
</tr>
</tbody>
</table>
### Table 3.3

*Coding Examples for Interview Data*

<table>
<thead>
<tr>
<th>Participant</th>
<th>In Vivo Codes</th>
<th>Categories Reflecting Value Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>“I think it is something I just kind of developed on my own”</td>
<td>Attitude</td>
</tr>
<tr>
<td>2</td>
<td>“The more you read to them orally the better their chances are for reading early or being more successful”</td>
<td>Value</td>
</tr>
<tr>
<td>3</td>
<td>“I think we should be very involved because we have the language development background to support early literacy in preschool.”</td>
<td>Attitude</td>
</tr>
<tr>
<td>4</td>
<td>“I think reading can either make or break a child”</td>
<td>Value</td>
</tr>
</tbody>
</table>


Table 3.4

*Themes from Interview Data*

<table>
<thead>
<tr>
<th>Themes</th>
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<tbody>
<tr>
<td>- Value of Emergent Literacy and Emergent Literacy Instructional Practices</td>
</tr>
<tr>
<td>- Accurate but Narrow Understanding</td>
</tr>
<tr>
<td>- Uncertainty of Expertise in Emergent Literacy</td>
</tr>
<tr>
<td>- Development of Emergent Literacy Knowledge after Graduate Training</td>
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<tr>
<td>- Indirectly Addressing Emergent Literacy</td>
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<tr>
<td>- Stretched Too Thin for Involvement in Literacy</td>
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<tr>
<td>- Varied Perspectives of Scope of Practice</td>
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<td>- Lack of Ownership</td>
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</tbody>
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Figure 3.1

Visual Model of Research Study

**Quantitative Data Collection**
- Identified emergent literacy perceptions through *Preschool Literacy Beliefs Questionnaire* (Seefeldt, 2004)
- Measured emergent literacy pedagogical knowledge through *Teacher Knowledge Assessment of Early Language and Literacy Development* (Neuman & Cunningham, 2009)
- Measured emergent literacy content knowledge through *Informal Survey of Linguistic Knowledge* (Moats, 1994).

**Qualitative Data Collection**
- Examined emergent literacy pedagogical knowledge through photography assignment
- Identified emergent literacy perceptions and examined emergent literacy pedagogical knowledge through semi-structured interviews

**Quantitative Data Analysis**

**Qualitative Data Analysis**

**Integration and Interpretation of Data**
Figure 3.2

Analytic Scheme for Photography Data
Figure 3.3

*Analytic Scheme for Interview Data*

<table>
<thead>
<tr>
<th>In Vivo Codes from Participant 1</th>
<th>Category</th>
<th>Themes</th>
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</thead>
<tbody>
<tr>
<td>In Vivo Codes from Participant 2</td>
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<td></td>
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<tr>
<td>In Vivo Codes from Participant 3</td>
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<td>In Vivo Codes from Participant 4</td>
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<td>In Vivo Codes from Participant 5</td>
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CHAPTER FOUR: RESULTS

The purpose of this study was to describe speech-language pathologists’ perceptions and knowledge of emergent literacy instructional practices. This chapter begins with a description of the study’s participants, including information regarding the participants’ work conditions and practice patterns. As outlined in chapter three, this study utilized a concurrent triangulation mixed methods design in which quantitative and qualitative data were initially analyzed separately. To reflect the use of the concurrent triangulation design, this chapter presents findings from both data sources independently. In other words, this chapter will be organized by first presenting results from the quantitative data and then presenting results from the qualitative data. Next, the findings from both quantitative and qualitative measures will be compared to answer the study’s research questions. Finally, the chapter will conclude by presenting the results of the measures of verification.

Participants

Participant Description

Five speech-language pathologists working in an educational setting in an Appalachian region in a southeastern state served as participants. All participants had earned a Master’s Degree in Communication Disorders and possessed or were eligible to possess the Certificate of Clinical Competence in speech-language pathology. In addition, all five participants were actively providing intervention services in an educational setting to children with communication disorders. At least 20 percent of each participant’s caseload included preschool aged children with communication disorders. Participants’ years of experience working as a speech-language pathologist ranged from
less than one year to 18 years. Participants possessed varying years of experience working with preschool aged children, with some participants working with preschoolers throughout their entire professional career and some participants possessing fewer years of experience working with preschoolers than other populations of clients. All five participants were female and spoke English as their native language. Table 4.1 depicts the demographic characteristics for each participant.

**Work Condition and Practice Pattern Description**

Table 4.2 depicts information regarding the work conditions and practice patterns reported by each participant. Participants’ caseloads ranged from 55 to 84 children with communication disorders, with a mean across participants of 66. One participant reported supervision of a speech-language pathology assistant (SLPA). Consequently, the participant’s caseload total reflected the joint caseload of the participant and the SLPA to parallel the method of describing caseload reflected in state licensure law. The percentage of participants’ caseloads that included preschool aged children ranged from 20 to 33 percent. In their current position, participants reported serving between two and seven schools. All participants reported use of a pull-out model of service delivery, while one participant reported use of classroom based therapy and three participants reported utilization of an indirect therapeutic model. All participants reported providing group and individual therapy sessions to children on their caseload.

**Quantitative Findings**

**Preschool Literacy Beliefs Questionnaire (Seefeldt, 2004)**

The Preschool Literacy Beliefs Questionnaire (PLBQ) (Seefeldt, 2004), a 30 item questionnaire using a Likert scale to report participants’ levels of agreement with
statements regarding emergent literacy instructional practices, was administered to all participants during the data collection phase of the study. As described in chapter three, the PLBQ (Seefeldt, 2004) possesses a total possible score of 150. Higher scores on the PLBQ (Seefeldt, 2004) are thought to represent beliefs aligned with evidenced based practices in emergent literacy, while lower scores are associated with endorsement of less effective instructional strategies (Hindman & Wasik, 2008). In this study, the PLBQ (Seefeldt, 2004) provided information about participants’ emergent literacy perceptions.

Table 4.3 depicts the participants’ overall total score on the PLBQ (Seefeldt, 2004). As indicated in the table, scores on the PLBQ (Seefeldt, 2004) ranged from 117 to 132. The average score on the PLBQ (Seefeldt, 2004) across participants was 121. In addition to overall score, participants’ performance on varying subscales on the PLBQ (Seefeldt, 2004) was also analyzed. Table 4.4 depicts participants’ scores on the decoding-related knowledge, oral language and vocabulary, book reading, and writing subscales of the PLBQ (Seefeldt, 2004). Examination of the means scores on the subscales indicated that participants agreed (i.e., had mean scores equal to or greater than four) with best practices in oral language and book reading, and nearly agreed with best practices in writing (mean=3.9). However, mean scores for decoding knowledge indicated a weak degree of agreement (mean=3.4).

**Teacher Knowledge Assessment of Early Language and Literacy Development**

*(Neuman & Cunningham, 2009)*

All participants completed the *Teacher Knowledge Assessment of Early Language and Literacy Development* [TKA] (Neuman & Cunningham, 2009) during the data collection phase of the research study. As described in chapter three, the TKA (Neuman
& Cunningham, 2009) is a 70 item assessment measuring an individual’s pedagogical knowledge of emergent literacy.

As indicated in Table 4.5, participants correctly responded to a range of 39 to 53 items on the TKA (Neuman & Cunningham, 2009), with a mean number of correct items of 45. With respect to the percentage correct on the TKA (Neuman & Cunningham, 2009), participants scores ranged from 55.7 correct to 75.7% correct. Across participants, the mean percentage correct was 64.3%.

**Informal Survey of Linguistic Knowledge (Moats, 1994)**

All participants completed the Informal Survey of Linguistic Knowledge [SLK] (Moats, 1994) during the data collection phase of the study. As described in chapter three, the SLK (Moats, 1994) is a 64-item survey assessing ability in phonemic awareness and structural aspects of the English language (i.e., morphology, syllable structure, historical aspects of spelling). In this study, the SLK (Moats, 1994) served as a measure of participants’ emergent literacy content knowledge.

Table 4.6 and 4.7 depict results from participants’ completion of the SLK (Moats, 1994). As depicted, participants correctly answered a range from 19 to 46 items. The mean number of correct items across participants was 32.8. In addition, participants’ percentage of items correct ranged from 29.9 to 71.9%. Across participants, the average percentage of items correct was 51.3%. Table 4.6 portrays participants’ range and mean percentage of accuracy on selected tasks on the SLK (Moats, 1994). Table 4.7 depicts the percentage of participants successful on selected tasks on the SLK (Moats, 1994).
Qualitative Findings

Photography

Upon completion of the two cycles of coding described in chapter three, one theme, “Narrow Focus of Intervention,” was generated from the process of coding and reflecting upon the data.

*Photography Theme One: “Narrow Focus of Intervention.”* Analysis of photography data indicated that participants appeared to maintain a narrow focus of emergent literacy instruction. In other words, the materials photographed by participants appeared to primarily focus on phonological awareness and oral language. While participants included some photographs of materials used to address written language awareness (i.e., flash cards of letters, books, phonics games), the large majority of photographs depicted materials focused on the emergent literacy domains of phonological awareness and oral language. For example, most of the photographs were categorized as “resource manuals” and all but one of the resource manuals photographed were aimed at phonological awareness, oral language, or speech sound production. Similarly, all but one of the games photographed by participants focused on phonological awareness. In addition, while participants included photographs of books, many of their descriptions of how books were used in therapy indicated they were used to target skills like rhyming, sequencing, speech sound production, or vocabulary, rather than written language awareness tasks. Finally, inspection of the descriptive and process codes also revealed that participants did not photograph or describe use of a material to address the emergent literacy domain of emergent writing.
**Semi-structured Interviews**

Upon completion of the two cycles of coding described in chapter three, eight themes (see Table 4.9) were generated from the process of coding and reflecting upon the semi-structured interview data.

**Interview Theme One: “Value of Emergent Literacy and Emergent Literacy Instructional Practices.”** Analysis of the semi-structured interview data indicated that participants appeared to value emergent literacy. Participants’ appreciation of emergent literacy was evidenced through statements like “I think reading... can either make or break a day for a child, in my opinion” and “The earlier you start the better.”

Not only did participants esteem emergent literacy, but participants also appeared to value varied instructional practices and intervention formats to promote acquisition of emergent literacy skills. For example, Participant Four appeared to value instruction that focused on “the individual needs of the students... [and] age appropriateness,” while Participant Three endorsed application of evidence based practice in her statement, “I think [best practice in emergent literacy is] just using a combination of appropriate materials and activities to support and foster the emergent literacy and based on the research and the best practices the other people recommend.” Participant Five endorsed joint book reading in her statement, “I think the more you read to them orally, the better their chances are, you know, for reading early or being more successful with that.”

Similarly, Participant One appeared to value joint book reading and instruction in book conventions and vocabulary in her comment that best practice entails, “reading a lot...talking about the books and the parts of a book...and then, just talking about the meanings of the words.” In addition, participants also reported valuing the instructional
technique of modeling, direct instruction, active participation, and use of language and literacy rich environments. Finally, analysis of the categories of values codes in the second cycle of coding of semi-structured interview data also indicated that participants also valued varied types of intervention formats including group instruction, small group instruction, and individual instruction.

Semi-structured interview data analysis also indicated that participants valued numerous emergent literacy skills and abilities. This was evidenced through participants’ identification of skills and abilities they perceived as being important for preschool children to acquire. For example, Participant One valued print knowledge in her response that “understand[ing] that the words have meaning” is an important skill for preschoolers to acquire. Participant Four valued pragmatics and receptive language in her statement, “I think social interaction and you know, receptive language skills, understanding, comprehension” are the most important skills for preschoolers to acquire before they come to kindergarten. Participant Four emphasized the alphabetic principle in her statement that “to understand that letters are, you know, words and then the language… I guess that what is written reflects what is said” is important during in the preschool years. In addition to value of rhyming, blending, sound identification, print knowledge, pragmatics, and receptive language, participants also reported valuing conceptual development, articulation, book handling skills, alphabet knowledge, school readiness, grapheme-phoneme correspondence, auditory comprehension, vocabulary, and storytelling abilities.

*Interview Theme Two: “Accurate but Narrow Understanding.”* Analysis of semi-structured interview data indicated that participants demonstrated an understanding of
how to facilitate emergent literacy growth in preschool aged children. In answering various questions aimed at identification of how participants were designing and providing intervention services (e.g., “Describe how you read books to preschool aged children” or “How do you address emergent literacy in intervention sessions with preschool aged children?”), participants described use of emergent literacy instructional practices supported by findings of research. For example, in describing how she addressed emergent literacy in intervention sessions with preschool aged children, Participant One responded:

Well, I always read a story…we talk about the author and the illustrator and what their jobs are and what the book is about and then we name vocabulary items and then we usually do some kind of art activity with the main theme of the book.

Similarly, in her description of a therapy material photographed, Participant Two discussed why she liked a particular book by stating:

And, so I really like to use this with the younger kids, just I like to get them in the habit of actually turning the pages of a book. It’s also good at teaching them to track from left to right with their fingers, as I read the sentences to them.

Likewise, Participant Three demonstrated her knowledge of phonological awareness in her statement:

Every therapy session I try to do some activities that involve rhyming, beginning sounds, ending sounds, blending. I try to incorporate all those areas that are important for phonological and phonemic awareness into every session.

Participants’ responses indicated that they possessed knowledge of how to facilitate emergent literacy development. However, participants seemed to possess a
narrow view of emergent literacy. For example, participants appeared to place more emphasis upon spoken language (i.e., speaking and listening) than written language (i.e., reading and writing). This was evidenced through Participant Three’s comment, “I think the sounds are more important than the letter.” In addition, analysis of the values codes indicated that a large majority of the instructional techniques and skills endorsed by participants focused primarily on oral language and phonological awareness. In fact, only one participant mentioned the emergent literacy domain of writing during the interview. Additionally, when asked to describe the most important skills preschoolers should acquire before entering kindergarten or when asked what they would photograph if they were aimed at capturing the most important things taking place in a preschool classroom with respect to emergent literacy, none of the participants identified writing instruction or practice. Rather, participants seemed to focus on book reading, oral language, phonological awareness, and social interaction.

A second way in which participants seemed to possess a narrow view of emergent literacy was evidenced in participants’ endorsement of a limited number of phonological awareness and written language awareness tasks. While participants did seem to value the domains of phonological awareness and written language awareness, they did not report targeting several skills within the domain in their intervention sessions with preschoolers. With respect to phonological awareness, the large majority of participants reported targeting the skills of rhyming, sound identification, and blending. Participants did not report targeting other phonological awareness skills like segmenting, alliteration awareness, elision, or phoneme manipulation and also did not report targeting varying levels of phonological awareness (i.e., word awareness, onset-rime awareness).
With respect to written language awareness, only three participants reported endorsement of varied written language awareness skills. In other words, Participant One, Two, and Four’s responses throughout the interview indicated they appeared to value print form skills (i.e., sound-letter correspondence, letter identification), print convention skills (i.e., reading from left to write), and book convention skills (i.e., role of author and illustrator, book handling). However, the remaining two participants seemed to primarily focus on the print form skills of letter identification and sound-letter correspondence in their responses to semi-structured interview questions.

In summary, analysis of data from the interviews across participants indicated that participants possessed accurate emergent literacy knowledge in that they could identify and describe ways to facilitate growth in emergent literacy. However, analysis also indicated participants’ knowledge was narrow as they seemed to maintain a focus on a limited number of emergent literacy domains and skills.

*Interview Theme Three: “Uncertainty of Expertise in Emergent Literacy.”*

Analysis of the interview data revealed participants felt unsure of their understanding of emergent literacy. In fact, when asked to describe their perceptions regarding their competency in emergent literacy, all five participants reported feeling incompetent and unqualified. For example, Participant One reported feeling “not very competent,” while Participant Five stated, “I don’t feel too very confident... I guess because I still don’t know what my role would be there...and what my outcome needs to be I guess at this point.” Similarly, Participant Two expressed uncertainty in her statement, “I personally don’t feel qualified to teach children, from scratch...how to read... I don’t feel confident in my ability to do that... I don’t feel like I was, you know, I went to school to do that.”
Participant One also expressed doubts regarding her ability to provide emergent literacy instruction as she stated:

I have a hard time embracing the literacy with the little ones, I just…think it’s really hard…with that age…I can do more with my older students in the elementary…but I just have a really hard time with the little ones in literacy.

Likewise, Participant Two declared:

With the preschoolers, [I am] probably not competent at all. I feel like I can provide a rich literacy environment, but actually sitting down and teaching them everything that they need to know to learn how to begin reading, I don’t feel very competent myself, doing something like that at this point.

Participants’ uncertainty of expertise was also evidenced through statements regarding their performance on quantitative measures. For example, Participant Three expressed, “There are certain parts of it, I feel like I did really well on. There are others that I felt that I might not have done so well.” Similarly, Participant Four claimed, “I did not do well…some of it you know, I just don’t use. I don’t use it, so I didn’t remember it. Some of it I just don’t have any knowledge of.” Likewise, Participant Five asserted:

I think maybe the syllable, counting the syllables, I may have did…yeah I probably did OK on those, but the other, no…I think the majority of it was just so long ago, but there were a few things on there I …couldn’t recall… or maybe… I just didn’t [receive training on it].

*Interview Theme Four: “Development of Emergent Literacy Knowledge after Graduate Training.”* Analysis of data from semi-structured interviews revealed that participants reported developing their knowledge of emergent literacy after completion of
their Master’s Degree in Communication Disorders. Participants did not attribute their understanding of emergent literacy to formal training in speech-language pathology, but rather reported emergent literacy understanding as, in the words of Participant Three, “something I just kind of developed on my own.”

Interview data across participants also indicated that understanding of emergent literacy resulted from several factors. For example, several participants attributed acquisition of their emergent literacy knowledge to attendance at professional development. Participant One stated she acquired her understanding of emergent literacy “just from continuing ed.” Participant Five’s comment that she acquired her understanding of emergent literacy “…just from working in the schools and then being exposed to all of that and from the working with…and collaborating with the teachers…” and Participant Two’s claim that she “didn’t understand it… until [she] actually came here and started doing it” point to work experience and collaboration with other educators as contributors to growth in emergent literacy understanding. In addition to professional development, collaboration, and work experience, reading ASHA’s policy documents was also identified as a method in which participants gained knowledge of emergent literacy. Participant Four stated that she acquired emergent literacy understanding from “professional development…and just hands on experiences, reading the ASHA information about literacy and the SLP’s role.” Participant Three summarized the influence of several factors in her development of emergent literacy understanding as she stated,

I know that I did get a foundation, you know, knowledge of it, language development and literacy development, but not specific… more so, it has come
from trainings and different things that I’ve been to since undergraduate and graduate school...things that I’ve learned along the way. And actually, just in practice in and of itself.

*Interview Theme Five: “Indirectly Addressing Emergent Literacy.”* Interview data analysis also indicated that several participants appeared to “indirectly” address emergent literacy in intervention sessions with preschool children by embedding emergent literacy instruction into intervention plans. In descriptions of their practice patterns, participants reported maintaining a primary focus on speech sound production, language, voice, fluency, and hearing, but also placing effort to provide embedded instruction in emergent literacy. For example, Participant Two described a method of using picture stimuli aimed at articulation to provide speech sound production practice and embedded emergent literacy instruction:

> And I really like these [articulation] cards, because it works on the initial position of a sound in a word, the final position, and the medial position. But, another thing I like to do with it is if a child is working on the ‘F’ sound for example, it has a word printed at the bottom of the card and say this is a card, I can turn it upside down and read ‘fire, fire.’ So, they’re watching me track the print and that’s helping them with the letter-sound recognition, as well as working on their ‘F’ sound.

Similarly, Participant One described embedding rhyming into an intervention activity focused on auditory comprehension by providing one and two step directions that contain rhyming words. Participant One also spoke of having children with speech sound production disorders make “books” that contain speech sound targets and rhyming words.
Participant Two summarized the notion of embedding emergent literacy instruction as she stated, “Well, the way I see it…one activity can be used in multiple ways…They’re working on speech, but try to add some reading in there...”

*Interview Theme Six: “Stretched Too Thin for Involvement in Literacy.”* Analysis of interview data identified the presence of several perceived constraints to involvement in emergent literacy and implementation of best practice in emergent literacy. Comments like, “I just think there’s so much to cover and like, in such little time” and “I mean, it’s hard to become proficient in all areas” suggest that time constraints and a diverse scope of practice may serve as constraints to involvement in emergent literacy. Participant Five spoke to the constraint of a high caseload when she stated, “Yeah I do think though, if we had some you know reduction in those, you know, in times and…caseloads…you know we could be much more utilized I think...”

Participant One indicated that her graduate training did not prepare her for involvement in emergent literacy. Similarly, Participant Four commented, “Maybe if I had had some training in teaching literacy…you know, teaching those kinds of things [I’d feel more qualified],” and, “I think we have the knowledge, it’s just it seems like we’re not sure how to use it.”

These statements illustrate how a lack of training and understanding in emergent literacy may prohibit implementation of best practice in emergent literacy. In addition to a diverse scope of practice, time constraints, high caseloads, lack of training, and decreased knowledge, participants also identified scheduling constraints, paperwork requirements, and involvement in educational initiatives (e.g., Response to Intervention) as constraints to involvement in emergent literacy.
Interview Theme Seven: “Varied Perspectives of Scope of Practice.” Analysis of interview data indicated the presence of varied perspectives regarding speech-language pathologists’ scope of practice and involvement in emergent literacy service provision. A range of perspectives was reported with some participants feeling strongly that speech-language pathologists possess clear roles in emergent literacy instruction, some participants believing speech-language pathologists should function in a consultative role, and some participants expressing uncertainty whether speech-language pathologists should assume any level of involvement. For example, Participant Three claimed, “I think we should be very involved, because we have the language development background to support early literacy in preschool children.” However, Participant Two stated the speech-language pathologists’ role should include “some consultation…friendly advice” as she did not feel a speech-language pathologist’s “role is actually to teach any children how to read.” Similarly, Participant One claimed, “I think [we] can aid in literacy development, in certain aspects of it” and Participant Five stated, “You know as of right now, I guess you know based on my training, I think we are more of a resource.” Participants also expressed uncertainty regarding how speech-language pathologists should be involved in emergent literacy service provision through comments like:

Is it our role to go in there and to you know provide like a weekly kind of session to the whole class to help to teach them some strategies and resources or is it just our role to address the children who have communication disorders? So I don’t know. That is a good question! I don’t know.
Similarly, participants’ uncertainty regarding involvement in emergent literacy was evidenced in statements like:

I think we have a lot of base knowledge about some activities and strategies, but you know where we go into how much time would we set aside for things like that, I don’t know… That’s a good question. I’m not sure.

*Interview Theme Eight: “Lack of Ownership.”* Finally, analysis of interview data revealed participants appeared to possess little ownership of emergent literacy as an area of expertise. Participants’ lack of ownership of emergent literacy was demonstrated in statements describing what participants’ viewed as their primary goal as a speech-language pathologist working with preschool children. Participants’ conceptualizations of their primary goals ranged from objectives directed related to facilitation of communication skills to more overall goals aimed at helping children attain school success. For example, Participant Five described her primary goal as a speech-language pathologist as identifying “if a child has any language or articulation needs and to intervene as early as possible to…help them be more successful in school.” Participant One claimed, “To increase their vocabulary development, I think is my main goal… and then increase intelligibility with kids that are really impaired phonologically.” Similarly, Participant Two described her goal in the following statement:

My goal is for…them to be able to communicate clearly to people who have never seen them before in their lives and to go into that classroom feeling confident enough in their own skills to be able to approach anyone and just talk to them, or tackle anything that the teacher lays down in front of them… I want them to be confident, but also want others around them to understand them.
On the other hand, Participant Three stated that her goal as a speech-language pathologist working with preschool children was “to help prepare [preschoolers] for kindergarten…just to give them the foundation they need.” Similarly, Participant Four stated, “I hope to help them improve their kindergarten, elementary experiences…you know, I want them to be able to be successful.” The fact that none of the participants specifically identified development of emergent literacy as a primary goal for intervention indicates that participants may not view emergent literacy as a significant component of their intervention with preschool students with communication disorders.

The lack of ownership of emergent literacy as an area of expertise or scope of practice was also demonstrated in participants’ responses to interview questions regarding perceived constraints to involvement in emergent literacy. For example, after describing numerous barriers, Participant One and Five were asked if their role in emergent literacy would change if all of the constraints were removed. Both participants responded that speech-language pathologists should still serve “as a resource.”

**Research Questions**

*Primary Research Question One*

What are speech-language pathologists’ perceptions of emergent literacy instructional practices?

As described, emergent literacy perceptions were defined as an individual’s attitudes, opinions, values, and ways of thinking regarding emergent literacy service provision. In addition, the conceptualization of emergent literacy perceptions also included an individual’s opinions regarding the characteristics of effective emergent literacy instruction, including who should provide emergent literacy instruction and what
skills should be targeted in education settings. Finally, emergent literacy perceptions included an individual’s attitudes regarding his or her competency in providing emergent literacy instruction and opinions regarding constraints to implementation of best practice in emergent literacy instruction. Collectively, secondary questions 1.1, 1.2, 1.3, 1.4, and 1.5 provide a description of participants’ emergent literacy perceptions. Each question will be answered separately below.

**Research Question 1.1**

How do speech-language pathologists perceive their competency in emergent literacy?

Results from qualitative measures in the study revealed that participants did not perceive themselves as possessing a great deal of competency in emergent literacy. More specifically, the theme of “Uncertainty of Expertise” discovered in analysis of semi-structured interview data revealed all five participants reported feeling unqualified and unsure of their abilities in emergent literacy service provision. In addition, results also indicated that participants reported acquiring their knowledge of emergent literacy instruction after completion of their graduate training. Participants reported their understanding of emergent literacy resulted from several factors, including professional development, work experience, collaboration with other educators, and familiarity with ASHA policy documents.

**Research Question 1.2**

How do speech-language pathologists define their ideal role in provision of emergent literacy instruction?
Results from the semi-structured interviews (i.e., “Varied Perspectives of Scope of Practice” theme) revealed the presence of varied perceptions regarding how and if speech-language pathologists should be involved in emergent literacy. A range of opinions regarding speech-language pathologists’ ideal role in emergent literacy service provision was reported with some participants feeling strongly that speech-language pathologists possess clear roles in emergent literacy instruction, some participants believing speech-language pathologists should function in a consultative role, and some participants expressing uncertainty regarding whether or not speech-language pathologists should assume any role in involvement.

**Research Question 1.3**

What skills do speech-language pathologists believe children must acquire in preschool in order to find success when entering school?

Results from semi structured interviews (i.e., “Value of Emergent Literacy and Emergent Literacy Instructional Practices” theme) indicated that participants believed children must acquire skills across several developmental domains in order to find success when entering school. Findings also revealed participants highly regarded emergent literacy skills as the large majority of the skills deemed as necessary for preschoolers to acquire fell within the domains of written language awareness, phonological awareness, and oral language. Study results indicated participants identified phonological awareness skills (i.e., rhyming, blending, sound identification), oral language awareness skills (i.e., print knowledge, book handling skills, grapheme-phoneme correspondence), and oral language skills (i.e., vocabulary, storytelling ability, auditory comprehension, conceptual development, speech sound production, pragmatics)
as important for preschoolers to acquire. Despite the value placed upon skills within the emergent literacy domains of oral language, phonological awareness, and written language awareness, results also indicated that skills within the emergent literacy domain of emergent writing were not identified by participants. In summary, results of the study indicated participants believe preschool children’s success in elementary school is influenced by skills in the majority of the domains of emergent literacy.

Research Question 1.4

What do speech-language pathologists identify as best practices in emergent literacy?

Results from quantitative and qualitative measures functioned to answer research question 1.4. More specifically, scores on the PLBQ (Seefeldt, 2004) and results from the semi-structured interviews provided a description of participants’ perceptions regarding best practices in emergent literacy. As noted, mean scores on the subscales of the PLBQ (Seefeldt, 2004) indicated that participants agreed with practices supported by the evidence in oral language and book reading, and nearly agreed with best practices in writing. Results also indicated participants possessed a weak level of agreement for best practices in decoding. Semi-structured interview data demonstrated that participants conceptualized best practice in emergent literacy as the integration of varied instructional practices and types of teaching. Data analysis revealed participants advocated for use of instructional techniques that are age appropriate, differentiated to meet children’s individual needs, and based upon the findings of research. In addition, participants believed best practice in emergent literacy entails active participation, opportunities for teacher/child communicative interactions, and use of book reading and language and
literacy rich environments. Results also indicated participants conceived best practice in emergent literacy to include various types of instruction including modeling, question asking, direct instruction, group instruction, small group instruction, and individual instruction. In summary, study results confirmed that participants’ conceptualizations of best practice in emergent literacy were multifaceted as multiple techniques and types of instruction are needed to facilitate emergent literacy growth in preschool aged children.

**Research Question 1.5**

What do speech-language pathologists identify as constraints to providing evidence based practice in emergent literacy?

Study results from qualitative measures indicated participants perceived several constraints that prohibited their ability to adopt their ideal role in emergent literacy service provision. Semi-structured interview findings (i.e., “Stretched Too Thin for Involvement in Literacy” theme) suggested that participants perceive time constraints, scheduling constraints, the presence of a diverse scope of practice, high caseloads, paperwork requirements, involvement in educational initiatives (e.g., Response to Intervention), lack of training, and decreased knowledge as barriers that interfere with their ability to assume their ideal role in emergent literacy service provision.

**Primary Research Question Two**

What is speech-language pathologists’ knowledge of emergent literacy instructional practices?

As described, emergent literacy knowledge was conceptualized as consisting of two components: content and pedagogical knowledge. Emergent literacy content knowledge was defined as an individual’s ability to complete a specific emergent literacy
skill, while emergent literacy pedagogical knowledge was described as an individual’s familiarity of emergent literacy instructional practices supported by the literature and understanding of how to provide effective emergent literacy instruction.

Integration of the quantitative and qualitative data functioned to answer the second primary research question. Participants’ performance on the TKA (Neuman & Cunningham, 2009) and findings from both qualitative measures (i.e., photography, semi-structured interview) provided insight regarding participants’ emergent literacy pedagogical knowledge, while performance on the SLK (Moats, 1994) provided information regarding participants’ emergent literacy content knowledge.

With respect to pedagogical knowledge, results indicated participants did not possess extensive knowledge across all domains of emergent literacy. This finding was demonstrated through analysis of quantitative and qualitative data. With respect to quantitative data, the finding was evidenced through participants’ performance on the TKA (Neuman & Cunningham, 2009). As discussed, the average number of correct items across participants on the TKA (Neuman & Cunningham, 2009) was 45, with a mean percentage of accuracy of 64.3%.

With respect to qualitative data, the lack of extensive knowledge across all domains of emergent literacy was evidenced in participants’ photographs and responses during semi-structured interviews. As outlined in chapter three, photographs served as a measure of pedagogical knowledge as participants applied their understanding of emergent literacy to select materials to photograph. In addition, participants’ descriptions of how they used the materials photographed in the semi-structured interviews also indicated their application of emergent literacy knowledge. The theme of “Narrow Focus
of Intervention” that emerged from analysis of the photographs indicated that participants maintained a focus on oral language and phonological awareness in intervention sessions. In addition, results indicated participants did not photograph or describe use of instructional materials to target emergent writing. Thus, while photographs revealed participants possessed pedagogical knowledge of the emergent literacy domains of oral language and phonological awareness, analysis did not indicate as extensive familiarity of instructional practices to facilitate growth in the emergent literacy domains of written language awareness or emergent writing.

Analysis of semi-structured interview data also demonstrated a lack of pedagogical knowledge across all domains of emergent literacy. More specifically, the theme of “Accurate but Narrow Understanding” that emerged from analysis supported this finding. As described, participants demonstrated emergent literacy pedagogical knowledge in their responses to interview questions. In fact, responses indicated participants possessed understanding of how to facilitate growth in oral language, phonological awareness, and oral language awareness as several instructional techniques were identified and described. However, analysis of findings revealed an emphasis on oral language and phonological awareness. Additionally, only one participant mentioned instruction in emergent writing. Responses also demonstrated narrow pedagogical knowledge as participants’ endorsed a limited number of phonological awareness and written language awareness skills. In fact, the large majority of the phonological awareness skills endorsed by participants reflected only shallow levels of awareness as described by Justice et al. (2009). Consequently, like the findings from photography, results from
semi-structured interviews also indicated a lack of extensive emergent literacy pedagogical knowledge.

With respect to content knowledge, participants seemed to possess strength in the area of phonological awareness and specifically in determining the number of syllables in words. Close inspection of participants’ scores on the SLK (Moats, 1994) reveals that four of five participants appeared to possess skill in the area of syllable awareness. Four of five participants demonstrated the ability to identify the number of syllables in words with 80% accuracy with two of four participants demonstrating 100% accuracy. However, as a group, participants’ phonological awareness abilities seemed to reflect shallow levels of awareness as described by Justice and colleagues (2009) as only two of five participants demonstrated ability to identify the number of phonemes in words with at least 80% accuracy and one of five participants demonstrated ability to identify the third phoneme in words with at least 80% accuracy.

In addition, participants’ performance on the SLK (Moats, 1994) indicated the morphology and orthography served as areas of weakness for participants. In other words, participants appeared to possess low levels of content knowledge related to morphology and spelling. None of the participants demonstrated ability to identify an inflection and inflected word form with at least 80% accuracy or demonstrated the ability to identify the number of morphemes in words with at least 80% accuracy. In addition, only one participant demonstrated ability to identify consonant digraphs or identify schwa vowels in written words with at least 80% accuracy. Likewise, only two of five participants were able to identify consonant blends with at least 80% accuracy. Two of five participants could explain when “ck” is used in spelling and only one participant
correctly identified three letters that signal that the letter “g” is pronounced /ʤ/. Furthermore, none of the participants were able to identify six ways to spell long “a” or identify six syllable types in English.

Overall, the participants’ scores on the SLK (Moat, 1994) indicated that participants did not possess a great deal of emergent literacy content knowledge. While areas of strength were noted in skills requiring shallow levels of phonological awareness, participants’ scores on the SLK (Moats, 1994) did not indicate participants, as a group, possessed high levels of knowledge as the average percentage of items correct across participants was 51.3%. While a wide range of scores was observed (i.e., from 29.9 to 71.9%), participants’ performance on the SLK (Moats, 1994) did not seem to demonstrate “expert” knowledge or in depth understanding of the concepts assessed.

In summary, results indicated participants possessed varying degrees of content and pedagogical emergent literacy knowledge. Strengths in pedagogical knowledge in the areas of oral language and phonological awareness were identified. Additionally, strengths in content knowledge in syllable awareness were noted, while writing, orthography, and morphology were identified as areas of weakness.

Research Question 2.1

What is the range of emergent literacy knowledge that speech-language pathologists possess?

Results of the study indicated that participants possessed varying types of emergent literacy knowledge, including pedagogical and content knowledge. As described, integration of quantitative and qualitative data confirmed that participants possessed pedagogical knowledge of how to provide instruction in emergent literacy.
This was evidenced through participants’ descriptions of practice patterns, photographs of intervention materials, and explanations of how the photographed materials were used. With respect to emergent literacy content knowledge, analysis of quantitative findings revealed that as a group, participants seemed to possess strengths in understanding of certain aspects of phonology, but demonstrated weaknesses related to knowledge of English orthography and morphology.

Results also indicated that participants exhibited varying degrees of emergent literacy knowledge. This was evidenced by the range of scores on quantitative measures. For example, participants’ scores on the TKA (Neuman & Cunningham, 2009) ranged from 55.7 to 75.7% correct. The largest range of scores was observed on the SLK (Moats, 1994) as scores on the SLK (Moats, 1994) ranged from 29.9 to 71.9% correct.

**Research Question 2.2**

How are speech-language pathologists providing emergent literacy instruction to preschool aged children?

Study results indicated that participants are actively engaged in emergent literacy service provision. Findings demonstrated that participants are using various instructional materials (e.g., books, compact discs, flash cards, games, resource manuals, workbooks, technology/interactive software) in intervention sessions with preschool children with communication disorders to promote acquisition of numerous emergent literacy skills (e.g., phonological awareness, written language awareness, oral language). Participants are also using varied service delivery models (i.e., pull-out, classroom based, indirect) to provide intervention services.
Results also indicated that while they are actively engaged in emergent literacy service provision, participants are maintaining a narrow focus of emergent literacy intervention. In fact, analysis of two data sources, photography (i.e., “Narrow Focus of Intervention” theme) and semi-structured interviews, (i.e., “Accurate but Narrow Understanding” theme), demonstrated that participants appeared to focus more on oral language and phonological awareness than other aspects of emergent literacy. In addition, results indicated participants did not directly target the emergent literacy domain of emergent writing.

Finally, results (i.e., “Indirectly Addressing Emergent Literacy” theme from semi-structured interviews) indicated that some participants appear to indirectly address emergent literacy by embedding emergent literacy instruction in intervention sessions primarily aimed at speech sound production, language, voice, fluency, and hearing. In other words, many participants appear to maintain a primary focus on communication, while incorporating instruction in emergent literacy when possible.

**Research Question 3**

To what extent do qualitative and quantitative findings of speech-language pathologists’ perceptions and knowledge of emergent literacy instructional practices converge?

Integration and analysis of all results demonstrated convergence of qualitative and quantitative findings of speech-language pathologists’ perceptions and knowledge of emergent literacy instructional practices. As described, findings converged as both types of data evidenced participants did not possess extensive pedagogical knowledge of instruction practices across all domains of emergent literacy. Participants’ performance
on the TKA (Neuman & Cunningham, 2009), as well as findings from photography (i.e., “Narrow Focus of Intervention” theme) and semi-structured interviews (i.e., “Accurate but Narrow Understanding” theme) demonstrated a lack of thorough pedagogical knowledge across all domains of emergent literacy. Findings also converged in the sense that both quantitative and qualitative data sources indicated similar areas of strength and weakness in emergent literacy service provision. As described, participants’ mean scores on the oral language subscale of the PLBQ (Seefeldt, 2004) indicated a high level of agreement with practices based upon research. Similarly, results from semi-structured interviews (i.e., “Accurate but Narrow Understanding” theme) also revealed strength in oral language facilitation. Finally, findings converged as results from quantitative and qualitative data identified emergent writing as an area of growth. As discussed, participants’ scores on the writing subscale of the PLBQ (Seefeldt, 2004) indicated less agreement with writing instructional practices based upon research than agreement with practices in oral language and book reading. Similarly, this finding was also evidenced in the qualitative data as participants did not photograph or describe use of any materials or instructional strategies to address emergent writing.

Close inspection of the convergence of findings revealed that participants demonstrated more emergent literacy content and pedagogical knowledge of instructional practices in which they possessed positive perceptions. In other words, findings from both qualitative measures (i.e., semi-structured interview, photography) indicated participants seemed to endorse more instructional strategies and use more materials aimed at oral language and phonological awareness than other aspects of emergent literacy. Participants also indicated high levels of agreement with instructional strategies
in the oral language and vocabulary subtest on the PLBQ (Seefeldt, 2004). Likewise, participants demonstrated strength in the area of phonological awareness, while exhibiting more difficulty on items reflecting knowledge of orthography on the SLK (Moats, 1994). A second example of an instance in which participants demonstrated emergent literacy knowledge of an instructional practice in which they possessed positive perceptions is found in findings related to phonological awareness. More specifically, qualitative findings (i.e., “Accurate but Narrow Understanding” theme from semi-structured interviews) evidenced that participants endorsed use of phonological awareness tasks requiring shallow levels of awareness, like rhyming and syllabification. Likewise, on the SLK (Moats, 1994), participants demonstrated the most accuracy in completion of tasks requiring shallow levels of phonological awareness (i.e., determining number of syllables in a word), yet had more difficulty with tasks requiring deeper levels of phonological awareness (i.e., determining third sound in a word).

Verifying

As described, the researcher made several efforts to ensure trustworthiness of the findings. In this section of chapter four, results from verification measures will be presented.

Verification was first addressed through use of a concurrent method of member checking (Tashakkari & Teddlie, 2003) in which the researcher corresponded with participants after each qualitative method was completed to ensure accurate interpretation of results. More specifically, after developing photographs taken by participants and generating descriptive codes, the researcher shared descriptive codes with participants during the semi-structured interviews. During the semi-structured interviews, none of the
participants expressed disagreement with the descriptive codes generated by the researcher. Rather, on occasion, participants provided additional information regarding the therapy material depicted by describing the physical attributes of the material or providing more in-depth descriptions of how the material was used. Whenever any supplemental information was provided by participants during the semi-structured interviews, the researcher altered the descriptive codes to convey the new information from member checking.

Upon completion of analysis of semi-structured interviews, the researcher provided participants with the opportunity to review the interpretation of the interviews (i.e., codes, themes) and asked participants to judge the accuracy of her analysis. Member checking of the interview analysis was facilitated through use of written correspondence in which participants received a document explaining the interpretation and were asked to assess the accuracy of the analysis by answering open ended questions (i.e., How well do you agree with the researchers’ interpretation of the interview?, Is there any information you believe was omitted or overlooked that should be reported?). Sixty percent of participants (i.e., 3 of 5) responded to written correspondence requesting input for member checking. Of the three participants who responded, all expressed agreement with the researcher’s interpretation of the data. In addition, all participants who responded indicated they did not feel the researcher had omitted or overlooked any information that should have been reported.

In addition to member checking, verification was addressed through application of a comprehensive review and analysis of the literature base related to speech-language pathologists’ understanding and beliefs of emergent literacy instructional practices,
adherence to the mixed methodological design, bracketing of the researcher’s past experiences and beliefs, use of an adequate sample, and interviewing until saturation of data was obtained. As noted by Guest, Bunce, and Johnson (2006), saturation of data may occur after completion of as few as six interviews. Analytic memos also contributed to the study’s verification as the analytic memos recorded throughout each phase of the research project were used for cross-referencing codes and emerging themes. In addition, data were triangulated in the sense that data from five sources were included in the analysis.

Finally, validation was attained as the codes and themes generated from the semi-structured interviews were reviewed by a second researcher with experience in qualitative research design and knowledge of emergent literacy theory and early childhood education. The second reviewer expressed 100% agreement with the In Vivo codes developed by the researcher as she did not identify any additional In Vivo codes in the interview transcripts and expressed agreement that the In Vivo codes identified by the researcher represented meaningful statements related to the study’s research questions and purpose. With respect to the value codes developed by the researcher during the second cycle of coding, the second reviewer indicated 96% agreement. In other words, the second reviewer did not code three of seventy six In Vivo codes in the same manner as the researcher.
Table 4.1

Demographic Characteristics of Participants

<table>
<thead>
<tr>
<th>Participant</th>
<th>Gender</th>
<th>Highest Degree Earned</th>
<th>Total Number of Years of Experience as Speech-Language Pathologist</th>
<th>Years of Experience as SLPA</th>
<th>Years of Experience Working in an Educational Setting</th>
<th>Years of Experience Working with Preschool Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Female</td>
<td>Master’s</td>
<td>11</td>
<td>0</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>Female</td>
<td>Master’s</td>
<td>0.5</td>
<td>0</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>3</td>
<td>Female</td>
<td>Master’s</td>
<td>9</td>
<td>4.5</td>
<td>13.5</td>
<td>13.5</td>
</tr>
<tr>
<td>4</td>
<td>Female</td>
<td>Master’s</td>
<td>18</td>
<td>0.5</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>5</td>
<td>Female</td>
<td>Master’s</td>
<td>16</td>
<td>5</td>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>
### Table 4.2

*Participants’ Work Condition and Practice Patterns*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Number of Students on Caseload</th>
<th>Percentage of Caseload of Preschool Students</th>
<th>Number of Schools Served in Current Position</th>
<th>Reported Service Delivery Model(s) Currently Used in Treatment of Preschool Children</th>
<th>Reported Format of Therapy with Preschool Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>63</td>
<td>30%</td>
<td>2</td>
<td>Pull Out</td>
<td>Group, Individual</td>
</tr>
<tr>
<td>2</td>
<td>55</td>
<td>20%</td>
<td>4</td>
<td>Pull Out, Indirect</td>
<td>Group, Individual</td>
</tr>
<tr>
<td>3</td>
<td>84*</td>
<td>23%</td>
<td>4</td>
<td>Pull Out, Indirect</td>
<td>Group, Individual</td>
</tr>
<tr>
<td>4</td>
<td>65</td>
<td>33%</td>
<td>7</td>
<td>Pull Out, Classroom Based, Indirect</td>
<td>Group, Individual</td>
</tr>
<tr>
<td>5</td>
<td>65</td>
<td>23%</td>
<td>2</td>
<td>Pull Out</td>
<td>Group, Individual</td>
</tr>
</tbody>
</table>

*denotes combined caseload of participant and SLPA under participant’s supervision
Table 4.3

*Participants’ Total Scores the PLBQ (Seefeldt, 2004)*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>132</td>
</tr>
<tr>
<td>2</td>
<td>119</td>
</tr>
<tr>
<td>3</td>
<td>117</td>
</tr>
<tr>
<td>4</td>
<td>118</td>
</tr>
<tr>
<td>5</td>
<td>121</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td><strong>121</strong></td>
</tr>
</tbody>
</table>
Table 4.4

*Participants’ Subscale Scores on the PLBQ (Seefeldt, 2004)*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Mean on Decoding Knowledge Subscale</th>
<th>Mean on Oral Language and Vocabulary Subscale</th>
<th>Score on Book Reading Subscale</th>
<th>Score on Writing Subscale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.2</td>
<td>4.9</td>
<td>4.6</td>
<td>3.8</td>
</tr>
<tr>
<td>2</td>
<td>3.0</td>
<td>4.4</td>
<td>4.8</td>
<td>3.8</td>
</tr>
<tr>
<td>3</td>
<td>3.0</td>
<td>4.6</td>
<td>4.6</td>
<td>4.0</td>
</tr>
<tr>
<td>4</td>
<td>3.7</td>
<td>4.2</td>
<td>4.4</td>
<td>3.8</td>
</tr>
<tr>
<td>5</td>
<td>3.3</td>
<td>4.4</td>
<td>4.6</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td><strong>3.4</strong></td>
<td><strong>4.5</strong></td>
<td><strong>4.6</strong></td>
<td><strong>3.9</strong></td>
</tr>
</tbody>
</table>
Table 4.5

*Participants’ Total Score Scores on the TKA* (Neuman & Cunningham, 2009)

<table>
<thead>
<tr>
<th>Participant</th>
<th>Number of Correct Items</th>
<th>Percentage Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>53</td>
<td>75.7%</td>
</tr>
<tr>
<td>2</td>
<td>48</td>
<td>68.6%</td>
</tr>
<tr>
<td>3</td>
<td>43</td>
<td>61.4%</td>
</tr>
<tr>
<td>4</td>
<td>39</td>
<td>55.7%</td>
</tr>
<tr>
<td>5</td>
<td>42</td>
<td>60.0%</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td><strong>45</strong></td>
<td><strong>64.3%</strong></td>
</tr>
</tbody>
</table>
Table 4.6

*Participants’ Overall Performance on the SLK (Moats, 1994)*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Number of Correct Items</th>
<th>Percentage Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>46</td>
<td>71.9%</td>
</tr>
<tr>
<td>2</td>
<td>39</td>
<td>60.9%</td>
</tr>
<tr>
<td>3</td>
<td>39</td>
<td>60.9%</td>
</tr>
<tr>
<td>4</td>
<td>21</td>
<td>32.8%</td>
</tr>
<tr>
<td>5</td>
<td>19</td>
<td>29.9%</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td><strong>32.8</strong></td>
<td><strong>51.3%</strong></td>
</tr>
</tbody>
</table>
Table 4.7

Range and Mean Percentage of Accuracy on selected SLK tasks (Moats, 1994)

<table>
<thead>
<tr>
<th>SLK Task and Criterion</th>
<th>Number of Participants Meeting Criterion</th>
<th>Range of Participants’ Percentage of Accuracy</th>
<th>Mean Percent of Accuracy Across Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identified an inflection and inflected word form with at least 80% accuracy</td>
<td>0 of 5</td>
<td>25-50%</td>
<td>40.0%</td>
</tr>
<tr>
<td>Identified the number of morphemes in words with at least 80% accuracy</td>
<td>0 of 5</td>
<td>0-50%</td>
<td>30.0%</td>
</tr>
<tr>
<td>Identified the number of syllables in words with at least 80% accuracy</td>
<td>4 of 5</td>
<td>12.5-100%</td>
<td>77.5%</td>
</tr>
<tr>
<td>Identified number of phonemes in words with at least 80% accuracy</td>
<td>2 of 5</td>
<td>12.5-100%</td>
<td>62.5%</td>
</tr>
<tr>
<td>Identified third phoneme in words with at least 80% accuracy</td>
<td>1 of 5</td>
<td>40.0-90%</td>
<td>58.0%</td>
</tr>
<tr>
<td>Identified schwa vowels in written words with at least 80% accuracy</td>
<td>1 of 5</td>
<td>0-83.3%</td>
<td>53.3%</td>
</tr>
<tr>
<td>Identified consonant blends with at least 80% accuracy</td>
<td>2 of 5</td>
<td>50.0-100%</td>
<td>76.6%</td>
</tr>
<tr>
<td>Identified consonant digraphs with at least 80% accuracy</td>
<td>1 of 5</td>
<td>0-83.3%</td>
<td>30.9%</td>
</tr>
<tr>
<td>Identified the number of syllables in words with at least 80% accuracy</td>
<td>4 of 5</td>
<td>12.5-100%</td>
<td>77.5%</td>
</tr>
</tbody>
</table>
Table 4.8

*Percentage of participants successful on selected tasks on the SLK (Moats, 1994)*

<table>
<thead>
<tr>
<th>SLK Task</th>
<th>Number of Successful Participants</th>
<th>Percentage of Participants Successful at Completion of Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explained when “ck” is used in spelling</td>
<td>2 of 5</td>
<td>40%</td>
</tr>
<tr>
<td>Identified 3 letters that signal that “g” is</td>
<td>1 of 5</td>
<td>20%</td>
</tr>
<tr>
<td>pronounced /ʤ/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identified 6 ways to spell “long a”</td>
<td>0 of 5</td>
<td>0%</td>
</tr>
<tr>
<td>Identified 4 ways to spell “k”</td>
<td>2 of 5</td>
<td>40%</td>
</tr>
<tr>
<td>Identified six syllable types</td>
<td>0 of 5</td>
<td>0%</td>
</tr>
<tr>
<td>Explained the “y” to “i” rule in spelling</td>
<td>1 of 5</td>
<td>20%</td>
</tr>
<tr>
<td>Explained Greek spellings</td>
<td>0 of 5</td>
<td>0%</td>
</tr>
<tr>
<td>Explained spelling with double “m”</td>
<td>0 of 5</td>
<td>0%</td>
</tr>
</tbody>
</table>
Table 4.9

*Themes from Interview Data*

<table>
<thead>
<tr>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Value of Emergent Literacy and Emergent Literacy Instructional Practices</td>
</tr>
<tr>
<td>- Narrow but Accurate Understanding</td>
</tr>
<tr>
<td>- Uncertainty of Expertise in Emergent Literacy</td>
</tr>
<tr>
<td>- Development of Emergent Literacy Knowledge after graduate training</td>
</tr>
<tr>
<td>- Indirectly Addressing Emergent Literacy</td>
</tr>
<tr>
<td>- Stretched Too Thin for Involvement in Literacy</td>
</tr>
<tr>
<td>- Varied Perspectives of Scope of Practice</td>
</tr>
<tr>
<td>- Lack of Ownership</td>
</tr>
</tbody>
</table>
CHAPTER FIVE: DISCUSSION AND CONCLUSIONS

The purpose of this chapter is to summarize and discuss the results of this study in context of the primary research questions. Evidence gathered in this mixed methods study will be discussed in relation to relevant literature and the findings of prior research. In addition, the chapter will identify and describe the limitations of the study and clinical implications that can be drawn from the study’s conclusions. Finally, avenues for future research will be discussed.

Discussion

Perceptions of Emergent Literacy Instructional Practices

A primary aim of this study was to describe speech-language pathologists’ perceptions of emergent literacy instructional practices. Emergent literacy perceptions included individual’s attitudes, opinions, values, and ways of thinking regarding emergent literacy service provision. Perceptions encompassed numerous factors, including opinions regarding the characteristics of effective emergent literacy instruction (i.e., thoughts regarding who should provide emergent literacy instruction and what skills should be targeted in education settings), attitudes regarding competency in providing emergent literacy instruction, and opinions regarding constraints to implementation of best practice.

Findings from this study indicated that speech-language pathologists possessed positive perceptions regarding emergent literacy. This was evidenced through participants’ value of emergent literacy and endorsement of several instructional strategies and intervention formats to promote acquisition of emergent literacy skills. Results indicated participants valued use of age appropriate, differentiated instruction.
based upon the findings of research to facilitate emergent literacy growth. In addition, speech-language pathologists in this study endorsed use of joint book reading, modeling, direct instruction, active participation, and use of language and literacy rich environments. Findings also indicated participants valued numerous emergent literacy skills, including phonological awareness skills (i.e., rhyming, blending, phoneme identification), written language awareness skills (i.e., print knowledge, book handling, alphabet knowledge, grapheme-phoneme correspondence), and oral language skills (i.e., pragmatics, receptive language, conceptual understanding, articulation, vocabulary, storytelling abilities), as they indicated these abilities were important for preschoolers to acquire before attending kindergarten.

Participants’ positive perceptions of emergent literacy and advocacy for use of varied instructional practices and intervention formats to target numerous emergent literacy skills reflect suggestions described in the literature. For example, participants endorsed joint book reading, an instructional technique identified by Bus and colleagues (1995) as “one of the most important activities for developing knowledge required for eventual success in reading” (p. 15). In addition, participants’ advocacy for instruction that combines modeling, direct instruction, active participation, and use of language and literacy rich environments reflects Justice and Kaderavek’s (2004) suggestion to utilize an embedded-explicit model of emergent literacy intervention that maintains joint focus on naturalistic, contextualized approaches and direct instruction. Participants’ value of varied emergent literacy skills also mirrors descriptions of both holistic and domain specific intervention techniques in the literature. For example, advocacy for use of language and literacy rich environment reflects endorsement of holistic instructional
techniques, while advocacy for skills like rhyming and blending reflects endorsement of domain specific instructional techniques. Consequently, this study expands the literature base on emergent literacy through its description of speech-language pathologists’ opinions regarding emergent literacy instruction.

Findings from this study also revealed that speech-language pathologists’ emergent literacy perceptions included endorsement of instructional strategies supported by the findings of research. As noted, scores on one quantitative measure were used to identify participants’ agreement with use of emergent literacy instructional practices aligned with the findings of research. More specifically, participants’ mean scores on the subscales of the Preschool Literacy Beliefs Questionnaire (PLBQ) (Seefeldt, 2004) indicated agreement with practices supported by the evidence in oral language and vocabulary (subscale mean=4.5) and book reading (subscale mean=4.6), and near agreement with best practices in writing (subscale mean=3.9).

Findings on the PLBQ (Seefeldt, 2004) in this study parallel the results of prior research. For example, participants’ scores on the PLBQ (Seefeldt, 2004) are similar to Hindman and Wasik’s (2008) findings in an investigation of Head Start teachers’ emergent literacy beliefs. The total score on the PLBQ (Seefeldt, 2004) for participants in both studies were similar as participants in this study had an average total score of 121 and participants’ average total score in Hindman and Wasik’s (2008) study was 118. Similarly, Hindman and Wasik’s (2008) results indicated early childhood educators expressed the most agreement with items on the oral language and vocabulary (subscale mean=4.25) and book reading (subscale mean= 4.27) subscales. Likewise, on the decoding knowledge subscale, participants in this study (subscale mean=3.4) and
Hindman and Wasik’s (2008) investigation (subscale mean=3.61) indicated the least amount of agreement. Thus, findings of this study and prior research speak to the fact that educators and related service providers possess some beliefs regarding emergent literacy instruction that are aligned with research. However, all beliefs reported by speech-language pathologists and early childhood educators do not reflect agreement with evidence based practices in all domains of emergent literacy.

Despite their value of emergent literacy and emergent literacy instruction, findings from this study also demonstrated that speech-language pathologists felt uncertain in their expertise in emergent literacy. In addition, participants reported acquiring their knowledge of emergent literacy after completion of their formal training. Furthermore, participants identified lack of knowledge and decreased training as two of several constraints to implementation of evidence based practice in emergent literacy service delivery. In addition to these barriers, participants perceived time constraints, scheduling constraints, diverse scope of practice, high caseloads, paperwork requirements, and involvement in educational initiatives (e.g. Response to Intervention) as negatively impacting their ability to assume an ideal role in emergent literacy service provision.

Participants’ feelings of uncertainty in their expertise in literacy reported in this study reflect the findings of prior research. Participants’ uncertainty of their expertise in emergent literacy confirms Boudreau and Larson’s (2004) assertion that speech-language pathologists may feel “less than confident” (p. 9). Additionally, feelings of uncertainty parallel the findings of Casby’s (1988), Conner and Coover (2001), and Hammond et al.’s (2005) surveys of speech-language pathologists’ beliefs regarding involvement in
literacy. Finally, the study’s findings are noteworthy as they reflect results of investigations of early childhood educators’ beliefs regarding emergent literacy. More specifically, uncertainty in expertise in emergent literacy was also reported in the education literature (Burgess et al., 1999; Lim & Torr, 2007; Lynch, 2009; Schweiker & Schweiker, 1993; Ure & Raban, 2001). As demonstrated, this study adds to the body of literature documenting reports of uncertainty regarding emergent literacy instruction among varied educational service providers in early childhood settings.

Participants’ descriptions of varying constraints to provision of evidence based practice in emergent literacy in this study also reflect the findings of past research. For example, time constraints, scheduling constraints, and high caseloads are described in the literature. In ASHA’s (2010) most recent school survey, only 14.9% of respondents reported preschools as the place in which most of their time is spent. In addition, ASHA’s (2010) survey describing the work conditions in educational speech-language pathology also reported the presence of increased caseloads and workloads. Finally, the findings of this study mirror the results of Wellman’s (2006) investigation of perceived roles of school based speech-language pathologists in that participants in both studies identified limited time for collaboration and caseload constraints as barriers in speech-language pathologists’ involvement in literacy instruction. Thus, the findings of this study and prior research speak to the fact that speech-language pathologists encounter numerous obstacles to involvement in emergent literacy service provision.

While participants in this study appeared to maintain similar positive perceptions regarding the value of emergent literacy and emergent literacy instruction and possessed similar perceptions regarding the presence of varied constraints to implementation in
evidence based practice, findings also indicated that participants possessed varying opinions regarding the role of the speech-language pathologists in emergent literacy service provision. A range of beliefs was reported in the study with some participants believing that speech-language pathologists possess clear roles in emergent literacy service provision, some participants believing speech-language pathologists should function in a consultative role, and some participants expressing uncertainty regarding speech-language pathologists’ role in emergent literacy. In addition, results of the study indicated speech-language pathologists may not possess ownership of emergent literacy as an area of expertise.

These findings reflect the results of prior research. More specifically, similarities between findings of this study and Wellman’s (2006) study of speech-language pathologists’ perceived roles in service provision were noted. For example, speech-language pathologists in Wellman’s (2006) investigation did not express agreement regarding roles in assessment of reading and writing. Additionally, responses varied regarding speech-language pathologists’ roles in prevention and identification of student with reading disorders were reported (Wellman, 2006).

Findings that speech-language pathologists’ lack of ownership of emergent literacy as an area of expertise also reflect results of prior research. In a grounded theory study of speech-language pathologists’ roles in school settings, Ukrainetz and Fresquez (2003) determined that oral language and speech sound production were identified as the only areas of specialization for educational speech-language pathologists. In fact, Ukrainetz and Fresquez (2003) noted that participants did not “attend consistently and
systematically to areas such as word attack, spelling, writing composition, or reading fluency” (p. 295).

Findings of this study and prior research (Ukrainetz & Fresquez, 2003; Wellman, 2006) are especially noteworthy given that several beliefs expressed by participants are in contrast to position statements and policy documents published by ASHA. ASHA’s (2007) description of the scope of practice in speech-language pathology includes professional roles and activities in literacy, including reading, writing, and spelling. In addition, ASHA’s (2001) position statements identify numerous roles of speech-language pathologists in literacy and contend that “speech-language pathologists have the expertise, and therefore, the responsibility to play important roles in ensuring that all children gain access to instruction in reading and writing, as well as in other forms of communication” (p. 357). Consequently, this study contributes to the literature base by documenting opinions from speech-language pathologists that dispute assertions from their national credentialing agency.

Knowledge of Emergent Literacy Instructional Practices

In addition to describing speech-language pathologists’ perceptions of emergent literacy instructional practices, this study was also aimed at identifying speech-language pathologists’ emergent literacy knowledge. Quantitative and qualitative findings in this study evidenced that speech-language pathologists possess varying types of emergent literacy knowledge, including pedagogical knowledge (i.e., familiarity of emergent literacy instructional practices supported by literature, understanding how to provide emergent literacy instruction) and content knowledge (i.e., ability to complete emergent literacy skill). In addition, varying degrees of understanding among speech-language
pathologists were evidenced as participants’ scores on both quantitative measures of knowledge demonstrated wide ranges.

Findings from qualitative and quantitative data sources also indicated strengths in pedagogical knowledge of oral language and phonological awareness, while also documenting strength in content knowledge of phonological awareness. However, findings also indicated speech-language pathologists may possess limited knowledge of emergent literacy instructional practices across all domains of emergent literacy. For example, quantitative results from the Teacher Knowledge Assessment of Early Language and Literacy Development (TKA) (Neuman & Cunningham, 2009) indicated a mean percentage correct of 64.3%. In addition, qualitative results (i.e., “Narrow Focus of Intervention” theme from photography, “Accurate but Narrow Understanding” theme from semi-structured interviews) supported a lack of extensive pedagogical knowledge across all emergent literacy domains. Likewise, quantitative results from the Informal Survey of Linguistic Knowledge (SLK) (Moats, 1994) demonstrated a lack of extensive content knowledge across varying domains of emergent literacy as participants’ average percentage correct was 51.3%.

Comparison of participants’ performance on the quantitative and qualitative measures to recent reports of early childhood educators’ knowledge of emergent literacy reveals numerous similarities. For example, in Neuman and Cunningham’s (2009) investigation, early childhood educators’ average percentage correct on the TKA was 57.5 before and 62.1% after completion of a language and literacy course and involvement in a coaching intervention. Likewise, in Crim et al.’s (2008) investigation of preschool teacher’s knowledge using the SLK (Moats, 1994), preschool teachers
exhibited weakness in emergent literacy content knowledge. Similar to this study’s findings, results of Crim et al.’s (2008) investigation indicated over 80% of participants responded incorrectly to the majority of questions assessing knowledge of English morphology. Results of Crim et al.’s (2008) study also reported wide ranges of ability across tasks (e.g., range from 40 to 85% on identification of the number of phonemes in words). In addition to these similarities, participants in Crim et al.’s (2008) investigation demonstrated strength in shallow levels of phonological awareness (i.e., identifying the number of syllables in words).

The findings of this study contribute to the literature documenting insufficient knowledge of emergent literacy instructional practices among varied educational service providers in early childhood settings. The finding indicating speech-language pathologists may lack of extensive knowledge of emergent literacy is especially noteworthy given that ASHA standard 3.1B includes “reading and writing” within its training requirements for training programs in speech-language pathology (ASHA, 2012a).

**Relationship between Perceptions and Knowledge**

A final purpose of this study was to identify convergence of quantitative and qualitative findings of speech-language pathologists’ perceptions and knowledge of emergent literacy instructional practices. Analysis of the study’s findings indicated numerous similarities in quantitative and qualitative results. For example, quantitative and qualitative data indicated lack of extensive pedagogical knowledge and identified similar areas of strength and weakness in emergent literacy service provision. Close inspection of the convergence of findings revealed that participants demonstrated more
emergent literacy content and pedagogical knowledge of instructional practices in which they possessed positive perceptions.

These observations are significant as they suggest that a relationship between perceptions and knowledge of emergent literacy instructional practices exists. The researcher’s analytic memos reflect entries in which the researcher contemplated how an individual’s knowledge and beliefs surrounding a particular issue seem interrelated. For example, after analyzing the semi-structured interviews, the researcher wrote the following analytic memo:

It is hard to separate participants’ knowledge and perceptions. They must function in an interrelated way. Describing how participants provide emergent literacy instruction illustrates how a participant applies her emergent literacy knowledge to design and implement intervention sessions. However, participants’ responses not only reflect their understanding of emergent literacy, the descriptions also demonstrate what a participant values as an interventionist. It seems what participants valued in intervention was influenced by the knowledge of emergent literacy they possessed, but at the same time, the knowledge of emergent literacy instruction that participants possessed seemed to center on what skills and instructional strategies the participants valued or perceived positively.

The observation that an individual’s knowledge and perceptions function in a complex, interrelated fashion reflects the findings of prior investigations of teachers’ beliefs and knowledge. Researchers have contended that teachers’ beliefs and knowledge may be interconnected and that distinguishing between the two may be difficult (Kagan, 1992; Madison & Speaker, 1994). Consequently, the findings of this study add to the
literature base by providing illustrations of the observed relationship between knowledge and beliefs through analysis of quantitative and qualitative data.

**Limitations**

Several limitations to the described study exist and could have influenced findings as follows:

**Limitations in Quantitative Methodology**

Use of the SLK (Moats, 1994) as a measure of participants’ emergent literacy content knowledge serves as one limitation in this study. While the SLK (Moats, 1994) possesses adequate reliability and its utility has been demonstrated in the literature through its use in recent investigations of early childhood educators’ knowledge, use of the tool in this study was problematic in multiple ways. First, as noted, several of the items on the SLK (Moats, 1994) reflect an individual’s knowledge of the structural aspects of the English language (i.e., morphology, syllable structure, spelling patterns, phonics rules). While knowledge of structural aspects of English is important in conventional literacy instruction, identification of syllable shapes, morphemes, phonics rules, and spelling patterns is less significant in emergent literacy instruction. In addition, while the tool is described as including a measure of phonological awareness in the literature (Moats, 1994), items on the SLK (Moats, 1994) are not administered verbally. Thus, it could be argued that SLK (Moats, 1994) does not genuinely reflect phonological awareness ability. Given the limitations of the SLK (Moats, 1994), this study could have been strengthened through utilization of a different tool to identify participants’ emergent literacy content knowledge.
While use of the PLBQ (Seefeldt, 2004) provided information regarding participants’ levels of agreement with varied emergent literacy instructional practices and the reliability of the PLBQ (Seefeldt, 2004) has been demonstrated (Hindman & Wasik, 2008), two noteworthy limitations of the PLBQ (Seefeldt, 2004) were identified. As described, the PLBQ (Seefeldt, 2004) possesses an oral language and vocabulary, book reading, writing, and decoding knowledge subscale. Close inspection of the items on the PLBQ (Seefeldt, 2004) subscales indicated that the decoding knowledge subscale contained items related to phonological awareness and written language awareness. In addition, analysis of the items on the PLBQ (Seefeldt, 2004) indicates a lack of items related to book conventions and print conventions. Consequently, use of the PLBQ (Seefeldt, 2004) does not lend itself well to identification of participants’ perceptions of instructional practices in separate domains of emergent literacy.

Shortcomings in the use of the TKA (Neuman & Cunningham, 2009) were also noted. Despite its reliability, validity, and recent use in measuring early childhood educator’s knowledge reported in the literature, use of the TKA (Neuman & Cunningham, 2009) in this study was problematic as several of the questions on the assessment were aimed at knowledge of early childhood education practices in general and did not focus primarily on emergent literacy instruction. In addition, some questions on the TKA (Neuman & Cunningham, 2009) were focused on child development standards, strategies for working with second language learners, and assessment. Analysis of the TKA (Neuman & Cunningham, 2009) consists of reporting a total score. Thus, participants’ scores on the TKA (Neuman & Cunningham, 2009) may have been higher if the portion of the assessment not focused on emergent literacy instruction was
not used. In addition, use of the TKA (Neuman & Cunningham, 2009) may have yielded more descriptive information about participants’ emergent literacy pedagogical knowledge if results could have been analyzed by determining participants’ accuracy regarding instruction in varying domains of emergent literacy (i.e., percentage of accuracy on questions related to oral language awareness).

**Limitations in Qualitative Methodology**

As described in the researcher’s bracketing statement, the researcher’s personal experiences may have influenced interpretation of qualitative findings. In addition, the researcher’s lack of experience in qualitative research may have also negatively impacted the study. Some of the questions and prompts used in the semi-structured interviews also served as a limitation of the study. More specifically, upon completion of the study, two of the questions used (i.e., “What do you define as best practice in emergent literacy instruction?” and “Describe constraints to implementation of evidence based practice in emergent literacy.”) now seem problematic as the questions assume participants possess emergent literacy knowledge and understand the conceptualization of evidence based practice. Finally, while a second reviewer analyzed the findings from the semi-structured interviews, codes, categories, and themes from photography were not reviewed by a second researcher.

**Clinical Implications**

Despite its limitations, this study draws attention to several clinical implications, including the need to improve training in emergent literacy, focus on alignment with best practices in emergent literacy, and collaborate in emergent literacy service provision.
**Improve Training in Emergent Literacy**

Analysis of findings revealed speech-language pathologists may possess insufficient content and pedagogical knowledge in emergent literacy, as well as uncertainty in their ability to appropriately deliver emergent literacy instruction. Thus, the study demonstrates the need for improved training in emergent literacy.

**Strengthen graduate training.** One mechanism to increase training in emergent literacy is to strengthen graduate programs in speech-language pathology. The findings of the study speak to the fact that academic programs should critically examine the curriculum and practicum experiences that are needed to prepare speech-language pathologists for service provision in emergent literacy. If deficits in training opportunities exist, effort should be placed on integrating information about literacy into existing coursework and practicum experiences or introducing additional coursework or practicum requirements to provide opportunity for students to acquire knowledge of emergent literacy.

The study points to the need for coursework to include information regarding literacy acquisition and the relationship between language and literacy development. Graduate students in speech-language pathology should receive training in factors that influence literacy development and the theoretical basis underlying language and literacy acquisition. In addition, coursework should include an emphasis of the relationship between the processes of speaking, listening, reading, and writing, noting the impact of communication disorders on literacy ability. Training programs should also provide speech-language pathologists with a strong foundation in phonemic awareness, morphology, and orthography. Speech-language pathologists in training should gain
knowledge of evidence based practices in literacy, understanding specific ways to strengthen students’ language and literacy skills and also possessing knowledge of reliable, accurate ways of identifying students demonstrating difficulty with emergent literacy who may be in need of remediation.

*Expand professional development.* Continued professional development for practicing speech-language pathologists may serve as a second method for increasing understanding of emergent literacy. As Cunningham et al. (2009) argued, professional development should be aimed at cultivating detailed knowledge of the English speech sound system and its production. In addition, literacy acquisition, its theoretical basis, relationship to spoken language, and identification of evidence based practices in emergent literacy should be topics of discussion in professional development. The need for professional development in emergent literacy is a noteworthy implication of this study as recent research indicates positive gains in educators’ understanding of literacy as a result in participation in professional development (Ashton & Sproats, 2000; Gillentine, 2006; Girolametto, Weitzman, Lefebvre, & Greenberg, 2007; Henk et al., 2007; Landry, Swank, Smith, Assel, & Gunnewig, 2006).

**Focus on Alignment with Best Practices**

As noted, the study confirmed that speech-language pathologists possess differing views with respect to involvement in emergent literacy service provision. The fact that speech-language pathologists may possess distinctly different views regarding involvement in emergent literacy is problematic in numerous ways. Differing views regarding involvement in emergent literacy may lead to inconsistencies in service provision for preschool aged children. In addition, the presence of markedly dissimilar
conceptualizations of scope of practice could result in confusion for other educational stakeholders. Misunderstanding surrounding speech-language pathologists’ scope of practice and areas of expertise may decrease referrals made to speech-language pathologists and could negatively impact service provision. Consequently, the results of the study underscore the need for the profession of speech-language pathology to focus on alignment with best practices and professional expectations.

**Collaborate in Emergent Literacy Service Provision**

Results of the study indicated that speech-language pathologists demonstrate the need to improve emergent literacy content and pedagogical knowledge. Given the significance of emergent literacy, the study speaks to the need for collaboration in emergent literacy service delivery. Educational speech-language pathologists working in preschool settings should collaborate with preschool teachers and special educators in an effort to capitalize upon one another’s strengths and areas of expertise to ensure evidence based practice in emergent literacy is being provided to all preschoolers.

**Future Research**

Several avenues for future research of speech-language pathologists’ perceptions and knowledge of emergent literacy exist. This study indicated that speech-language pathologists may not possess similar views regarding roles in emergent literacy service provision. Participants in this study reported a range of perceptions with some believing speech-language pathologists possess clear roles in emergent literacy, some supporting the notion that speech-language pathologists should function in a consultative role, and some participants expressing uncertainty regarding how and if speech-language pathologists should assume roles in emergent literacy. Consequently, future studies could
aim at distinguishing what role in emergent literacy most speech-language pathologists support.

Studies could further explore the relationship between emergent literacy knowledge and perceptions and could extend the literature by identifying factors contributing to speech-language pathologists’ perceptions and understanding of emergent literacy. For example, future studies could compare the emergent literacy perceptions and knowledge of speech-language pathologists possessing differing attributes (i.e., number of years of experience, use of different types of service delivery models, involvement in professional development, educational background, etc.) to determine if any factors contribute to emergent literacy knowledge and perceptions. Similarly, future studies could examine the emergent literacy perceptions and knowledge of speech-language pathologists working with students with varying characteristics (i.e., students with varying disabilities and severity levels, students who speak a dialect or language that is different from their local academic curriculum, students of varying socioeconomic level, etc.).

Future studies investigating speech-language pathologists’ content and pedagogical knowledge of emergent literacy instructional practices could include separate assessment in each domain of emergent literacy. This may lead to more thorough descriptions of speech-language pathologists’ understanding of emergent literacy.

Future studies investigating knowledge and perceptions of emergent literacy could also compare speech-language pathologists’ performance on assessments measuring emergent literacy knowledge to speech-language pathologists’ perceived performance on assessments. This type of investigation is significant as educational
researchers have identified the ability to accurately assess one’s knowledge as one factor that influences motivation to learn (Cunningham et al., 2009).

Finally, future research should also examine the effectiveness of professional development aimed at improving emergent literacy knowledge. Similarly, future investigations could explore if differing models of professional development (i.e., mentoring, coaching, etc.) would lead to growth in emergent literacy knowledge.

**Conclusion**

In conclusion, all professionals working in preschool settings, including speech-language pathologists, have an invaluable opportunity to positively impact preschool students’ language and literacy development. The preschool years represent an important time in children’s development of skills that will assist them in finding later academic success. Emergent literacy represents one important domain of instruction in early childhood education programs. Understanding how educational speech-language pathologists view emergent literacy and distinguishing what aspects of emergent literacy speech-language pathologists best understand is significant. Ultimately, the knowledge and perceptions that practitioners possess impact the clinical decision making process which directly affects the quality of services provided to children with communication disorders. Researchers should continue investigating significant aspects of early childhood education, like speech-language pathologists’ perceptions and knowledge of emergent literacy, as greater understanding of these issues may identify constraints to implementation of best practices and may ultimately improve young children’s early school experiences.

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### Table A.1

**Reading Developmental Milestones**

<table>
<thead>
<tr>
<th>Age</th>
<th>Reading Milestones</th>
</tr>
</thead>
</table>
| Birth-HAge 1| - Looks at pictures in books for a short time when named  
- Likes to hear stories being told and read                                                                                                                  |
| Ages 1-2    | - Makes sounds when looking at pictures in books  
- Makes sounds or sings along with songs and rhymes  
- Points or touches pictures in books when named  
- Turns pages in a book; may turn more than one page at a time  
- Listens to simple stories for a short time  
- Starts to name colorful pictures in books                                                                                                                 |
| Ages 2-3    | - Knows that words have meaning and are used for different reasons  
- Starts to name black and white pictures  
- Points to and names many common pictures in books  
- Enjoys rhymes  
- Enjoys having favorite books read over and over again  
- Likes to listen to books that repeat words or phrases  
- Starting to sit alone and look at books  
- Turns pages one at a time  
- Knows that books have a front and a back  
- Knows how to open and hold books  
- Knows the direction of words in books (i.e., left to right)  
- Listens and enjoys when books are read for 5 to 15 minutes                                                                                                    |
| Ages 3-4    | - Recognizes and may say familiar words (e.g., restaurant signs, street signs, etc.)  
- Pretends to read books by holding the book, turning pages, and saying some words  
- Says some of the words in a story or a book  
- Recognizes and may say words that rhyme and words that begin with the same sound                                                                 |
| Ages 4-5    | - Produces rhyming words and words that begin with the same sound  
- Understands that you are reading words and not just talking about pictures in books  
- Recognizes where words start and stop by pointing to spaces between words  
- Pretends to read a book by telling the story from memory                                                                                                       |
| Ages 5-6    | - Realizes that words can be broken into smaller parts (i.e., syllables)  
- Names printed letters in the alphabet from A to Z and numbers from 1 to 10  
- May know that letters have sounds and the sound that some letters make  
- Says the first sounds in spoken words  
- Begins to point to specific letters on a page  
- May read some unfamiliar words                                                                                                                                       |

### Writing Developmental Milestones

<table>
<thead>
<tr>
<th>Age</th>
<th>Writing Milestones</th>
</tr>
</thead>
</table>
| 1-2 years | - Holds a large crayon or maker  
- May scribble when observing other writing                                      |
| 2-3 years | - Writes by drawing and scribbling  
- Scribbles using wavy lines and circles                                           |
| 3-5 years | - Starts to scribble letters, numbers or pretend letters, wavy lines, and squiggles  
- Prints some large uppercase letters  
- Knows that drawing and writing are different  
- Copies simple lines and shapes  
- Knows that people write for a reason  
- Writes one letter or word to stand for a whole sentence or idea  
- Prints first name, some letters of the alphabet and numbers  
- Writes letters in no set order                                              |
| 5-6 years | - Uses one to three letters to spell words  
- Spells words as they sound                                                     |

Appendix B

Table B.1

*Levels of Phonological Awareness*

<table>
<thead>
<tr>
<th>Level</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word Awareness</td>
<td>The ability to recognize word boundaries in spoken language (Pullen &amp; Justice, 2003)</td>
<td>Knowing the sentence “Anna loves music” is made up of three words</td>
</tr>
<tr>
<td>Syllable Awareness</td>
<td>Awareness that words can be broken down into syllables (Gillon, 2004)</td>
<td>Knowing the word “elephant” is comprised of the syllables “el”, “e”, “phant”</td>
</tr>
<tr>
<td>Onset-rime awareness</td>
<td>The understanding that words are made up of a beginning sound and a rime unit</td>
<td>Knowing “b” is the onset and “all” is the rime unit of the word “ball”</td>
</tr>
<tr>
<td>Phoneme awareness</td>
<td>Awareness of individuals sounds of words (Gillon, 2004).</td>
<td>Knowing the word “cat” is composed of the sounds “c”, “a”, and “t”</td>
</tr>
</tbody>
</table>
## Appendix C

Table C.1

*Phonological Awareness Tasks*

<table>
<thead>
<tr>
<th>Phonological Awareness Task</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhyme Discrimination</td>
<td>Ability to discriminate between rhyming words</td>
<td>Knowing that “car” and “jar” rhyme and that “cup” and “cat” do not rhyme</td>
</tr>
<tr>
<td>Rhyme Production</td>
<td>Ability to produce rhyming words</td>
<td>Knowing a word that rhymes with “bus”</td>
</tr>
<tr>
<td>Blending</td>
<td>Ability to combine smaller units of language (i.e., syllables, onset rimes, phonemes) into larger units of language</td>
<td>Identifying that the sounds “c”, “a”, “p” make the word “cap” or that “el”, “e”, “phant” makes the word “elephant”</td>
</tr>
<tr>
<td>Segmenting</td>
<td>Ability to break larger units of language into smaller units of language</td>
<td>Breaking the word “volcano” into the syllables “vol”, “ca”, “no” or breaking</td>
</tr>
<tr>
<td>Elision</td>
<td>Ability to delete a unit of spoken language</td>
<td>Saying the word “car” without the “c” or the word “flower” without “er”</td>
</tr>
<tr>
<td>Alliteration Awareness</td>
<td>Ability to recognize common sounds at the beginning of words</td>
<td>Knowing the words “bed” and “bear” start with the same sound</td>
</tr>
<tr>
<td>Phoneme Identification</td>
<td>Ability to identify a particular sound in a word</td>
<td>Identifying the beginning, middle, or ending sound of a word</td>
</tr>
<tr>
<td>Phoneme Manipulation</td>
<td>Ability to interchange units of language to generate new or nonsense words</td>
<td>Saying the “bat” with a “m” instead of “b”; Saying the word “rainbow” with “fall” instead of “bow”</td>
</tr>
</tbody>
</table>
### Appendix D

Table D.1

**Written Language Awareness Tasks**

<table>
<thead>
<tr>
<th>Print Awareness Domain</th>
<th>Definition</th>
<th>Example Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Book Conventions</td>
<td>Skills that promote understanding of how books are created, their purpose, and organization</td>
<td>-knowledge of how to hold a book (i.e., right side up)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-book handling skills (i.e., turn pages individually from front to back)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-understanding role of author and illustrator</td>
</tr>
<tr>
<td>Print Conventions</td>
<td>Skills that facilitate understanding of how print is organized</td>
<td>-knowing that you read a book page by page from front to back</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-knowing you read words from left to right</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-knowing the first letter of a word is on the left and the last letter of a word is on the right</td>
</tr>
<tr>
<td>Print Forms</td>
<td>Skills that promote knowledge that words and letters can be named and are differentiated from other types of text like numbers or scribbles</td>
<td>-knowledge that words are made up of letters</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-ability to point to words individually as they are read</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-knowledge that words, letters, and numbers are different</td>
</tr>
</tbody>
</table>

Appendix E

Speech-language pathologists,

Do you…
- Possess a Master’s Degree or greater in Communication Disorders
- Possess or are eligible for certification by the American Speech Language Hearing Association
- Currently provide intervention services in an educational setting with at least 20% of caseload consisting of preschool aged children
- Speak English as a native language

If so, you are eligible to participate in a research study investigating Speech Language Pathologists’ beliefs and knowledge of emergent literacy.

Who is doing the research?
- Kellie C. Ellis, doctoral candidate in Rehabilitation Sciences at the University of Kentucky

What is the purpose of the study?
- To identify and describe Speech Language Pathologists’ beliefs and understanding of emergent literacy instructional practices
- To determine how Speech Language Pathologists’ perceptions and knowledge of emergent literacy instructional practices are related

When and where will the study take place?
- The first phase of the study will take place at (NAME OF SPECIAL EDUCATION COOPERATIVE)’s Speech Language Pathology Cadre meeting on (DATE OF TRAINING) at (LOCATION OF TRAINING)
- If you are selected for the second phase, it will take place at your school one day this Fall

How long will the study take to complete?
- 1st phase=15 minutes; 2nd phase=2 hours and 30 minutes

Why should you volunteer?
- To help improve intervention programs for preschool aged children with communication disorders
Appendix F

Consent to Participate in a Research Study

SPEECH LANGUAGE PATHOLOGISTS’ PERCEPTIONS AND KNOWLEDGE OF EMERGENT LITERACY INSTRUCTIONAL PRACTICES: A MIXED METHODS STUDY

WHY ARE YOU BEING INVITED TO TAKE PART IN THIS RESEARCH?

You are being invited to take part in a research study about speech-language pathologists’ understanding and beliefs regarding emergent literacy instructional practices. You are being invited to take part in this research study because you are a speech-language pathologist who speaks English as a native language and possesses a Master’s Degree or higher in Communication Disorders and possesses or is eligible for a Certificate of Clinical Competence in speech-language pathology from the American Speech Language Hearing Association who currently provides intervention services in an educational setting with at least 20% of caseload consisting of preschool aged children. If you volunteer to take part in this study, you will be one of about 5 people to do so.

WHO IS DOING THE STUDY?

The person in charge of this study is Kellie C. Ellis, Principal Investigator, of the University of Kentucky, Department of Rehabilitation Sciences. She is being guided in this research by Sharon Stewart, Ed.D. There may be other people on the research team assisting at different times during the study.

WHAT IS THE PURPOSE OF THIS STUDY?

The purpose of this study is to identify and describe speech-language pathologists’ beliefs and understanding of emergent literacy instructional practices. The study will determine how speech-language pathologists’ perceptions and knowledge of emergent literacy instructional practices are related.

By doing this study, we hope to learn how to improve intervention programs for preschool aged children with communication disorders.

ARE THERE REASONS WHY YOU SHOULD NOT TAKE PART IN THIS STUDY?

You may not volunteer for this study if you do not speak English as a native language, possess a Master’s Degree or higher in Communication Disorders, possess or are eligible for certification through the American Speech Language Hearing Association, work as a speech-language pathologist in an educational setting, or possess a current caseload in which at least 20% of your students are preschool aged.
WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?

The research procedures consist of two phases. The first phase will be conducted at the professional development site of the (Name of the Special Education Cooperative). The second phase will be completed at the school in which you are employed. The Principal Investigator will visit your school approximately one time during the study. The visit will take about 2 hours and 15 minutes. The total amount of time you will be asked to volunteer for this study is 2 hours and 45 minutes over the next six months.

WHAT WILL YOU BE ASKED TO DO?

During the first phase of the study, you will be asked to complete a 30 item questionnaire. The questionnaire uses a scale from 1 to 5 in which you indicate your level of agreement to statements regarding early reading instruction. The questionnaire should take approximately 15 minutes to complete.

During the second phase of the study, you will complete the following: a survey, assessment, photograph assignment, and interview (described below).

You will complete a 65 item survey. The survey asks you to do things like counting the number of syllables in a word, identifying the sounds of words, and identifying spelling patterns. The survey will take approximately 30 minutes to complete.

You will take a 70 item assessment of early language and literacy development. The test has multiple choice and true/false questions. It asks you to identify instructional techniques to promote language and literacy skills and should take approximately 45 minutes to complete.

You will be given a camera and will be asked to take 15 photographs. You will be asked to take photographs of therapy materials you use to address literacy when working with preschool aged children on your caseload. The photography assignment should take you approximately 15 minutes to complete.

You will complete an interview with the Principal Investigator at the school in which you are employed. The interview will be audio/videotaped. The researcher will ask you questions about your beliefs about Speech Language Pathologists’ involvement in literacy instruction. The interview should take approximately 60 minutes to complete.

The following chart shows the steps in the study:
WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

There are not any known risks or adverse effects associated with participation in this study. The probability of risk in participation in the study is not greater than the risk ordinarily encountered in daily life or during the completion of routine psychological testing.

WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?

You will not get any personal benefit from taking part in this study.

DO YOU HAVE TO TAKE PART IN THE STUDY?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering.

IF YOU DON’T WANT TO TAKE PART IN THE STUDY, ARE THERE OTHER CHOICES?

If you do not want to be in the study, there are no other choices except not to take part in the study.

WHAT WILL IT COST YOU TO PARTICIPATE?

There is no cost to participate in the study.

WHO WILL SEE THE INFORMATION THAT YOU GIVE?

We will make every effort to keep private all research records that identify you to the extent allowed by law.

Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers, we will write about the combined information we have gathered. You will not be personally identified in these written materials. We may publish the results of this study. However, we will keep your name and other identifying information private.

We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. A coding system will be used so that your name or identifying information will not be listed on any test form or interview transcript. The audio/video tape of your interview will be deleted upon completion of an interview transcript. All of your information will be kept under lock and key. Six years after completion of the study, all study information will be destroyed by shredding the assessment forms and interview transcripts.
You should know, however, that there are some circumstances in which we may have to show your information to other people. For example, the law may require us to show your information to a court or to tell authorities if you report information about a child being abused or if you pose a danger to yourself or someone else.

Officials of the University of Kentucky may look at or copy pertinent portions of records that identify you.

**CAN YOUR TAKING PART IN THE STUDY END EARLY?**

If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. You will not be treated differently if you decide to stop taking part in the study.

**WHAT HAPPENS IF YOU GET HURT OR SICK DURING THE STUDY?**

If you believe you are hurt or if you get sick because of something that is due to the study, you should call Sharon Stewart at (859)218-0570 immediately.

It is important for you to understand that the University of Kentucky does not have funds set aside to pay for the cost of any care or treatment that might be necessary because you get hurt or sick while taking part in this study. Also, the University of Kentucky will not pay for any wages you may lose if you are harmed by this study. The medical costs related to your care and treatment because of research related harm will be your responsibility.

You do not give up your legal rights by signing this form.

**WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?**

You will not receive any rewards or payment for taking part in the study.

**WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS, CONCERNS, OR COMPLAINTS?**

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator, Kellie C. Ellis at (859)622-1860. If you have any questions about your rights as a volunteer in this research, contact the staff in the Office of Research Integrity at the University of Kentucky at (859)257-9428 or toll free at 1-866-400-9428. We will give you a signed copy of this consent form to take with you.
WHAT IF NEW INFORMATION IS LEARNED DURING THE STUDY THAT MIGHT AFFECT YOUR DECISION TO PARTICIPATE?

If the researcher learns of new information in regards to this study, and it might change your willingness to stay in this study, the information will be provided to you. You may be asked to sign a new informed consent form if the information is provided to you after you have joined the study.

_____________________________________________ _______________________________________________
Signature of person agreeing to take part in the study Date

_____________________________________________ _______________________________________________
Printed name of person agreeing to take part in the study

_____________________________________________ _______________________________________________
Name of [authorized] person obtaining informed consent Date

_____________________________________________
Signature of Investigator
App\n\n\n\n\nAppendix G
\n*Preschool Literacy Beliefs Questionnaire*  
(Seefeldt, 2004)

**DIRECTIONS:** Rate each of the statements below. **SA:** strongly agree; **A:** agree; **N:** neither agree or disagree; **D:** disagree; **SD:** strongly disagree

I believe preschool children:

<table>
<thead>
<tr>
<th>Statement</th>
<th>SA</th>
<th>A</th>
<th>N</th>
<th>D</th>
<th>SD</th>
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</thead>
<tbody>
<tr>
<td>1. Should not write until teachers show them how to form each letter.</td>
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<td>2. Should learn new words by talking with teachers about what they are doing at the time.</td>
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<td>3. Need plenty of drill and practice to learn the sounds of letters.</td>
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<td>4. Need to hear the same story more than once or twice to learn new words.</td>
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<td>5. Do not need to learn the meaning of a lot of words to become good readers.</td>
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<td>6. Do not need to be taught the names of each letter because children can learn to read without knowing each letter and its name.</td>
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<td>7. Should not talk during meal times.</td>
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<td>8. Should write without worrying about spelling.</td>
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<td>9. Learn ending sounds by circling pictures of things that rhyme on worksheets.</td>
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<td>10. Learn language by talking about their ideas and expressing their feelings.</td>
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<tr>
<td>11. Learn letter names by singing the “ABC” song.</td>
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<td>12. Should look at books to help them learn to read.</td>
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<td>13. Should not waste time scribbling and drawing when they can be learning to write.</td>
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</table>
14. Learn ending sounds in words by listening to nursery rhymes.

15. Should be taught to hear sounds in their environment before they are taught to hear sounds in words.

16. Do not need to hear many stories in order to become good readers.

17. Learn new words as teachers define them when reading books to children.

18. Learn to write by watching teachers write.

19. Learn new words by connecting them to real things, objects or activities they are doing.

20. Should not talk with each other during the day.

21. Learn to read before learning to write.

22. Need to learn to sit still and listen to teachers.

23. Need to be taught the names of each letter so they will be good readers.

24. Should play with words, such as making up rhymes or jump rope chants, to learn to hear ending sounds in words.

25. Can be taught letter names as they write their names.

26. Should not ask questions or talk about stories when teachers read to them.

27. Should be taught to speak in complete sentences.

28. Need to learn a lot of words so they can learn to read.

29. Should learn to identify beginning and ending sounds in words.
30. Need many experiences, such as going to the zoo and talking about it in order to learn new vocabulary.
Appendix H

*Teacher Knowledge Assessment of Early Language and Literacy Development*

(Neuman & Cunningham, 2009)

**MULTIPLE CHOICE DIRECTIONS:** Carefully read each of the following multiple choice questions. Circle only one answer from the choices provided to you for each question. If you are unsure of the right answer, please make your best guess.

1. The ability to point to the print as what carries the message instead of the picture on a page indicates a child's understanding:
   
   a. That words are made up of sounds which can be blended together  
   b. That the print is what is read  
   c. That words in sentences relate to each other  
   d. That words can regularly occur in the same contexts

2. During group time, Ms. Betty is about to read a book to her 5-year-olds. As she reads, she runs her finger along underneath the text. Why does she do this?
   
   a. To help children connect sounds and letters  
   b. To keep children’s attention  
   c. To help children understand how print works  
   d. To improve children’s letter knowledge

3. Which of the following practices might **best** help children learn how letters are related to their letter names?
   
   a. Matching pictures and beginning sounds  
   b. Singing the alphabet song slowly and pointing to each letter  
   c. Asking children to spell the letters of their name  
   d. Saying the letters of the alphabet out of order

4. All of the following instructional activities improve children's understanding of how we use print in daily activity **EXCEPT:**
   
   a. Creating a print-rich environment  
   b. Copying simple words  
   c. Writing a menu  
   d. Reading a recipe

5. Which of the following is an appropriate method for assessment and evaluation of children in early childhood education settings?
a. Observation
b. Documentation
c. Interviews
d. All of the above

6. Which of the following statements best describes how print works in storybooks?
   a. Print is just like oral language
   b. Print is written by people
   c. Print is read from left to right and top to bottom
   d. All of the above

7. Assessment of preschool children generally should be:
   a. Linked to the home background of each child
   b. Primarily norm-referenced
   c. Untimed but similar for all children
   d. Ongoing and informal

8. Each of the following is an informal assessment technique appropriate for preschoolers EXCEPT:
   a. Anecdotal records
   b. Portfolios
   c. Running records
   d. Emergent storybook readings

9. Which of the following statements describes authentic assessment?
   a. Children’s learning is compared to others using norm-referenced assessment
   b. Children’s learning is examined in the context of meaningful activity
   c. Children’s learning is assessed using authentic children’s literature
   d. Children’s learning is assessed for understanding of real versus fantasy

10. What are appropriate ways for early childhood educators to use observation as a method of assessing children?
    a. To make conclusions about a child’s development
    b. To provide information to parents
    c. To plan new activities
    d. b and c only

11. One way to informally assess a child's phonological awareness might be to ask the child:
a. To retell a favorite story
b. To identify nursery rhymes
c. To identify the letters of the alphabet
d. To sound out the letters in his or her name

12. Which of the following is typical of the language development of 3-year-olds?

a. Begins to use simple sentences of at least three to four words
b. Begins to retell their favorite stories with a beginning, middle, and end
b. Begins to carry on a conversation involving three or more turns
d. Begins to use declarative statements, like "Mommy get me"

13. Each of the following is an effective way to foster language development EXCEPT:

a. Asking children to plan, do, and review their free-choice activities
b. Expanding children’s responses, such as “You’d like to play in the kitchen and make pizza? And what kind of pizza would you like to make today?”
c. Re-reading a favorite book
d. Encouraging children to respond to questions in complete sentences

14. Which of the following statements best describes how Vygotsky viewed language development?

a. Language development is innate and every child is born with all the tools needed to acquire language
b. Language development is a social and cultural phenomenon
c. Language development occurs the same way for all children
d. Language development is a result of environmental conditioning

15. Someone who engages children every day in play, discussions, conversations, and singing songs is likely to be providing which of the following?

a. Opportunities for recognizing the relationship between sounds and letters
b. Experiences for children to learn and use new language rules
c. Opportunities for oral language development
d. Kinesthetic tactile experiences

16. Each of the following activities is helpful for promoting oral language development EXCEPT:

a. Naming letters
b. Outdoor play
c. Singing
d. Free-choice time

17. Which of the following activities **best** promotes vocabulary development?

a. Reading a story  
b. Writing  
c. Talking  
d. Watching television

18. Which of the following **best** explains why developing phonemic awareness in English may be especially challenging for a child for whom English is a second language?

a. The sound system of the child’s first language may not use an alphabet  
b. Some languages may require attention only to whole words, not sounds in words  
c. Sometimes teachers may not articulate sounds clearly  
d. The sound structure of the child's first language may be different from English

19. Which of the following statements **best** defines phonemic awareness?

a. Matching letters and sounds  
b. Hearing and manipulating individual sounds in spoken words  
c. Recognizing and spelling the letters in syllables  
d. Identifying words in context

20. The alphabetic principle is **best** described as the understanding that:

a. Sounds in words can be represented by letters  
b. Letters are formed from curved and straight lines  
c. There are many different alphabets in the world  
d. The sounds we speak are different from the letters we write

21. Phonological awareness is **best** described as the ability to:

a. Hear the sounds of language as distinct from its meaning  
b. Match sounds to letters  
c. Recognize different animal sounds like "oink" and "meow"  
d. Identify upper and lower-case letters

22. Which of the following practices **best** help preschoolers blend sounds in words?

a. Identifying words that begin with the same sound  
b. Distinguishing sounds in words
c. Stretching the sounds out in a word and putting them together
d. Hearing different sounds, and identifying the letters that correspond to those sounds

23. Encouraging children’s early writing attempts is important because:

a. It improves children’s spelling skills
b. It helps children understand how sounds relate to letters
c. It improves children’s thinking skills
d. It helps them develop good handwriting skills

24. Children who are emergent writers benefit most from opportunities to:

a. Explore the uses of writing for communicating with others
b. Learn how to form upper and lower-case letters
c. Copy the texts of favorite story books
d. Write letters on lined paper

25. Between the ages of 1 and 5, children learn to use symbols like marks on paper and pictures in their play to:

a. Manipulate objects and understand them
b. Create and communicate meaning
c. Learn to differentiate media
d. Describe the roles of a writer and reader

26. Four-year-old Sarah has drawn a picture. As Sarah tells her about the picture, the teacher writes down her words, and then reads it back to her. This activity promotes literacy development by:

a. Helping the child learn more about narratives and their structure
b. Reinforcing the child's understanding of the parts of a story
c. Increasing the child's awareness of the relationship between written and oral language
d. Expanding the child’s understanding that there are many ways to write letters

27. The following activities are appropriate for promoting letter knowledge EXCEPT:

a. Singing the alphabet song
b. Playing with alphabet puzzles
c. Comparing letter shapes
d. Handwriting

28. Encouraging children to spell "their way" is helpful because they may learn to:
a. Write correctly  
b. Differentiate print from pictures  
c. Think actively about letter-sound relationships  
d. Figure out the differences between vowels and consonants

29. All of the following are important ways to encourage preschooler's early writing EXCEPT:

a. Encouraging correct spelling  
b. Taking dictation for children unwilling to write  
c. Displaying children's writing around the room  
d. Having a designated writing area equipped with crayons, pencils, stencils, and several types of paper

30. The most age-appropriate strategy for assessing whether 4-year olds are ready to learn mathematical symbols for the numbers one through nine is to see if they can:

a. Count from one to nine  
b. Classify nine objects that are similar in shape  
c. Group nine objects into sets of twos and threes  
d. Demonstrate one-to-one correspondence using objects

31. Mrs. Smith wants to teach the concepts of first, middle, and last to a group of four-year-old children. She might best do this by:

a. Drawing three familiar characters in a row and indicating which character is in which place  
b. Lining up stuffed animals and indicating which animal is in which place  
c. Having children take turns standing in line and asking them to identify who is in which place  
d. Showing the children picture cards of sets of three objects and asking them to tell which objects are in which place

32. Which of the following activities best reinforces children's understanding of the relationship between the letter "d" and the sound that it makes?

a. Saying words that begin with "d" and pointing to the beginning letter  
b. Spelling words that have the letter "d" in it  
c. Rhyming aloud words that end with the letter "d"  
d. Asking children to identify things around the room that begin with the letter "d"

33. Of the following groups of materials, which would be the best selection to aid 4-year-olds in developing initial concepts about the physical characteristics of different objects?
a. Paper, stationery, envelopes, storybooks, and a telephone book  
b. A toy train, pictures of trains, stories about trains, and sound records of trains  
c. Apples, oranges, onions, and peaches  
d. Sandpaper, rough wood, silk cloth, and wet soap

34. Each of the following is an appropriate activity for helping children understand one-to-one correspondence EXCEPT:

a. Counting from 1 to 10  
b. Setting out napkins on the table to match the number of chairs  
c. Counting blocks by pointing to each block  
d. Modeling counting as you point to three objects

35. If a teacher is trying to promote concepts of print, and a child asks, “Can I paint now?” the teacher might respond:

a. “Let’s see if your name is on the waiting list.”  
b. “You should put a paint apron on first, Aki.”  
c. “Didn’t I see that you were painting a few minutes ago.”  
d. “Looks like the paint easels are in use right now.”

36. One way to encourage reading in the home is to:

a. go to the library  
b. plan to read before bedtime  
c. read often  
d. all of the above

37. Which of the following is the most effective way to encourage young children to go to a cozy corner book area more often during free choice time?

a. Reward children who choose to go to the area during free choice time  
b. Structure 20 minutes of independent reading time each morning  
c. Create an attractive area with open faced bookshelves  
d. Provide at least 50-100 books in the area

38. Placing menus with pictures and print in the dramatic play center may support young children’s:

a. Understanding of left to right progression  
b. Awareness of the functions of print  
c. Spelling development  
d. All of the above
39. Ms. Jones places a variety of books in all centers throughout her child care setting. For example, in the kitchen play area she has a selection of simple cookbooks. In the art center, she has several art books. She has some newspapers and magazines in the dramatic play center, and brings a basket of nature and insect books with her when she takes the children outdoors. In what way does this support early reading development for young children?

a. It helps children learn to think about reading as an important part of their daily activities
b. It ensures that children will spend at least an hour each day reading
c. It gives children more situations in which they must read to do certain activities
d. It prevents children from becoming too dependent on Ms. Jones for information and guidance

40. Interactive storybook reading means that:

a. Children are encouraged to read along with their peers
b. Children are encouraged to predict what comes next in a story
c. Children have opportunities to read aloud
d. Children get to act out the story

41. Kyesha is a 4-year old preschooler with reading skills at the kindergarten level. What is the best approach to take with Kyesha to create a supportive learning environment for her?

a. Keep her involved in all group activities so her peers do not notice the difference in her ability
b. Encourage her parents to enroll her in kindergarten immediately
c. Make sure she has plenty of opportunities to interact with books on her own
d. Have her act as a tutor to other children who may show little interest in reading

42. Which of the following statements best describes why integrating curriculum is important in preschool settings?

a. Children cannot really distinguish between science, reading, and math, and so it makes sense to place all subject matter together
b. Children are exposed to in-depth study of important information topics
c. Children need to begin to learn about many different things they will be assessed on in first grade
d. Children do not seem to enjoy curriculum that is not integrated

43. Vygotsky’s zone of proximal development emphasizes:
a. The difference between a child’s level of independent functioning and his or her performance when aided by an adult
b. The difference between practical, creative, and academic learning
c. Factors that lead to changes in cognitive tasks
d. The importance of motivation and the expectation of success

44. Early childhood educators support English language learning for second language learners by each of the following activities EXCEPT:

a. Modeling appropriate uses of English
b. Creating environmental print in children’s first and second language
c. Correcting children’s grammar and mispronunciations
d. Reading storybooks in English

45. A developmentally-appropriate curriculum is one that:

a. An early childhood educator always plans in cooperation with parents
b. Builds upon the interests of children
c. Places a greater emphasis on play than on cognitive skill development
d. Is established in advance

46. The preoperational stage is the second stage of Piaget’s theory of cognitive development. Which of the following accurately describes characteristics of children in this stage of cognitive development?

a. Accelerated language development
b. Less dependence on sensorimotor action
c. Dependence on concrete representations
d. All of the above

47. An early childhood educator who visits with parents at the beginning of each new year and discusses their child’s interests is most likely attempting to do which of the following?

a. Gain information that can be used to make engaging assessments
b. Gain information that can be used to plan holiday activities
c. Integrate children's home background in planned activities
d. Help families best utilize community resources

48. Which of the following models of early childhood education uses developmentally appropriate practice methods?

a. Montessori
b. Head Start
c. Reggio Emilia
d. All of the above
49. Which of the following helps involve parents and families in their children’s early education program, EXCEPT?

   a. Make home visits to get to know parents and families better
   b. Ask parents what goals they have for their children, and plan activities to try to help children meet these goals
   c. Communicate regularly with parents about their children’s progress
   d. Call parents when a child misbehaves

50. Ms. Ruppert wants to foster multicultural awareness and appreciation among the diverse children in her child care setting. Which of the following is the best way to go about doing this?

   a. Emphasize the similarities between children of different racial and ethnic groups
   b. Help children develop a better understanding of themselves, their culture, and the culture of others
   c. Invite parents to visit the classroom to share stories about their family traditions
   d. Designate a particular day of the week to highlight different cultures not represented by children in the setting

TRUE AND FALSE

DIRECTIONS: Carefully read each of the following statements. At the end of each statement, please indicate whether you think the statement is True or False by circling the best choice. If you are unsure of the correct answer, please make your best guess.

1. It is common for children to have letter name knowledge by age 4. True False

2. Children who are non-English language speakers benefit most when they are required to speak in English in formal settings. True False

3. Children typically have an intuitive understanding of numbers by the age of 4. True False

4. Children’s vocabulary in the early years is a strong predictor of their later reading achievement. True False

5. It is more important to have small teacher-child ratios in the toddler years when children are beginning to talk, than in early infancy when children spend most of their time napping. True False
6. Children always advance from one identifiable stage to another. True False

7. Reading instruction should begin about when children are 6 1/2 years old. True False

8. Children can generally understand more language than they can produce. True False

9. It is common for children to have some number name knowledge by age 2 ½. True False

10. Children’s beginning writing attempts often look like block letters. True False

11. Second language learners should be exposed on a regular basis to storybooks in English. True False

12. Standardized tests with validity and reliability are the best way to determine if a child is ready for kindergarten. True False

13. Children learn to sort and identify letters by their sound features. True False

14. Children's knowledge of nursery rhymes is related to their letter knowledge. True False

15. Infants learn about their world through sensing and acting. True False

16. Correcting a child when he makes a statement like "I runned" by saying, “No, you mean you ran?” helps him learn syntax. True False

17. Encouraging parents of second language learners to use the English language exclusively in the home enhances children’s English acquisition. True False

18. Fathers can affect their children’s attitudes and engagement with books. True False

19. Parents should point to each word in picture books as they read to their child. True False

20. Block areas generate large amounts of child communication. True False
Appendix I

Informal Survey of Linguistic Knowledge
(Moats, 1994)

1. From the list below, find an example of each of the following:

Inflected verb ________________________________

Compound noun ________________________________

Bound root ________________________________

Derivational suffix ________________________________

scarecrow  nameless  terrible  phonograph

impeached  tables  weakly

2. For each word on the left, determine the number of syllables and the number of morphemes:

<table>
<thead>
<tr>
<th>Word</th>
<th>Number of syllables</th>
<th>Number of morphemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salamander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crocodile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attached</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unbelievable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finger</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gardener</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychometrics</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. How many speech sounds are in the following words?

<table>
<thead>
<tr>
<th>Word</th>
<th>Number of speech sounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ox</td>
<td></td>
</tr>
<tr>
<td>Boil</td>
<td></td>
</tr>
<tr>
<td>King</td>
<td></td>
</tr>
<tr>
<td>Thank</td>
<td></td>
</tr>
<tr>
<td>Straight</td>
<td></td>
</tr>
<tr>
<td>Shout</td>
<td></td>
</tr>
<tr>
<td>Though</td>
<td></td>
</tr>
<tr>
<td>Precious</td>
<td></td>
</tr>
</tbody>
</table>
4. What is the third speech sound in each of the following words?

<table>
<thead>
<tr>
<th>Boyfriend</th>
<th>Third speech sound</th>
</tr>
</thead>
<tbody>
<tr>
<td>thank you</td>
<td></td>
</tr>
<tr>
<td>Squabble</td>
<td></td>
</tr>
<tr>
<td>Educate</td>
<td></td>
</tr>
<tr>
<td>Stood</td>
<td></td>
</tr>
<tr>
<td>Prayer</td>
<td></td>
</tr>
<tr>
<td>Higher</td>
<td></td>
</tr>
<tr>
<td>Chalk</td>
<td></td>
</tr>
<tr>
<td>Witchcraft</td>
<td></td>
</tr>
<tr>
<td>Badger</td>
<td></td>
</tr>
</tbody>
</table>

5. Underline the schwa vowel:

about    melody    Sofa    effect    difficult    definition

6. Underline the consonant blends:

doubt    Known    First    Pumpkin    squawk    scratch

7. Underline the consonant digraphs:

wholesale   psychic    Doubt    Wrap    daughter    think

8. When is a “ck” used in spelling?

9. What letters signal that a “g” is pronounced /j/?

10. List all the ways you can think of to spell “long a”:

11. List all the ways you can think of to spell “k”:

12. What are six common syllable types in English?

13. When adding a suffix to a word ending with “y”, what is the rule?

14. How can you recognize a word of Greek origin?

15. Account for the double “m” in *comment* or *commitment*.
Appendix J

Photography Instructional Prompts

Participants,

Please use the enclosed camera to take 15 photographs of therapy materials or supplies you use to address emergent literacy in your intervention sessions with preschool aged children with communication disorders.

I have enclosed the instructional manual with information regarding operation of the camera.

Please do not include any people in the photographs you take.

Please complete the photographs within one week of receiving the camera. Return the camera and instructional manual to me using the enclosed packaging. Please contact me at (859)353-2095 or at kellie.ellis@eku.edu with any questions or concerns regarding this assignment or with questions regarding use of the camera. Thank you again for your cooperation and participation in this research study,

Kellie C. Ellis, M.A. CCC-SLP
Appendix K

Semi Structured Interview Prompts

1. Please describe what is depicted in each picture. (Researcher share written descriptions of photographs for member checking)
2. How do you use the item pictured in therapy?
3. If you were to photograph the most important things taking place in a preschool classroom with respect to early reading, what would you photograph?
4. Tell me about your experience as a speech-language pathologist working with preschool aged children.
5. Tell me about what you believe is your primary goal as a speech-language pathologist working with preschool aged children.
6. Describe what you feel are the most important skills you want preschool students to acquire.
7. How do you address early reading skills in your therapy sessions with preschoolers?
8. Describe what you do when you read a book to your students.
9. What do you define as best practice in early reading instruction?
10. Describe your view of speech-language pathologists’ involvement in early literacy instruction.
11. Describe how your undergraduate and graduate training prepared you to provide early reading instruction to preschool aged children with communication disorders.
12. How do you perceive your competency in the area of early literacy instruction?
13. Describe the constraints to implementation of evidence based practice in emergent literacy.
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VITA

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Eastern Kentucky University; Richmond, KY 1997-2001
B.S. in Communication Disorders; graduated Summa Cum Laude

University of Cincinnati; Cincinnati, OH 2001-2003
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Professional Experience

Eastern Kentucky University August 2011-present
Assistant Professor/Clinic Director

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Speech-Language Pathologist

East Kentucky Speech, Hearing, and Therapy Services November 2004-present
Speech-Language Pathologist/ Partner

Publications and Presentations


Ellis, K. C., Gregory, L., & Harris, L. (2010, February). Where do I go for answers: Kentucky Speech Language Hearing Association, American Speech Language Hearing Association, or the Kentucky Board of Speech Language Pathology and Audiology? Presentation at the Kentucky Speech Language Hearing Association’s Annual Convention. Lexington, KY.


**Honors and Awards**

Member of Kentucky Board of Speech-Language Pathology and Audiology (2005-2011)
- Chair (2009-2011)
- Vice-Chair (2008-2009)

Member of Kentucky Speech Language Hearing Association’s Executive Council
- President (August 2012-present)
- President Elect (August 2011-August 2012)
- Pediatric Program Chair (2010)
- Licensure Board Liaison (2008-2009)

2012 Eastern Kentucky University Critical Thinking Teacher of the Year Runner-Up

University of Kentucky Rehabilitation Science Doctoral Program’s 2012 Nominee for the Patricia A. Cross Award

Recipient of Kentucky School Public Relations Association’s 2009 OASIS award for public awareness program “Speech-Language Pathology: Making Sure All Voices Are Heard”

Recipient of Kentucky School Public Relations Association’s 2004 OASIS award for commentary writing/feature writing

Member of Head Start Community Partners Focus Group (2005-present)

Harlan County Public Schools Reading First Grant Writing Committee Member (2003-2004)