COMPREHENSIVE LITERACY INSTRUCTION IN SELF-CONTAINED SPECIAL EDUCATION CLASSROOMS: EPISTEMOLOGY AND PRACTICE

Amanda K. Bock

A dissertation submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Early Childhood, Special Education & Literacy in the School of Education.

Chapel Hill
2013

Approved by:

Karen A. Erickson

George Noblit

Penelope Hatch

Harriet Able

Kathleen C. Gallagher

ABSTRACT

Amanda K. Bock: Comprehensive Literacy Instruction in Self-Contained Special Education Classrooms: Epistemology and Practice
(Under the direction of Karen A. Erickson)

Special education has evolved separately from general education, resulting in a separate system with different purposes, instructional practices, content, expectations, and outcomes for students. The separate system is based on a set of beliefs about teaching and learning (epistemology) that leads to a denial of meaningful learning opportunities and increases the impact of disability on students' lives. The special education system predominantly relies on a behavioral approach to literacy instruction, but this approach is ineffective in teaching students to gain and convey meaning through print in the variety of contexts required by life beyond school. This study addresses the need to shift literacy instruction for students with severe disabilities to a constructivist perspective.

The purpose of this study was to explore instructional practices in two self-contained special education classrooms as teachers implemented a comprehensive literacy curriculum rooted in a constructivist perspective. This study used grounded theory to analyze field notes, teacher interviews, and paraeducator interviews collected over the course of one school year. Data analysis resulted in three major findings:

(1) Teacher control was inversely related to student engagement. The more control teachers exerted, the less students communicated and participated; as teachers released control student communication, participation, and engagement increased.

(2) Teacher clarity about the goals and purposes of lessons supported a collaborative construction of learning and the use of instructional feedback.

(3) When teachers combined a release of control with clarity about the purposes of lessons, students engaged in learning that had higher cognitive demands.

Behaviorist methods in literacy instruction have long been associated with low student engagement, low cognitive demands, and ineffective literacy instruction. This study demonstrates how practices rooted in a behaviorist perspective limit students' engagement and learning opportunities during literacy instruction. An emerging body of literature shows that students with severe disabilities benefit from literacy instructional practices recognized as best practices in general education. This study demonstrates how two teachers applied constructivist, student-centered teaching practices to literacy instruction for students with severe disabilities to gain their students' interest, enjoyment, contributions, and cognitive engagement in useful and applicable learning.

Key words: severe disabilities, intellectual disability, cognitive disabilities, literacy instruction, constructivism, behaviorism, special education, epistemology

This work reported herein was partially funded under grant 84.327A.090018 from the U.S. Department of Education, Office of Special Education Programs. The views expressed herein are solely those of the author, and no official endorsement by the U.S. Department of Education should be inferred.

ACKNOWLEDGEMENTS

I would like to express my appreciation for the many people who made this work possible. I am grateful to George Noblit for opening my eyes to a world of research I never knew existed. You helped me make sense of the work I wanted to do. I am grateful to Harriet Able for her guidance as I tried to find my path. I am grateful to Kate Gallagher, who has guided me and challenged me for many years now; you are an amazing role model. I am grateful to Penny Hatch, from whom I have learned far more than she can imagine. Thank you for talking me through concept after concept until I understood! I would like to thank Lynne Vernon-Feagans and Marnie Ginsberg for the extraordinary experiences they gave me; I learned so much about literacy, professional development, and the world of academic research from you. I am grateful to Bill Ware, whose endless patience and bewildering enthusiasm for statistics made you a great professor. However, I am even more grateful for your friendship and support as I struggled to navigate this process.

I would like to particularly thank my dissertation adviser and mentor, Karen Erickson. You have given me opportunities to present, to write, to teach, to learn, and to think in new and thrilling ways. You are truly the quintessential teacher; you provided the space and the guidance for me to explore ideas and construct new understandings. Thank you for believing in me. I feel so lucky to have been your student and employee.

I also would like to express my appreciation for the Center for Literacy and Disability Studies. It has been the greatest honor of my life to work with the passionate and enthusiastic

staff of the Center, who love to talk about literacy and language and kids as much as I do. Special thanks to Chanel Blaylock, Megan Latta, Kaylen Hunter, and Golda Bonaparte for your insights and enthusiasm during the coding phase.

None of this work would have been possible without the teachers and students who participated in the study and gave so generously of their time, their thoughts, and their ideas. Thank you. I am also grateful to my former students and their families, who shared their lives with me for six years. I carry with me the lessons I learned as a teacher, and I treasure them. Part of my heart will always be in Buena Vista, Georgia.

Finally, I would like to thank my family. I am grateful to my dad for getting me started in this process and making me believe I could do it. I am so thankful for my mom, who supported me every day with love and patience. Thank you for listening, and reading, and listening some more. I am lucky to have two fabulous and hilarious sisters, who offer unique and unexpected perspectives on every subject. You make me laugh, but you also make me think! I am truly and eternally grateful for my wonderful sons, Parker and Peyton, who have spent almost their entire lives with a mom in graduate school. Thank you guys for putting up with that. Thanks for being fun, and funny, and sweet, and cool, and silly, and awesome. Last, I must acknowledge my dog, Teddy, who is one heck of a writing partner.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1: INTRODUCTION

Introduction

In the United States public education system, general education and special education have evolved as two separate entities. The purpose of general education has been to prepare students for meaningful participation in society, both in terms of socialization and academics (Jackson, Ryndak, & Wehmeyer, 2009) while special education has historically had a much different purpose. Prior to 1975, students with disabilities were largely excluded from public school education (OSERS, 2010). Special schools and institutions functioned to segregate, contain, and control students with disabilities in order to protect them and allow public schools to run more smoothly (Gerber, 2011; Stainback & Stainback, 1996). The education that did exist in these special schools and institutions focused on preparing residents with disabilities to work as laborers within the institution itself, which resulted in separation from society across the lifespan (Jackson et al., 2009). Today, evidence of special education's historical roots is found in the continued segregation and containment in separate settings, as well as the different instruction provided to students with disabilities. In spite of laws requiring a shift toward more inclusive educational practices, we also see evidence of a societal belief that students who need special education are so different from their peers in general education that they require a separate curriculum, separate classes, and separate instructional techniques (Zigmond, Kloo, & Volonino, 2009).

Special Education as a Separate System

Over the past few decades, the United States public education system has undergone a transformation in its approach to educating students with disabilities. Laws and mandates have evolved to try to provide students with disabilities with access to the settings and standards of general education. Public Law 94-142 and its amendments (IDEA, 1997; IDEA, 2004), currently known as the Individuals with Disabilities Education Improvement Act (IDEA, 2004), have provided increasing support for the education of students with disabilities not only in public schools, but in general education classrooms with students who do not have disabilities (McLeskey, Rosenberg, & Westling, 2010). The No Child Left Behind Act of 2001 (NCLB, 2001) and the Individuals with Disabilities Education Improvement Act of 2004 (IDEA, 2004) mandated that students with disabilities should have access not only to general education settings, but also to the general education curriculum (McLeskey et al., 2010). Research consistently supports inclusion showing that inclusive education yields academic and social benefits for students with and without disabilities (Downing & Peckham-Hardin, 2007; Fisher & Meyer, 2002; Laws, Byrne, & Buckley, 2000; Okagaki, Diamond, Kontos, & Hestenes, 1998; Peck, Staub, Gallucci, & Schwartz, 2004; Vaughn et al., 2003). Yet, the most recent data from the U.S. Department of Education shows that only 61% of students ages 6 through 21 served under IDEA spend at least 80% of their time in general education classrooms (OSEP, 2011).

Despite legislative, research, and advocacy efforts to bring special education into alignment with general education, many students with disabilities continue to receive educations that differ from that of their peers without disabilities in a number of ways. First, a significant percentage (14%) of students with disabilities receive all or most of their education in separate special education classrooms within public schools (OSEP, 2011). Second, students with the

most severe disabilities receive instruction that deviates from the general education curriculum and often excludes access to literacy (Agran, 2011; Erickson, Hanser, Hatch, & Sanders, 2009; Kliewer, Biklen, & Kasa-Hendrickson, 2006). Hence, a disability label may result in differences in educational setting (which necessarily includes physical location, resources, teachers, and peers) or educational programming (which includes curriculum, instructional practices, assessments, goals, and expectations), and for many students, both. Because special education exists as a parallel education system with its own philosophies and practices, it is difficult for students to access general education settings and curricula once they have been placed into special education (Jackson et al., 2009; Stainback & Stainback, 1996; Taylor, 2004). This separate system denies students opportunities to learn culturally valued knowledge and ways of being, which increases the impact of disability on students' participation in society (Gindis, 1999; Kozulin & Gindis, 2007); however, the separate system is maintained by laws, policies, funding structures, teacher preparation programs, and societal attitudes toward disability. It is even defended by some researchers in the field of education who argue that some students simply must be educated in separate settings due to the severity of their needs (see e.g., Hockenbury, Kauffman, & Hallahan, 2000; Kauffman & Hallahan, 2005).

The Separate Special Education System in North Carolina

The separate special educational system is strongly present in North Carolina public schools. In particular, students with moderate to severe intellectual disabilities and students with multiple disabilities are predominantly assigned to separate educational settings across North Carolina. When all students in North Carolina ages 6-21 served under IDEA are looked at as a group, most of these students spend most of their school days in general education classrooms with nondisabled peers (North Carolina Department of Public Instruction Exceptional Children

Division, 2012). However, when the data is disaggregated by disability label, students served under the labels *intellectual disability- severe*, *intellectual disability- moderate*, and *multiple disabilities* are predominantly educated in separate classrooms (see Table 1.1). While most of these separate classrooms are found in general education schools, North Carolina also has a number of public separate special education schools. Students in these separate schools comprise the majority of students who spend 0% of their school day with peers without disabilities as reflected in Table 1.1.

Table 1.1

Students ages 6-21 served in North Carolina Public Schools under IDEA Part B, Percent of Day with Peers without Disabilities by Disability Label

	Percent of School Day Spent with Peers without Disabilities			
Disability Label	**>80%**	**40%-79%**	**<39%**	**0%**
All Disability Labels	66.7%	18.2%	13.9%	1.2%
ID- severe	0.1%	0.6%	75.3%	24.0%
ID- moderate	2.1%	7.1%	80.1%	10.7%
Multiple disabilities	2.4%	7.0%	70.9%	19.6%

(North Carolina Department of Public Instruction Exceptional Children Division, 2012)

This study examines data from self-contained classrooms in North Carolina serving students with moderate to severe intellectual disabilities and students with multiple disabilities, also known in the research literature as students with severe disabilities. These classrooms are located in regular public schools, but the vast majority of students in this study spend less than 20% of their school day with peers without disabilities and a significant portion spend 0% of their school day with peers without disabilities.

Students with Severe Disabilities

Students with moderate to severe intellectual disabilities and students with multiple disabilities are commonly referred to in the literature as students with "severe disabilities," (see, e.g., Agran, 2011; Giangreco, 2011; Kliewer & Biklen, 2001; Koppenhaver, Hendrix, & Williams, 2007). Under IDEA, intellectual disability is defined as "significantly subaverage general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, that adversely affects a child's educational performance," (NICHCY, 2012). Multiple disabilities are defined as "concomitant impairments (such as intellectual disability-blindness, intellectual disability-orthopedic impairment, etc.), the combination of which causes such severe educational needs that they cannot be accommodated in a special education program solely for one of the impairments" (NICHCY, 2012). As noted above, students in North Carolina who are served under the disability labels *intellectual disability- severe*, *intellectual disability- moderate*, and *multiple disabilities* are predominantly educated in separate segregated settings with peers who are also served under these labels. These students are considered to have severe disabilities, including varying cognitive, physical, sensory, social, emotional, behavioral, and communication disabilities and sometimes accompanied by health issues (Downing, 2006; Koppenhaver et al., 2007).

A significant number of students with severe disabilities do not use speech to communicate and require augmentative and alternative communication systems (Koppenhaver et al., 2007). Students with autism are considered to have a severe disability when moderate to severe intellectual disability is also present (Kliewer & Biklen, 2001; Spooner, Knight, Browder, & Smith, 2012). Severe disabilities are frequently exacerbated by limited life experiences, as issues of health, comfort, and safety eclipse exposure and exploration during the early years

(Downing, 2006; Erickson & Koppenhaver, 1995). Students with severe disabilities have complex and unique mixes of skills, barriers and needs that cannot be summarized into a single definition. However, students with severe disabilities have in common the need for substantial modifications and supports (Browder & Spooner, 2006; Giangreco, 2011).

Paraeducators in Special Education

A major feature of the special education system that sets it apart from general education is its use of paraeducators to mediate and deliver instruction. Educational legislation in the 1990's that expanded special education services and promoted educating students with disabilities in general education settings led to a dramatic increase in the employment of special education paraeducators (Riggs & Mueller, 2001). Over the last two decades, the number of students eligible for special education services has continued to grow in the face of a pervasive and widespread shortage of certified special education teachers, and paraeducators have offered an inexpensive way to fill the gaps (Breton, 2010; Deardorff, Glasenapp, Schalock, & Udell, 2007; Musick & Stott, 2000; Striffler, 1993).

The most recent data available from the U.S. Department of Education (OSEP, 2011) shows that in 2010 there were more paraeducators working in special education programs with children ages 6-21 than there were teachers. Paraeducators provide services to children under the supervision of a certified teacher who is responsible for the educational program and student outcomes (Ghere & York-Barr, 2003; Pickett, 1997). However, the role of the special education paraeducator increasingly emphasizes delivering instruction to students, and many students with disabilities receive most of their services from paraeducators rather than teachers (Giangreco & Broer, 2005; Giangreco, Suter, & Doyle, 2010). Training, support, and supervision provided for paraeducators working in special education is highly variable, and most special education

teachers never receive training in supervision or management of paraeducators (Breton, 2010; French, 2001; Giangreco et al., 2010; Riggs & Mueller, 2001). When paraeducators act as inclusion facilitators, they work without the direct supervision of special education teachers (Ghere & York-Barr, 2003). Paraeducators who are poorly trained and supervised can function in ways that interfere with students' academic and social opportunities in general education settings (Broer, Doyle, & Giangreco, 2005; Giangreco, 2010).

The Behavioral Approach to Instruction

One important byproduct of special education's historical roots in institutional care and special schools is the behavioral approach to teaching, which typically focuses on teaching observable, functional skills of daily living (Jackson et al., 2009; Spooner & Browder, 2006). Best practices in general education, rooted in a constructivist view of learning, have emphasized teacher-student relationships, peer relationships, social and emotional support, the effective use of language, motivation, active engagement, self-regulation, productivity, and higher-order thinking skills (Johnston, 2004; Pianta, La Paro, &Hamre, 2008). In contrast, practices that are considered effective and evidence-based for students with severe disabilities, rooted in a behaviorist view of learning, have been reported to include task analytic instruction, massed trials, systematic prompting procedures, errorless learning, and expectations for students to provide rote responses at a preset level of mastery (Browder, Ahlgrim-Delzell, Courtade, Gibbs, & Flowers, 2008; Spooner et al., 2012). More importantly, these approaches are often applied in overly simplified ways that make it difficult if not impossible for students to apply what they have learned or generalize it in novel situations (Erickson et al., 2009). The philosophies and practices associated with this overly simplified behavioral approach to teaching are at odds with the philosophies and practices that dominate general education, and serve to increase the

segregation of students with disabilities and to limit their future learning opportunities (Katims, 2000a; Kliewer & Biklen, 2001).

Literacy for Students with Severe Disabilities

Literacy instruction for students with severe disabilities provides one specific example of the differences in educational practices between special education and general education. The literature regarding literacy for students with severe disabilities is replete with examples of instruction that focuses exclusively on sight word reading using massed trial procedures (Browder, Wakeman, Spooner, Ahlgrim-Delzell, & Algozzine, 2006; Spooner et al., 2012). Contemporary textbooks used to prepare both general and special education teachers are dominated by a reductionist orientation toward literacy instruction for students with severe disabilities (Katims, 2000a). This reductionist orientation focuses on a behavioral approach to teaching, in which literacy skills are broken down into component parts (subskills) and taught in an isolated and decontextualized manner using drill and practice (Katims, 2000a). This approach differs from the comprehensive and constructivist literacy approach that dominates general education, where the focus is on gaining and conveying meaning through connected text (Katims, 2000a). It also leaves students with severe disabilities with skills that are of little value to real-life literacy applications (Agran, 2011; Erickson et al., 2009).

Literacy can be simply defined as the ability to read and write to convey meaning (Erickson & Clendon, 2009), yet its importance cannot be overstated. Literacy provides the keys to participation, independence, and enjoyment of life (Ferrara, 2012). In our society, one's very humanity is based on the ability to socialize, think, plan, and reason (Ludlow, 2002, as cited in Zascavage & Keefe, 2007). Literacy instruction gives students access to culture, curricula, communication, and functional skills. The ability to read and write is particularly important for

students with communication difficulties, as it provides an alternative or supplement to verbal communication. Literacy represents the best hope for students with severe disabilities to communicate, which is essential for participation in society (Mike, 1995), yet the literature is dominated by research addressing literacy instruction for students with severe disabilities that is highly unlikely to help any learner become a reader and writer (Erickson et al., 2009; Katims, 2000a). This study focused on literacy instruction geared toward meaningful interaction with print that opens the door to a lifetime of literacy learning.

The purpose of this study was to explore literacy instruction provided to students in self-contained special education classrooms in conventional literacy. While many nonconventional systems based on pictures or symbols have been offered as an alternative to conventional literacy for students with significant intellectual disabilities, these systems fail to give students tools for academic, social, and cultural development (Erickson et al., 2009; Erickson, Hatch, & Clendon, 2010). This study focused on instruction in conventional reading and writing. This study adds important information to the scant research base regarding instruction in self-contained special education classrooms serving students with severe disabilities who spend less than 20% of the school day interacting with their peers without disabilities.

Statement of the Problem

General education and special education are each based on a distinct set of theories about teaching and learning. These differing theories about teaching and learning are rooted in different philosophies about the purposes of schooling and lead to different instructional practices, classroom cultures, goals and expectations. Yet, educational law, research findings, and advocates for students with disabilities (including students themselves) are currently posing an enormous challenge to schools: provide all students with opportunities to learn the explicit

and implicit curricula of schooling, so that all students have the opportunity to become fully functioning members of our democratic society. As long as the two separate educational systems exist, meeting this challenge is impossible. It is necessary to explore ways to integrate these systems, and in particular to bring the philosophies, practices, and expectations of special education out of its roots in institutionalization and toward those of general education. However, it is equally necessary to ensure that students with special educational needs receive supports to address those needs. The field of special education continues to struggle to understand how to support students with severe disabilities as they are being held to increasingly higher expectations.

Faced with a reality that in North Carolina most students with severe disabilities are educated in separate special education classrooms for most if not all of their school days, it is important to understand what is happening in those classrooms and what may be improved. This study explored the question: What happens in self-contained special education classrooms when teachers provide literacy instruction designed to provide students with severe disabilities access to conventional literacy learning using methods common to general education?

Purpose of the Study

The purpose of the study was to examine teacher practices in self-contained special education classrooms as they were challenged to provide literacy instruction in a manner that is more consistent with general education practices than with practices traditionally used in special education (e.g., comprehensive literacy instruction, constructivist teaching methods). The study examined what happened in self-contained special education classrooms as teachers provided literacy instruction designed to provide students with severe disabilities access to conventional literacy learning using methods common to general education, but rarely used in special

education settings serving students with severe disabilities (Erickson et al., 2009; Katims, 2000a). The study used a combination of field notes and interviews to examine self-contained special education classrooms across a single school year as they implemented a particular literacy curriculum developed for students with severe disabilities but designed to promote comprehensive literacy instruction through a constructivist approach to teaching.

CHAPTER 2: REVIEW OF THE LITERATURE

The purpose of the study was to understand what happened when teachers were challenged to provide comprehensive conventional literacy instruction to students with severe disabilities in self-contained special education classrooms. This chapter reviews what is already known about literacy instruction for students with severe disabilities in self-contained classrooms. Two related areas of research are also reviewed: first, the literature around the purposes of education in general, special education, and special education in separate settings; second, literature about the ways teacher beliefs about learners and learning influence their instructional practice. Third, this chapter reviews the literature regarding instructional practices for students with severe disabilities learning to read and write regardless of setting. Instructional practices are rooted in teacher beliefs about and expectations for their students' learning, which themselves are rooted in teacher beliefs about the purposes of education for their students. These relationships will be described within a sociocultural theoretical framework.

Theoretical Framework

The study was situated in a theoretical framework encompassing three main ideas: (1) the purpose of public education is to prepare students for meaningful participation in society; (2) education is social and interactive, teaching students about their role(s) in society; and (3) teachers' beliefs about learners and learning (epistemology) significantly impact their instruction. All three of these ideas were rooted in a sociocultural perspective of learning and education, and all three influenced the analysis and interpretation of the findings.

In our society, formal schooling "is an integral part of the political economy and a major institution for the socialization of children," (Cole, 1990, p. 97). Consistent with this perspective, the argument can be made that the overarching purpose of American compulsory education is to prepare the next generation for meaningful participation in the democratic society we wish to maintain. Vygotsky argued that pedagogy is political and heavily influenced by the interests of the dominant social class (Daniels, 2007). If our societal interest is focused on maintaining a democratic, evolutionary society, children must learn to participate in democratic, evolutionary learning communities (Johnston, 2004). As children learn to solve problems collaboratively and to value different perspectives, they become increasingly productive members of our society (Johnston, 2004). This study applied this line of thinking specifically to self-contained special education classrooms, defining their purpose as a means to prepare students with severe disabilities for meaningful participation in society.

Education is a social and interactive process through which students come to understand who they are in society. According to a Vygotskian (1978) perspective, people learn what to think and how to think through social interactions with more knowledgeable others. The social context shapes mental processes as people acquire culturally generated knowledge and ways of thinking (Bodrova & Leong, 2007). Factors such as models of novel behaviors and vicarious reinforcement shape how people act within their environments (Bandura &Walters, 1963). According to Putnam and Borko (2000), "learning is as much a matter of enculturation into a community's ways of thinking and dispositions as it is a result of explicit instruction in specific concepts, skills, and procedures," (p. 5). Participating in sociocultural activities shapes an individual's motives and commitments to action choices and consequently one's personality or personal identity (van Huizen, van Oers, & Wubbels, 2005). Teachers play an important role in

creating the sociocultural activities of school and subsequently have a significant role in the formation of their students' identities. These sociocultural activities show children what kinds of people they may be and provide important opportunities to practice those roles (Johnston, 2004). This study examined the nature of literacy learning in self-contained classrooms through a lens of understanding consistent with this view of the social context and the importance of sociocultural activity in the classroom.

Teacher beliefs about learners and learning strongly influence the social, cultural, and educational experiences they provide their students. Teacher beliefs and emotions organize and drive teacher actions and reactions, which have significant influence on the experiences of students in schools (Fang, 1996). Johnston (2004) frames teacher beliefs about learners and learning using two questions: "Who do you think you're talking to?" and "What do you think you're doing?" (p. 78-80). Using these two questions Johnston frames the importance of feelings, attitudes, and relationships in creating a productive classroom discourse in which students develop their identities as learners. Teacher beliefs about who their students are and what they are doing as teachers influence the words they say, how they say them, how they organize their classrooms, what kinds of activities they choose, and what kinds of resources are offered (Johnston, 2004). This study examined teachers' stated beliefs and actions that conveyed their beliefs about literacy learning in self-contained special education classrooms.

Purpose of Education

There are many purposes for education, and most of these purposes can be classified under one of two headings: the explicit curriculum or implicit curriculum. The explicit curriculum is the body of knowledge and skills which schools intend to transmit to students. Currently, the dominant explicit curriculum is framed by the Common Core State Standards

(National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). For students with disabilities, Individualized Education Programs, which are mandated by law (IDEA, 2004), also play an important role in defining the explicit curriculum. The explicit curriculum is publicly stated and intentionally taught (Eisner, 2002). In contrast, the implicit curriculum is neither publicly stated nor intentionally taught. Nonetheless, it has an immense impact on how students learn to think and behave. The implicit curriculum in schools is comprised of factors such as the structure of classrooms, expectations for students, teaching approaches, messages conveyed through learning materials, systems of reward and punishment, and systems of classifying students (Eisner, 2002). The implicit curriculum teaches students values and beliefs by showing them what is valued within the culture of the school (Eisner, 2002). Both the explicit and implicit curricula must be considered when discussing the purpose of schooling.

In a classic and influential text, Dreeben (1968) describes the purpose of school as "an agency of socialization" whose purpose is "to develop capacities necessary for appropriate conduct in social settings that make different kinds of demands on them and pose different kinds of opportunities," (p. 3). While Dreeben acknowledges that schools impart knowledge and skills to students, he argues that their primary function is to provide a variety of experiences, relationships, opportunities, and challenges that expand students' psychological repertoires beyond what they can learn within their families. Dreeben further states that one of the outcomes of schooling is for students to accept social norms, and learn to act and make decisions according to social norms. More recently, Brighouse (2006) argued that the purpose of public schooling should be to facilitate autonomy, equipping students with the skills needed to rationally reflect, compare, and evaluate ways of living. He argues that exposure to different

experiences, kinds of people, and ways of living coupled with evaluation skills provide the foundation for a good life. According to Eisner (2003), "the really important dependent variables in education are not test scores or even skills performed in the context of schools; they are the tasks students are able to complete successfully in the lives they lead outside of schools," (p. 651).

The purpose of education, then, is not simply mastery of the explicit curriculum. This is not nearly enough. Education is intended to help students learn how to succeed in life beyond school. Students need to learn how to learn, how to solve problems, how to evaluate solutions, and how to act and be around a variety of people. This implicit curriculum is present in general education settings simply because they require a variety of people to come together, get along, develop independence, comply, perform, and learn (Dreeben, 1968; Eisner, 2002). However, special education in separate settings provides a distinctly different implicit curriculum. The very different relationships students form with adults and peers, along with very different expectations for behavior and learning, create an implicit curriculum that is totally different from the one found in general education. These different relationships and expectations for learning are rooted in a different purpose of education in self-contained special education classrooms.

The Purpose of Special Education

The purpose of special education, as stated by educational law and case law, is to provide a free and appropriate public education to students with disabilities, with as little infringement on individual rights as possible (Taylor, 2004). The literature tells a varied and evolving story of the purposes of special education that is typically situated in ongoing discussions of education reform. One dominant purpose of special education that appears is "to bring the performance of

students with disabilities closer to that of nondisabled peers in regular classrooms" (Kauffman & Hallahan, 2005, p. 122).

Brownell, Sindelar, Kiely, and Danielson (2010) describe the evolution of special education through the lens of special education teacher preparation. In the early days of special education, the 1960s and 1970s, the dominant perspective on special education was that students with disabilities had deficits that, once identified, could be remediated through carefully planned instruction. Research failed to support the veracity of this perspective. However, research did support behaviorist teaching techniques, and this "one-size-fits-all" approach began to gain traction in special education (Brownell et al., 2010). The focus shifted from diagnosing individual students' strengths and needs to determine what was required to close the gap with their peers without disabilities to using data to measure performance outcomes on predetermined skill progressions. Drawing from this perspective, researchers developed scripted intervention programs that focused on carefully sequenced skills rather than on individual student needs, and largely took away teachers' need to make decisions at all (Brownell et al., 2010). As policy, research, and practice have increasingly focused on students with disabilities making meaningful progress in the general education curriculum, the behaviorist perspective has failed (Brownell et al., 2010). As the purpose of special education has shifted from remediation of deficits to identifying ways to help students with disabilities make progress on general education standards, researchers have noticed that special education on its own is not serving its purpose.

Jackson et al. (2009) define the contemporary purposes of schooling as socialization, enculturation, and learning codes of representation for reading and math. While they suggest that inclusive education is the only research-based practice that effectively addresses these three purposes of schooling for students with disabilities, they acknowledge the reality faced by many

teachers who are trying to educate students with severe disabilities in self-contained special education classrooms. Teachers in self-contained classrooms must try to deliver the general education curriculum under conditions that deviate significantly from general education classrooms in ways that cannot be contrived; for example, without interactions with peers without disabilities (Jackson et al., 2009). Separate classrooms are, themselves, creators and components of the implicit curriculum for students, and this implicit curriculum differs markedly from that of general education classrooms.

The Purpose of Separate Settings

A meaningful percentage (14%) of students with disabilities receive all or most of their education in separate special education classrooms within public schools (OSEP, 2011). The Individuals with Disabilities Education Act (IDEA, 2004) provides a continuum of placement options, based on the needs of each individual student (Taylor, 2004). The law requires students to be educated in the least restrictive environment, but the term is ambiguous enough to either support or oppose a continuum of placement options (Taylor, 2004). For some, the concept of the least restrictive environment means the general education classroom, utilizing consultation or a co-teaching model. For others, the least restrictive environment means the setting that is best suited to the educational needs of the student and could include self-contained classrooms or special schools. In the United States, interpretations of least restrictive environment vary by state. For example, in some states (e.g., New Hampshire, Nebraska, Colorado), fewer than 12% of students with disabilities receive all or most of their education in a separate setting, while in other states (e.g., New York, California, New Jersey) more than 26% of students with disabilities receive all or most of their education in separate settings (OSEP, 2011).

Segregated settings are conceptually associated with more intensive services intended to teach students skills so that they can move into more integrated settings (Hockenbury et al., 2000; Taylor, 2004; Zigmond et al., 2009). However, the research that exists on the efficacy of self-contained classrooms shows that this purpose is not being achieved (Brownell et al., 2010; Ryndak, Moore, Orlando, & Delano, 2009; Taylor, 2004). While much research is focused on increasing and improving inclusive practices, and the use of separate settings has declined over the last several decades (OSERS, 2010), separate settings remain the primary educational setting for a significant percentage of our student population. The persistence of separate settings is rooted in the historical purposes of special education for students with severe disabilities.

The historical purposes of special education for students with severe disabilities differ markedly from the purposes for students in general education. Those historical purposes, containment and control, have not been entirely eradicated from today's educational system (Stainback & Stainback, 1996). Contemporary purposes for special education are driven by expectations for how students with disabilities will participate and contribute to society after schooling. Expectations for meaningful participation in society would logically lead to the conclusion that inclusion is the best model for service delivery, as it focuses on services and supports to give students the access and participation necessary to become competent members of society (DEC/NAEYC, 2009; Taylor, 2004). Expectations for a future of dependence and limited participation result in the view that the purpose of special education is to prepare students as well as possible in functional skills of daily living. Consistent with the latter expectations, special education has historically focused on different content from the general education curriculum, such as social skills, self-help skills, communication skills, vocational skills, and functional reading skills (Zigmond et al., 2009). The separate curriculum and alternative

instructional techniques used in special education drove the formation of small, separate classes where the environment could be tightly controlled, a concept that persists in schools today (Zigmond et al., 2009). Today, many students with severe disabilities are served in separate classrooms where the focus of instruction remains on functional skills.

The Purpose of Literacy Instruction in Separate Settings

For the past several decades, the purpose of literacy instruction for students with severe disabilities has been rooted in a functional skills approach (Erickson et al., 2009). As described by Erickson and colleagues, this approach emphasizes preparing students for life and work beyond school, generally focusing on a limited repertoire of rote skills. In keeping with this approach, the purpose of literacy instruction for students with severe disabilities has been to provide students with knowledge of sight words and environmental print that would theoretically allow them to function, albeit at a very basic level, in life beyond school. This approach relies on memorizing sight words in isolation and other reductionist interventions that fail to provide students with literacy skills they can use meaningfully.

In trying to shift the purpose of literacy instruction for students with severe disabilities to be more in line with its purposes in general education, it is no longer functional for students to leave school with a limited set of memorized sight words. Our current understanding of functional literacy is "the capability of reading and writing at a level proficient enough to conduct one's daily affairs," (Erickson et al., 2009, p. 8). In order to achieve functional literacy, students with severe disabilities need comprehensive literacy instruction that teaches them to gain and convey meaning through print (Erickson et al., 2009; Katims, 2000b; Keefe & Copeland, 2011). The purpose of comprehensive literacy instruction goes beyond teaching students with severe disabilities the skills they need to use print in meaningful ways. Along with

the explicit curriculum and the implicit curriculum, schools teach students through the null curriculum, or through what is not taught (Eisner, 2002). By choosing not to teach students with severe disabilities the skills to meaningfully decode and encode print in a way that allows them to conduct their daily affairs, schools teach students with severe disabilities that they cannot become literate and should not expect to become literate. By making comprehensive literacy instruction part of the curriculum for students with severe disabilities, schools convey to these students that they can and should learn to read and write. This curriculum also drives teachers' beliefs about what they can and should be teaching their students. Teachers' understandings of the purpose of education and beliefs about their students as learners both impact the instruction they offer their students.

Impact of Teacher Beliefs on Instruction

Teacher beliefs link the purposes of education to instructional practice. Beliefs about and expectations for students' literacy learning are rooted in teacher beliefs about who their students are and what they are doing as teachers, and influence instructional practice. The importance of teacher attitudes and beliefs has been highlighted in teacher education and professional development research (e.g. Cochran-Smith, Feiman-Nemser, McIntyre, & Demers, 2008; Guskey, 2002). Teacher beliefs organize and drive teacher actions and reactions, which have significant influence on the experiences of students in schools (Fang, 1996). Teacher beliefs influence teacher behaviors, classroom climate, and student outcomes (Silverman, 2007). Teacher beliefs about knowledge and learning, also called their epistemological stances, are an important element in driving instructional decisions. Teacher epistemological stances form the foundation of their reading instruction, driving decisions about what they should teach, how they should teach it, and how they should assess their students (Cunningham & Fitzgerald, 1996).

Three areas of literature on teacher belief are reviewed here: teacher beliefs about students with disabilities, teacher beliefs about teaching students with disabilities, and teacher beliefs about literacy for students with severe disabilities.

Beliefs About Students with Disabilities

Historically, attitudes toward students with disabilities have been based on a deficit model or medical model of disability (Fisher, Frey, & Thousand, 2003). Under these models, teachers learn about specific disabilities as if all children who share a particular label can be educated in the same way (Fisher et al., 2003). A much more useful attitude is that every student is an individual, and academic and social experiences should be designed to meet each student's particular profile of strengths and needs (Fisher et al., 2003). Additionally, teachers can be much more effective when they understand that disability itself is culturally defined, rather than attributable to deficiencies within individuals (Shapiro, 1999). Teachers who view students with disabilities as individuals whose opportunities are limited by prejudice, discrimination, situations, and environments are in a good position to remove such barriers (Shapiro, 1999).

Zascavage and Keefe (2007) describe four models of disability construct and the instructional practices generally associated with each model. The medical model, as noted by Fisher and colleagues, is rooted in the idea of deficits, which leads to a pessimistic view of disability as personal tragedy. The materialist model is rooted in the belief that a person's value in society can be measured by their occupational skills and financial contributions. Under both the medical model and the materialist model, educational emphasis is placed on life skills and job skills with the goal of future economic contribution. In contrast, the administrative model frames disability as a social problem, and is concerned with removing barriers and offering opportunities. Rooted in administrative concerns such as financing services, this model leads to

a high level of control over students with disabilities by administrators, and allows funding concerns to limit opportunities. One final model described by Zascavage and Keefe is the social barriers model. This model puts the onus on society to remove the barriers and restrictions that cause a mismatch between student and environment. Under this model, the environment may be made accessible to the student through the use of accommodations, or the student may be placed in a different environment considered a better match for his or her needs (i.e. a self-contained special education classroom). The model of disability construct and the instructional practices that schools and teachers adhere to have a significant impact on the educational experience of the students they teach.

In general, teachers' beliefs about students with disabilities also significantly impact their instructional practices (Jordan, Schwartz, & McGhie-Richmond, 2009). Jordan and her colleagues (2009) categorized teacher perspectives as either pathognomonic (disability is internal and fixed) or interventionist (disability is environmentally influenced and fluid). They found that teachers with pathognomonic perspectives blamed students with disabilities and their families for learning difficulties, did not collaborate or problem-solve with families or other professionals, and placed responsibility for student progress on families and other professionals. Teachers with interventionist perspectives considered themselves responsible for teaching all students, made adaptations and accommodations, collaborated with families and other professionals, and allowed students multiple and various opportunities to learn. The authors found that teachers with interventionist perspectives toward disability scored higher than teachers with pathognomonic perspectives on other measures of teacher effectiveness, suggesting that they were more effective teachers for all of the students in their classrooms.

Special education teachers must have positive attitudes toward students with disabilities if they are to teach them effectively; however, people without disabilities, including teachers, may have flawed ideas about what constitutes positive attitudes toward students with disabilities. It is often the case that well-intentioned teachers are overly nice, helpful, protective, and charitable toward students with disabilities (Shapiro, 1999). As a result, they fail to provide students with disabilities with critical access to sociocultural knowledge, accompanied by high expectations for culturally appropriate behavior (Kozulin & Gindis, 2007). These negative teacher attitudes foster dependence, learned helplessness, and social isolation, while preventing students from taking risks and experiencing failure (McLeskey et al., 2010). When a teacher's attitude toward a student with a disability interferes with the student's opportunities to acquire psychological tools and interact with peers, the teacher contributes to what Vygotsky termed a "secondary disability," (Gindis, 1999).

When teachers view students with disabilities as individuals on a spectrum of diversity, rather than as a group separate from "normal" students, they impact how students with disabilities are viewed by their classmates (Shapiro, 1999). Categorization and differential treatment by adults negatively influence the attitudes of typically developing children toward peers with disabilities. Children view peers as more desirable playmates when they believe they are part of their same group, so teacher categorization of students with disabilities as a separate subgroup negatively impacts social interactions between students with and without disabilities. This begins in early childhood environments where peer interaction is negatively impacted by adult control and one-to-one instruction, and positively impacted by teachers who support all students' participation in typical classroom activities (Diamond & Innes, 2001).

When teachers view students with disabilities as individuals on a spectrum of diversity it also impacts how they respond to their students' needs (Meyer & Rose, 2000). A promising development in the field of education is universal design for learning (UDL). UDL rejects the notion of traditional education for "normal" students and the marginalization of students who deviate from this "norm" (Gordon, Gravel, & Schifter, 2009). UDL recognizes that when students are not making academic progress, teachers should consider what changes they can make to their instruction, the environment and the curriculum, rather than blaming the students (Gordon et al., 2009). UDL is based on three principles: multiple means of representation, multiple means of expression, and multiple means of engagement. When these principles are applied appropriately, barriers are consciously reduced, diversity is addressed flexibly, and teachers find ways to make learning possible for all of their students (Gordon et al, 2009; Meyer & Rose, 2000). This view echoes the "interventionist" perspective that is positively related with effective teaching (Jordan et al., 2009).

A starkly different view of students with severe disabilities is rooted in the behaviorist perspective. In their historical overview of educating students with severe disabilities, Spooner and Brown (2011) document the emergence of this perspective. In the 1960's and 1970's, numerous studies showed that the behavior of persons with severe disabilities could be changed in the areas of eating, dressing, toileting, and self-help skills using applied behavior analysis. At the time, this was a vast improvement over institutional care and demonstrated that persons with severe disabilities could learn, work, and participate in meaningful ways. During the 1970's, definitions of "severe disability" focused on descriptions of negative behaviors, such as aggression, self-injury, and temper tantrums; or on what persons with severe disabilities could not do, such as failure to attend to stimuli, failure to speak, and failure to imitate. In the 1980's,

as applied behavior analysis gained wide acceptance as a way to educate students with severe disabilities, definitions of severe disability shifted to focus on the requirement for extensive ongoing supports. The authors note that applied behavior analysis is still the foundation for teaching skills and assessing skill acquisition for students with severe disabilities.

Teachers may fall anywhere on the spectrum of beliefs about students with severe disabilities, from a behaviorist perspective that students with severe disabilities are only capable of learning a limited repertoire of rote skills to a far more inclusive perspective in which students with severe disabilities are important members of the learning community. The impact of their beliefs about students with severe disabilities on their instructional practice is mediated by their beliefs about their own abilities to provide effective instruction.

Beliefs About Teaching Students with Disabilities

Self-Efficacy. Research has shown that teachers' attitudes toward teaching students with disabilities depends highly on their perceptions of their own abilities and likelihood of success in doing so (Durando, 2008; Jung, 2007). Teachers with high self-efficacy for teaching are confident in their skills and abilities to positively impact student outcomes (Romi & Leyser, 2006; Silverman, 2007). Teachers with high self-efficacy are "significantly more willing to adapt curriculum and instruction for students with disabilities, and to be more patient and flexible in providing these students with extra help," (Silverman, 2007, p. 43). Teachers who feel well prepared to teach students with severe disabilities are more likely to provide literacy instruction (Durando, 2008). Research has related teachers' positive self-efficacy beliefs with better student outcomes (Brady & Woolfson, 2008; Takahashi, 2011). In contrast, low teacher self-efficacy leads to decreased teacher motivation, which leads to decreased student performance, and serves to widen the achievement gap between students with and without

disabilities (Takahashi, 2011). Therefore, it is important for teachers to feel well prepared to teach students with disabilities and confident in their abilities to effect positive student outcomes.

Self-efficacy for teaching students with severe disabilities is related to attitudes toward students with severe disabilities. Teachers whose attitudes are shaped by the deficit model of disability or the pathognomonic perspective view themselves as less capable and less responsible for bringing about positive student outcomes (Takahashi, 2011). Brady and Woolfson (2008) found that teachers' feelings of sympathy for students with disabilities were inversely related to their self-efficacy. Teachers who did not view students with disabilities with sympathy were more likely to see themselves as capable of bringing about positive student outcomes, and held higher expectations for their students with disabilities (Brady and Woolfson, 2008).

Expectations for Students. Expectations for learning are typically quite low for students with severe disabilities (Downing, 2005b). The literature about education for students with severe disabilities is dominated by expectations for these students to gain a limited set of life skills and functional skills such as mobility, independence in eating and toileting, compliance, and recognition of a few "survival" words in print (Downing, 2005b; Katims, 2000b; Zascavage & Keefe, 2007; Zigmond et al., 2009). Lowered expectations for social interaction and academic learning devalue students with severe disabilities and lead to self-fulfilling prophecies of incompetence (Keefe & Copeland, 2011; Kliewer, 2008; Zascavage & Keefe, 2007). The long-standing focus on behaviorist instruction targeting decontextualized skills, inappropriately applied to areas such as literacy, language, and cognition, reflects expectations that students with severe disabilities are not capable of learning in meaningful ways; they are only capable of being trained to provide rote responses in a limited set of discrete skills (see e.g., Browder et al., 2008; Browder et al., 2009; Browder et al, 2006; Hockenbury et

al., 2000; Spooner et al., 2012). Many teachers do not expect their students with severe disabilities to learn any literacy skills at all (Downing, 2005b; Durando, 2008; Kliewer & Biklen, 2001; Kliewer et al., 2006). In a survey of 82 teachers of students with multiple disabilities, Durando (2008) found that over half of the respondents did not agree that reading instruction is appropriate for all students. This belief relieves teachers of feeling responsible for providing literacy instruction (Downing, 2005b).

Some illustrative examples of low teacher expectations can be found in qualitative research. Kliewer and Biklen (2001) reported that professionals dismissed families' assertions of competence in their children with severe disabilities. The professionals focused on gross motor and adaptive skills, and indicated to families that mastery of such skills preceded any possibility of symbolic or abstract competence. The special education teacher participating in Koppenhaver and Erickson's (2003) study kept writing materials out of the reach of students except during teacher-controlled tracing activities. This teacher stated a belief that the students were not interested in writing, and may put pencils in their mouths. The goals written in students' individualized education plans reflected low expectations for simple decontextualized tasks or progress in vague "readiness" skills. Similarly, Kliewer (2008) noted a pattern in the segregated settings he and his colleagues studied. They found that literacy for students with severe disabilities "was commonly limited to extremely brief, adult-designed expressions of bodily needs" (p. 33). These included words such as "bathroom" and "eat," as if students with severe disabilities would have nothing more to say than requests to have physical needs met.

Epistemology. A teacher's beliefs about knowledge and learning, known as epistemology, forms the basis of his or her instructional practice, influencing goals, methods, selection of materials, and organization of the classroom (Ferrara, 2012). The importance of

epistemology in education cannot be overstated. According to Cunningham and Fitzgerald (1996), "Many, if not most, educational debates are not at heart about different approaches or methods, or even different objectives or goals. Rather, they are about different views of what it means to learn, to know, and to become educated." (p. 39).

Elements of epistemology related to teaching students with disabilities, such as viewing ability as fixed or malleable, have been related to instructional practices (Jordan et al., 2009). For example, Jordan and her colleagues found that teachers who viewed ability as fixed and stable were more likely to use teacher-controlled, transmissive instructional methods and extrinsic motivators for students. Teachers who viewed ability as malleable were more likely to use student-centered and cooperative instructional methods, and were more likely to rely on intrinsic motivation. Jordan and her colleagues further found that teachers with naive beliefs about the nature of knowledge, such as the belief that knowledge is certain and there is always one right answer, were less effective teachers and relied on student memorization and recall. Teachers who believed that knowledge is uncertain, situated in individual perspectives, and subject to change were more effective teachers. These teachers engaged their students in higher-order thinking. In sum, teacher beliefs about ability/disability, teacher beliefs about knowledge and learning, and teacher beliefs about their roles and responsibilities are all interrelated, and impact instructional practices and teacher effectiveness.

Beliefs About Literacy for Students with Severe Disabilities

For all teachers, literacy instructional approaches are rooted in epistemological beliefs about reading. According to Ferrara (2012), theoretical perspectives of literacy development fall into three general categories: (1) bottom-up perspectives that focus on foundational skills, and view readers as making meaning through the accurate processing of letters and words; (2) top-

down perspectives that focus on background knowledge and language comprehension as the tools of making meaning; or (3) interactive perspectives that view reading as a transaction between reader and text, in which the reader requires accurate processing of text, background knowledge, language ability and a purpose for reading in order to connect with, and make meaning of, text. Literacy programs based on the interactive perspective enjoy wide support in the general education literature, but this perspective is just beginning to be applied to students with severe disabilities (Erickson, Koppenhaver, & Cunningham, 2006).

Cunningham and Fitzgerald (1996) maintain that reading theories are themselves rooted in epistemological perspectives. Epistemology, whether examined or unexamined, forms the basis of belief and understanding that drive instructional practice. Epistemological perspectives can be understood through such issues as whether we can have knowledge of a single reality independent of the knower; whether there is such a thing as truth; how knowledge can come to be considered true; whether knowledge is universal or particular; where knowledge is located relative to the knower; whether knowledge comes primarily from sense data, mental activity, or interactions of both; and whether knowledge is discovered or created. Knowledge itself can be broken down into three general types: background knowledge, or knowledge by acquaintance; procedural knowledge, or knowledge of how to do something; and knowledge of meaning, or factual knowledge. Views of reading can be understood by examining these elements; how teachers expect their students to make meaning of texts is very much based on their beliefs about where knowledge is located and how it is attained. In turn, these beliefs drive teachers' decisions about what to teach, how to teach it, and how to assess student progress.

Various models of reading have been proposed, with a variety of epistemological perspectives (Cunningham & Fitzgerald, 1996). Views of reading may fall anywhere along the

spectrum between a focus on the text, a focus on the reader, and a focus on the interactions or transactions between text and reader. Views of teaching reading may fall anywhere along the spectrum between teachers holding knowledge which they impart to students, students constructing their own knowledge, and teachers scaffolding student construction of knowledge. Markedly different points on these spectrums are evident in an examination of the differences in research and practice between literacy instruction in general and literacy instruction for students with severe disabilities.

The traditional view of reading paints reading development as acquiring and integrating an increasingly complex set of skills, which work interdependently as a system (Adams, 1990; Katims, 2000b; Kliewer & Biklen, 2001). Students with severe disabilities are typically seen as incapable of mastering and integrating the skills needed to read and write in the traditional manner, and are stymied at the "readiness" phase (Kliewer & Biklen, 2001). In this view of reading, cognitive development is the precursor to skill mastery, which leads to using written language and symbols to communicate meaningfully with others (Kliewer & Biklen, 2001). Students who have not proven cognitive "readiness" are typically steered away from literacy in favor of functional or adaptive skills (Agran, 2011; Zascavage & Keefe, 2007). This creates a self-fulfilling prophecy in which a presumption that students with severe disabilities will not learn to read leads to denial of reading instruction, which results in students not learning to read (Keefe & Copeland, 2011; Zascavage & Keefe, 2007). Hence, a teacher's belief that students with severe disabilities are incapable of learning to read will lead him or her to provide no reading instruction at all and therefore ensure that the student does not learn.

Viewing students with severe disabilities as incapable of making progress in literacy not only leads to a denial of reading instruction; it denies students a literate identity. An alternative

to this devaluing perspective of students with severe disabilities is the concept of *local understanding* (Kliewer, 2008). Local understanding values knowledge of individual students within local contexts, rather than viewing students under the umbrella of universal truths (Kliewer, 2008). Local understanding is given little value in the field of education, while scientific knowledge and attempts at universal understanding are given high value. Teachers, in collaboration with families, possess expertise on their students, and their intimate knowledge of students should be held in high regard rather than being sublimated by standardized test scores and universally-applied interventions. Yet, disability definitions and labels in special education often trump local understanding.

When local understanding is valued, the concept of literacy can be expanded to include idiosyncratic and nonconventional behaviors and symbols (Kliewer & Biklen, 2001). This is extremely useful in constructing students with severe disabilities as literate people, and in supporting students with severe disabilities in their communication and interactions with others (Downing, 2005a). However, an idiosyncratic or nonconventional construction of literacy should be viewed as a starting point rather than an end result (Erickson et al., 2010). As a starting point, such idiosyncratic and nonconventional behaviors can lead to meaningful social interactions that drive the development of conventional literacy skills that open access to further learning opportunities (Erickson et al., 2009; Kliewer & Biklen, 2001). As an end result, idiosyncratic or nonconventional behaviors and symbols limit further opportunities for learning and for interacting with people who are not already deeply intimate with the student (Erickson et al, 2009; Erickson et al., 2010). For example, rebus-type, picture-supported text not only creates a barrier for students to learn to read, but abstract symbols for words that cannot be represented by a picture are difficult to understand (Hatch, 2009). Conventional literacy skills are essential

in order for students with severe disabilities to go beyond rote memorization of information into building the capacity to find and build information in all subject areas and throughout life. They are also essential to communication that can be understood across environments and partners (Erickson & Clendon, 2009; Erickson et al., 2010).

One strand of research that attempts to provide students with severe disabilities access to instruction in conventional rather than nonconventional literacy is the functional approach (Katims, 2000b; Keefe & Copeland, 2011). This approach to literacy is rooted in the medical or materialist models of disability described by Zascavage and Keefe (2007). In the functional approach to literacy, students are expected to memorize a limited number of sight words that would theoretically allow them to function at a very basic level in their daily lives (Erickson et al., 2009; Katims, 2000b). Students taught using this approach are not expected to be able to decode or identify words that were not explicitly taught. Although this approach has received much attention in the field of education for students with severe disabilities (e.g., Browder & Spooner, 2006; Browder et al., 2006; Spooner et al., 2012), many researchers agree that this approach does not provide students with genuine access to learning or literacy (Downing, 2005b; Erickson et al., 2009; Katims, 2000b; Keefe & Copeland, 2011). While sight words are often useful as a small part of comprehensive literacy instruction, when they are taught in isolation they do little to support meaningful use of print (Adams, 1990; Downing, 2005b; Erickson & Clendon, 2009).

In recent years, there has been a small but promising movement in literacy research for students with severe disabilities. Some researchers have recognized the limiting nature of behaviorist approaches to teaching decontextualized sight words or other literacy subskills, while simultaneously recognizing the importance of conventional literacy skills for students with

disabilities to function academically, socially, and in all areas of life (e.g., Erickson et al., 2009; Hatch, 2009; Katims, 2000b; Koppenhaver & Yoder, 1993). These researchers have called for students with severe disabilities to receive the kinds of high-quality, active, interactive, engaging, constructivist, comprehensive literacy instruction offered to students in general education, with the same focus on outcomes that allow students to meaningfully engage with print. Katims (2000b) describes these researchers, and the teachers who adopt their recommended practices, as holding a progressive literacy perspective. According to Katims, a progressive literacy perspective is evidenced by the following beliefs: (1) students with severe disabilities can become literate; (2) IQ alone does not predict achievement; (3) good instruction matters; (4) emergent literacy precedes conventional literacy and is a valuable stage of literacy development; (5) reading and writing instruction should focus on meaning and authentic uses of print; (6) reading and writing are complementary activities and should be taught in interconnected ways; (7) there are multiple strategies to construct meaning from text; (8) and reading and writing are interactive processes between reader and writer.

Researchers and teachers who take this progressive perspective have shown that students with severe disabilities who receive comprehensive literacy instruction show positive outcomes on formal and informal measures of literacy learning. The literature on comprehensive literacy instruction for students with severe disabilities will be described in the following section, along with the literature on reductionist literacy instruction.

Literacy Instruction in Self-Contained Special Education Classrooms

The literacy instruction provided to students with severe disabilities often looks very different from the literacy instruction provided to students in general education, as well as students with mild disabilities. The literacy instruction provided to students with severe

disabilities is rooted in a different set of beliefs about who these students are, what should be happening in their classrooms, the purpose of their educations, and expectations for what they are capable of learning. Although individual teachers and parents may hold high expectations for individual students, the field of education has typically held low expectations for literacy learning for students with severe disabilities. In fact, reports of people with severe disabilities becoming literate have been met largely with disbelief and dismissal (Kliewer et al., 2006). The presumption that students with severe disabilities cannot learn to read leads to a de-emphasis on reading instruction, creating a self-fulfilling prophecy that is then used to support continued denial of reading instruction (Downing, 2005b; Keefe & Copeland, 2011).

Research regarding effective reading instruction for students with intellectual disabilities is scant (Al Otaiba & Hosp, 2004; Erickson et al., 2009). However, reviews over the past two decades have consistently resulted in the same conclusion: students with severe disabilities do not receive literacy instruction that reflects the instruction provided to students without disabilities. For example, in their review of the available literature about literacy for students with severe disabilities, Koppenhaver and Yoder (1993) found that students with severe disabilities received far less literacy instruction than students in general education, received instruction in small groups or one-on-one, engaged with text at the word or sentence level, participated in passive ways, had little interaction with their peers during instruction, and were frequently interrupted by nonliteracy activities. They found that students with severe disabilities largely experienced instructional practices that are *negatively* correlated with literacy achievement, such as the use of worksheets, passive student involvement, and an instructional focus on spelling and punctuation rather than more meaningful aspects of writing. In his review of the literature, Mike (1995) found that students with severe disabilities most often received

literacy instruction in subskills and words in isolation, not reading connected text. They most often received instruction one-to-one rather than in group settings. For students with severe disabilities, writing was highly controlled by teachers and limited student expression. Mike identified three factors that negatively impact literacy learning for students with severe disabilities: (1) limited literacy instruction time due to therapies, related services, positioning, lengthy transitions, shifting schedules, and disruptions; (2) overreliance on individual instruction, which is far less effective than group instruction; and (3) limited opportunities for students to interact with one another in ways that involve literacy.

Browder and colleagues (2006) reviewed 128 studies that addressed reading instruction for students with severe cognitive disabilities, including studies that addressed instruction in picture identification for students using augmentative and alternative communication systems. Most of the studies were conducted in self-contained special education classrooms or research settings (67%), but a few were conducted in general education classrooms, homes, and communities. Over 70% of the studies focused on teaching students functional sight words, and about a third of the studies focused on teaching students picture identification. Only 13 studies addressed phonics instruction, and 5 addressed phonemic awareness instruction. While 31 studies addressed comprehension, they did so in a reductionist way focusing on the meaning of individual words by having students use sight words within functional activities or matching words to pictures. Of the studies addressing sight words, 90% used massed trial training as the instructional format. This included systematic prompting and feedback using praise, token rewards, and edible rewards. While the authors concluded that there is sufficient evidence for teaching students with severe disabilities to read sight words using massed trial instructional

techniques, they noted the lack of evidence for teaching other components of literacy. The data also revealed a consistent reliance on massed trial instruction.

A review of the literature published between 2003 and 2009 (Erickson et al., 2009) raises several issues about literacy instruction for students with severe disabilities. First, when nonconventional and idiosyncratic behaviors or rote memorization of sight words are accepted as literacy learning for students with severe disabilities, these students are denied access to conventional literacy instruction. Conventional literacy instruction teaches students to gain and convey meaning from print, and is the most functional and useful type of literacy instruction with the best outcomes for students. Second, certain instructional practices that are deeply rooted and commonly used in special education are inadequate, counterproductive, and actually widen the gap between students with severe disabilities and their peers in general education. Third, the multiple components of comprehensive literacy instruction can be addressed for students with severe disabilities. Each of these issues will be explored in greater detail below.

Conventional Literacy Instruction for Students with Severe Disabilities

Erickson et al. (2009) define literacy as "the cognitive processes of comprehending and composing meaning in written texts," (p. 6). For students with severe disabilities, as with all students, learning to read and write is not only part of the curriculum, but provides access to all other parts of the curriculum and to lifelong learning. Reading and writing are functional life skills, allowing students to understand and communicate ideas, gain and convey information, and conduct their daily affairs. Literacy skills are functional skills because they increase independence and autonomy across environments (Ruppar, Dymond, & Gaffney, 2011). In order for literacy skills to be functional, students must be able to use them in meaningful ways, across environments and conversation partners (Erickson & Clendon, 2009; Erickson et al., 2010).

Idiosyncratic and nonconventional forms of literacy are not easily understood by people who are not already intimately familiar with the student using them; in fact, many picture symbols are arbitrary and confusing, and therefore without communicative usefulness with unfamiliar communication partners (Erickson et al., 2010; Hatch, 2009). Because reading is a complex system of skills and knowledge, no discrete subskill is useful in and of itself (Adams, 1990). Memorizing sight words, for example, fails to provide students with the tools to gain and convey meaning through print, to communicate with various partners in various environments, or to conduct their daily affairs (Erickson et al., 2009; Katims, 2000b). The most functional, useful, and meaningful literacy instruction for students with severe disabilities is conventional literacy instruction that imparts skills required to construct and convey meaning through reading and writing (Erickson et al., 2009).

Ineffective Literacy Instructional Practices for Students with Severe Disabilities

Most literacy instruction for students with severe disabilities looks much different from the instruction provided to their nondisabled peers. In some ways, these differences may be intended to increase the intensity of literacy instruction or to offer alternative methods of instruction for students who receive less benefit from reading instruction offered in the general education setting. In other ways, differences serve to decrease instructional emphasis on literacy in favor of "readiness" or "life" skills. According to Koppenhaver and his colleagues (2007), observations of literacy instruction for students with severe disabilities have revealed "a fairly consistent pattern of ineffective instruction," (p. 80). Students with severe disabilities receive literacy instruction that differs from the instruction provided to their nondisabled peers in terms of amount of instruction, content, instructional methods, expectations for participation and engagement, and instructional context.

Amount of instruction. In general, students with severe disabilities come to school with less exposure to print and literacy activities than their nondisabled peers (Al Otaiba & Hosp, 2004; Erickson & Koppenhaver, 1995). This trend of decreased exposure to print combined with limited literacy learning opportunities continues once students with disabilities come to school (Beck, 2002; Erickson & Koppenhaver, 1995). Instruction may be intentionally reduced for students who are unable to show their understanding using traditional communication methods (Downing, 2005a), and instruction may be withheld from students who are unable to demonstrate mastery of "readiness" skills that are viewed as precursors to literacy (Downing, 2005b; Keefe & Copeland, 2011). Literacy instruction may be reduced in favor of other skills, such as those of self-care, that seem relevant to teachers who hold very low expectations for their students with severe disabilities (Keefe & Copeland, 2011). Mike (1995) observed only 30 minutes of literacy instruction per day, but noted that this time was further reduced by positioning, transitions, and interruptions. Koppenhaver and his colleagues (2007) echoed this, noting that of the little time scheduled for literacy instruction for students with severe disabilities, much of it is lost to classroom management, repairing technology, distributing materials, and setting up activities. Hence, the students who need the most instruction are actually receiving the least.

Content. Most of the research regarding reading instruction for students with severe disabilities has focused on sight word instruction (Browder et al., 2006) or instruction in decontextualized subskills (Browder et al., 2008; Katims, 2000a). Reading instruction that focuses on the memorization of sight words or decontextualized subskills is inconsistent with reading instruction provided in general education, and with what is generally understood to be effective reading instruction (Adams, 1990; Al Otaiba & Hosp, 2004; Katims, 2000a). It is also of very little use for students and fails to provide students with severe disabilities access to

literacy or to other areas of the curriculum (Erickson et al., 2009; Keefe & Copeland, 2011). Even the instruction students receive in "survival" sight words can be quite useless, as students are frequently taught these words in decontextualized and isolated ways, so the knowledge does not generalize to meaningful settings (Downing, 2005b). However, these types of reading instruction dominate the literature for students with severe disabilities.

In a review of the literature regarding reading instruction for students with severe disabilities, Browder et al. (2006) found that most of the studies focused on acquisition of sight words, with an emphasis on "functional" sight words. In the few studies that addressed comprehension, the focus was on word-picture matching or using sight words in the context of functional activities; the focus was on understanding single words rather than understanding connected text, as is the case with reading comprehension in general education. In addition, the emphasis of most of the studies was on "functional" sight words, such as those found in recipes and simple directions, but the words were taught out of the context of these meaningful applications. This type of instruction exposes students with severe disabilities to content that is very different from the content to which their peers in general education are exposed and limits their opportunity for learning.

Instructional methods. In a review of the literature regarding reading instruction for students with significant intellectual disabilities, Browder et al. (2006) identified the following instructional practices as effective: massed trial, systematic prompting, and time delay prompting. The researchers noted that these practices included the use of feedback, praise, token reinforcers, and edible reinforcers. They applied their findings only to instruction in sight word reading and picture identification. However, Browder et al. (2008) extended these instructional practices to instruction in phonemic awareness, phonics, comprehension, and concepts of print.

Instructional methods included task analysis, time delay prompting, drill and practice, and a system of least prompts that included modeling and physical guidance. All of these methods reflect the behaviorist traditions of special education dating back to the 1960's.

In an analysis of textbooks used to prepare general and special education teachers, Katims (2000a) found that the dominant orientation toward literacy instruction for students with disabilities was a reductionist orientation, focusing on a behavioral approach to teaching isolated subskills rather than making meaning of connected text. Koppenhaver et al. (2007) found that much of the literacy instruction provided to students with severe disabilities focused on individual completion of worksheets, and reading and writing words or sentences in isolation rather than in connected texts. Overall, instructional methods in literacy instruction for students with severe disabilities are teacher-directed, focusing on explicit instruction or prompting and requiring rote responses in isolated, decontextualized, discrete skills. According to Vygotskian perspective, there is a distinction between development and skill acquisition (Daniels, 2007). Instructional methods for students with severe disabilities focus not on development, but on skill acquisition. Compounding the problem, these instructional methods require little more than passive participation from students.

Participation and engagement. Learning is a social and interactive undertaking (Bandura &Walters, 1963; Bodrova & Leong, 2007; Vygotsky, 1978). However, literacy instruction for students with severe disabilities is often delivered one-on-one or in small groups in a teacher-directed manner (Browder et al., 2008; Mike, 1995; Spooner et al., 2012) or through individual completion of worksheets or other tasks (Koppenhaver et al., 2007; Mike, 1995). Koppenhaver and Yoder (1993) found that students with severe disabilities participated in passive ways during literacy instruction, and had little interaction with their peers. Mike (1995)

found that issues of classroom organization, planning for differentiation, and scheduling led the teacher of a self-contained special education class to reject grouping in favor of students working alone or with an adult. Along with limited opportunities to interact with their peers, students with severe disabilities frequently have impairments in communication, which make it difficult for them to take advantage of the few opportunities that do exist (Downing, 2005b; Mike, 1995), yet improved literacy is one of the most important ways that teachers can address the complex communication impairments experienced by many students with severe disabilities (see e.g., Koppenhaver, 2000; Yoder, 2001).

Literacy is communication; it involves gaining and conveying meaning through reading, writing, listening, and speaking (Downing, 2005b; Erickson & Clendon, 2009; Ferrara, 2012; Zascavage & Keefe, 2004). Skotko, Koppenhaver, and Erickson (2004) found that as parents interacted with their children with severe disabilities around storybook reading, the children's communication increased and improved. As the parents moved away from solely using directives and increasingly engaged their children using natural comments and questions about the story, children increasingly attended, participated, and communicated about the story. Kliewer and Biklen (2001) described an 11 year-old girl with severe disabilities who could not read, write, or speak when she entered a general education classroom. The students in the class engaged her by exchanging notes, a common activity for the girls in the classroom. Over the course of the school year, this communicative interaction became the mode through which the girl learned to use a symbolic communication system. According to Kliewer and Biklen, social interaction drives literacy development, while literacy development supports social interaction.

Unfortunately, students with severe disabilities are often denied opportunities for social interaction, active participation, and communicative engagement. Students with severe

disabilities often passively receive instruction in teacher-directed ways (Browder et al., 2008; Koppenhaver & Yoder, 1993; Spooner et al., 2012). Students with severe disabilities have little interaction with peers, as they receive one-to-one instruction or work independently (Koppenhaver et al., 2007; Mike, 1995). This represents missed opportunities and decreased quality of instruction.

Instructional context. For students with severe disabilities, the dominant instructional context is the self-contained special education classroom (see, e.g., Browder et al., 2008; Erickson & Koppenhaver, 1995; Koppenhaver & Erickson, 2003). While the general education classroom has yielded dramatically positive outcomes and opportunities for literacy learning for students with severe disabilities (Kliewer & Biklen, 2001), this context is rarely offered to students with severe disabilities in North Carolina (North Carolina Department of Public Instruction Exceptional Children Division, 2012). Students become enculturated to the environment in which they are educated (Jackson et al., 2009). According to Jackson and colleagues, self-contained classrooms provide ineffective instructional contexts for many reasons: 1) a single special education teacher must often plan and teach content to students in multiple grades, and there are limits to the resources one teacher can provide; 2) a classroom of students who each have difficulties in communication cannot provide the rich peer interactions known to support learning; and 3) self-contained classrooms lack age-appropriate models of typical patterns of academic, social, and interpersonal behaviors for students to learn and navigate. Research has shown that even less-than-ideal general education settings are superior to self-contained special education settings in terms of the amount and quality of instruction provided, student engagement in academics and socialization, and academic and social outcomes (Jackson et al., 2009).

Comprehensive Literacy Instruction for Students with Severe Disabilities

In recent years, a number of researchers have questioned the ineffective, limiting, and fairly useless literacy instruction that has dominated the educational experiences of students with severe disabilities. A small but growing number of studies have examined the effectiveness of comprehensive reading instruction for students with severe disabilities as an alternative to the status quo. These studies approach the purpose of literacy instruction for students with severe disabilities in ways that are profoundly different than those traditionally found in special education; the purpose is not to learn survival words, but to communicate and participate in meaningful ways. These studies reflect beliefs about teaching students with severe disabilities that are profoundly different than those traditionally found in special education; students are seen as capable of learning to communicate and participate meaningfully using conventional literacy. In these studies, students with severe disabilities are given access to literacy instruction that, in its underlying purpose and the teachers' underlying beliefs, is far more closely aligned to general education instruction than to traditional special education instruction.

Erickson and Koppenhaver (1995) investigated an instructional program developed for eight students ages 5 to 11 in a single self-contained special education classroom. The students had severe and complex disabilities, particularly in the area of communication. The classroom teacher, speech pathologist, two paraeducators, and a classroom aide were all present in the classroom full-time. The program was designed to be integrated and transdisciplinary rather than using a pull-out model for services such as speech and physical therapy. The program was designed to emphasize child-directed, constructive reading and writing activities. There was also an emphasis placed on group learning. There was an ongoing focus on communication, using a variety of assistive technologies to develop each student's abilities to communicate and

participate. The students made progress in their communication, participation, and reading and writing. The authors concluded that the success of the program was its resemblance to quality instruction that is found in general education; the students simply needed the tools to access the instruction, such as adaptations and assistive technologies.

Erickson, Koppenhaver, Yoder, and Nance (1997) conducted a longitudinal qualitative case study to examine one student's communication and literacy development over his fourth and fifth grade years. The student was described as having severe disabilities, including impairments in speech, vision, cognition, and self-care. He was also described as having severe physical impairments, with limited use of his hands. He attended general education classrooms with a full-time aide. At the beginning of fourth grade, he was using eye gaze to select from limited communication options, and was beginning to use a voice-output communication device. In an effort to help him become more independent in his communication, his device was programmed so that he could select individual letters, and so that he could select from a core vocabulary of words organized into categories. His educational team planned for comprehensive literacy instruction integrating reading and writing using connected text. The focus was on finding ways for the student to engage in general education literacy activities by providing adaptations and assistive technology. At the same time, his literacy development supported his use of assistive technology, allowing him to generate his own writing rather than relying on limited message options preprogrammed by others. Over the two years of the study, the student developed multiple strategies to communicate using preprogrammed words, invented spelling, and word prediction software. His educational team continued to problem solve to increase his independent access to general education literacy activities. At the same time, he was fully

included as part of general education fourth and fifth grade classes, gaining access to content across the curriculum.

Koppenhaver and Erickson (2003) explored the emergent literacy development of three preschool students with autism, who attended a self-contained special education class for children ages 3 to 5 with autism spectrum disorders. All three students demonstrated significant delays on assessments of cognitive performance and communication. Researchers gathered four months of baseline data, including observations, documents, and interviews, then five months of intervention data. Baseline data revealed a lack of literacy learning opportunities; writing materials and books were kept out of reach and only used during structured activities such as tracing. Instruction was largely teacher-directed and one-on-one. During the intervention phase, the researchers focused on increasing literacy learning opportunities by creating a print-rich environment with a wide variety of reading and writing materials. The researchers created multiple opportunities to read and write in meaningful ways throughout the day, and used responsive feedback rather than direct instruction to provide students with information about print. They also emphasized group activities and interactions. The researchers found that students' interest in reading and writing activities grew dramatically, with students frequently choosing literacy activities during free play. Students made progress in name writing, letter recognition, sight word knowledge, attention to print, and other activities of emergent literacy. Notably, they made this progress without structured, adult-controlled instruction. The presence of reading and writing materials, time for independent exploration, adult modeling, interaction, and adult feedback yielded significant growth in emergent literacy development.

Al Otaiba and Hosp (2004) reported the results of a tutoring program for four students with Down syndrome aged 7 to 12. The students each received ten weeks of one-on-one reading

instruction that included an integrated and comprehensive approach to literacy including phonological awareness, phonics, sight-word fluency games, vocabulary and comprehension, and progress monitoring. Instruction was provided by graduate students in a clinical setting. The researchers found this model of reading instruction to be effective for the students, with students making gains in decoding and word reading. However, the researchers did not assess reading comprehension.

Erickson, Clendon, Abraham, Roy, and Van de Carr (2005) reported the results of a classroom-based literacy program for 23 students with severe to profound intellectual disabilities aged 5 to 12. The MEville to WEville Early Literacy and Communication Program (AbleNet, 2005) was specifically developed for students with moderate to severe disabilities and focused on comprehensive literacy instruction, using meaningful and connected text, and making literacy learning a social and interactive endeavor. The students received eight weeks of instruction in three self-contained special education classrooms. The program was comprised of lessons addressing language development, reading and listening comprehension, writing development, reading development, and literacy experience. The program was designed to integrate literacy and communication instruction across a variety of contexts and activities. Students showed academic and practical progress, including an increase in the number of students who were able to participate in the literacy assessment. Although results were not statistically significant on quantitative measures, students with severe and complex disabilities showed overall growth in literacy skills in a short period of time, which has practical significance. Observation data and teacher reports showed that students initiated more communication and interactions with adults and peers, becoming more active and engaged classroom participants.

A Changing Landscape

While the research described above makes comprehensive conventional literacy instruction accessible to students with severe disabilities in ways that are closely aligned with general education, other researchers are beginning to reach for similar goals from a traditional special education perspective. Even researchers grounded in behaviorist, rote, functional literacy instruction have begun to recognize the limitations of this work. Browder and her colleagues (2008) recognized the need for students with severe disabilities to receive instruction in aspects of literacy beyond sight words. These researchers reported the results of a classroom-based scripted reading program for 23 students with moderate to profound intellectual disabilities in grades K to 4. The students received one school year of instruction in seven self-contained special education classrooms. Half of the students in each class were assigned to the treatment group while the other half were assigned to the control group. The students assigned to the treatment group received scripted instruction focused on sight words, concepts of print, phonemic awareness, phonics, and comprehension. The students assigned to the control group received instruction focused on sight words and pictures. However, all students also participated in shared story reading. Students in the treatment group made significant gains in phonemic awareness and on a researcher-developed measure designed to assess the skills taught in the scripted program. All students made gains in an assessment regarding Conventions of Reading, which was aligned with the shared story reading that all students received.

While Browder and her colleagues were able to show that behaviorist techniques were effective in terms of student gains on a test of skills explicitly taught, all students gained useful literacy skills by participating in shared story reading, which does not require one-on-one explicit instruction. Behavioral approaches to teaching literacy are highly controlling, limiting, and

reductionist, yet these approaches have long been viewed as the only way for students with severe disabilities to learn. For all students, schooling is about far more than learning explicit skills. Different instructional practices and sets of expectations for students are the implicit curriculum, teaching students what behaviors are of value, and what sort of people they should become and expect to be (Eisner, 2002). As the field of special education seeks to provide students with disabilities an education that truly prepares them for the world, researchers are finding that providing accommodations so that students with severe disabilities can access comprehensive conventional reading instruction is an effective means of literacy instruction. Without compelling evidence that it is truly necessary to deny this type of instruction to students in favor of reductionist, behaviorist teaching methods, there is no reason for the field of special education to continue to rely on such outdated practices.

CHAPTER 3: METHODS

The purpose of this study was to understand what happened when teachers were challenged to provide comprehensive conventional literacy instruction to students with severe disabilities in self-contained special education classrooms. The study examined data taken over the course of a full school year in two self-contained special education classrooms as the teachers implemented a literacy curriculum based on comprehensive literacy instruction using instructional strategies shown to be effective in general education, but rarely used with students with severe disabilities.

The study utilized a grounded theory approach, which enabled the construction of a theory of what was happening from the data itself (Charmaz, 2006). By constructing codes from the data and engaging in constant comparison and analysis, the data was allowed to tell its own story, rather than being used to prove or disprove a hypothesis. Given that our understanding of literacy for students with severe disabilities is nascent and our understanding of literacy instruction in self-contained special education classrooms is in the earliest stages of development, grounded theory was the most appropriate method to understand what was happening in the settings selected for the investigation.

The settings for the current study were self-contained special education classrooms located in public schools in central North Carolina. Data was collected as part of a larger study investigating the effectiveness of the MEville to WEville Literacy and Communication Program (AbleNet, 2005). This study was not about the MEville to WEville program per se, but rather the study was about the classroom context in which the curriculum was used.

The MEville to WEville Program

The MEville to WEville Early Literacy and Communication Program (AbleNet, 2005) is an instructional program specifically developed for students with moderate to severe disabilities using evidence-based practices that have been identified in general education. The purpose of the program is to develop students' reading, writing, and communication in integrated and meaningful ways. The program focuses on building a classroom community, emphasizing the social and cooperative nature of learning. It incorporates a range of ideas for adaptations and accommodations for each lesson to support teachers as they plan for their individual students' communication and access needs.

The curriculum focuses on research-based principles of effective literacy instruction. These include integrating reading with writing, using quality literature, focusing on the deeper meanings in texts, and teaching discrete skills within the contexts of connected text (Pressley, 2009). The comprehensive literacy instruction addresses language development, reading and listening comprehension, writing for expression, and engagement in literacy learning activities. The program avoids mastery-focused instruction commonly offered to students with severe disabilities by providing repetition with variety, so that students learn to use skills in different contexts and for different purposes over time (Erickson et al., 2005).

While the MEville to WEville Curriculum was developed based on principles of effective literacy instruction for typically developing students, the program has subsequently been proven effective for students with severe disabilities. Erickson and her colleagues (2005) found that students with severe disabilities made gains in a variety of literacy skills as measured using a pretest and posttest. They also found that students increasingly initiated communication and interaction with both adults and peers. Through the program's letters to parents and home

extension activities, collaboration and communication between families and teachers increased, helping teachers plan lessons that were more meaningful to each of their students.

Settings

Eight self-contained special education classrooms in North Carolina participated in the larger study as intervention classrooms. Two high school classrooms, three middle school classrooms, and three elementary classrooms participated. All teachers and staff in all classrooms consented to participate in the study. Observations focused on the students who consented to participate in the study. Each classroom was located within a public school. All teachers received the MEville to WEville instructional program as part of their participation in the larger study.

All schools participating in the study are located in public schools in one county in North Carolina. According to the district's web site, the county has over 30,000 students served in over 50 schools. During the 2010-2011 school year when the data were collected, 61% of students county-wide received free or reduced lunch. Schools participating in the study ranged from 39% to 99% of students school-wide receiving free or reduced lunch. On average, students in the county performed 15 percentage points lower on end-of-grade tests than the statewide average. This was also the case when comparing district averages to state averages for students with disabilities (NC School Report Cards, 2011).

The two classrooms selected for the study were elementary classrooms located in two different schools. Classroom 1 was located in a school (School 1) with 54% of students receiving free or reduced lunch. Classroom 2 was located in a school (School 2) with 99% of students receiving free or reduced lunch. A breakdown of students by ethnicity for each of the two schools is shown in Table 3.1.

Table 3.1
Ethnic representation in two schools participating in the study

Ethnicity	School 1	School 2
Black	25%	45%
White	35%	5%
Latino	30%	47%
Asian	7%	3%
Multi	4%	1%

Participants

The larger study was open to self-contained special education classrooms for students ages 8-21 with moderate to severe disabilities and multiple disabilities. Participants included students, their teachers, and their paraeducators. For this study, two classrooms were selected as representatives of two very different epistemological stances in teaching students with severe disabilities and two different profiles of student need.

Classroom 1 participants

Adults. Across the school year, five adults from classroom 1 participated in the study. The teacher (Teacher 1) was a white woman in her fifth year of teaching. She began her teaching career in elementary general education, but switched after her first year to her current position as a self-contained special education teacher. She is dually certified in elementary education and special education, and holds a Master's degree in literacy. There were two full-time paraeducators in the class. One paraeducator (PE1a) was a white woman in her eleventh year as a paraeducator, who had been with the teacher all four years in this classroom. She has a GED, and is a parent of children with disabilities. The second paraeducator changed midyear. At the beginning of the year, this second paraeducator (PE1b) was a white woman who had been

a paraeducator in general education at the school for many years. Later in the year, she was replaced by a black man just embarking on his career (PE1c). Two college students, both white women, shared a full-time position as a personal aide to one of the students. They were employed by the student's parents, but supported the student at school.

Students. There were eleven students in classroom 1 who participated in the study. Of these, there were seven boys and four girls. Seven of the students were black, two were white, one was multiracial, and one was a Native Pacific Islander. Five students were in the third grade, four students were in the fourth grade, and two students were in the fifth grade. They were served under labels including autism, visual impairment, multiple disabilities, intellectual disability, and emotional disability. All of the students were capable of meeting their self-care needs with minimal support, and all but one used speech to effectively meet their face-to-face communication needs. Nine of the eleven qualified for the alternate assessment.

Classroom 2 participants

Adults. Across the school year, four adults in classroom 2 participated in the study. The teacher (Teacher 2) was a white woman in her fifth year of teaching. She holds a Master's degree and is dually certified in two areas of special education: mild/moderate and moderate/severe. She also holds a reading certification. There were three full-time paraeducators in the class. One paraeducator (PE2a), an Hispanic woman, had been an elementary teacher in her native Puerto Rico. This was her ninth year in this classroom. One paraeducator (PE2b), a black woman, had a two-year Associate's degree in Paraprofessional Education and was close to finishing her Bachelor's degree in Child Development. This was her fourth year in this classroom, and she had worked for several years in another school system. Her husband is legally blind, and she is able to use Braille. One paraeducator (PE2c), a black

woman, holds a Bachelor's degree in Business Administration. This was her fourth year in this classroom. Her daughter, who has severe disabilities, was a student in the classroom next door. She had been working on a degree in Special Education, but became frustrated with the special education system and stopped pursuing that degree during the school year.

Students. In total, there were seven students in classroom 2. Three students had consent to participate in the larger study. They were the only students in the classroom who were 8 years old at the beginning of the study. Of the three children with consent, two were boys and one was a girl. One participating student was black, one was white, and one was Hispanic. Two were in second grade, and one was in third grade. Two were served under the label "multiple disabilities" and one was served under the label "moderate intellectual disabilities." One had hearing impairment and a cochlear implant. One used a wheelchair. None of the students were able to meet their own personal care needs without maximum support, and none used speech to effectively meet their face-to-face communication needs.

Data Collection

A research team comprised of three researchers with PhDs and four PhD students with experience teaching or providing speech-language services to students with severe disabilities collected data over one school year (2010-2011). Data included bi-weekly field notes taken during literacy instruction time and interviews with teachers about their beliefs about literacy. The research team met over the course of the school year to identify emerging themes in the data and to target elements that merited closer observation. One researcher was assigned as the primary contact for each of the classrooms, but over the course of the school year field notes in each classroom were collected by at least three different members of the research team. For the purpose of having one consistent perspective across all classrooms, one member of the research

team (this author) conducted observations in each of the classrooms at three points: once at the beginning of the school year, once at the midpoint of the school year, and once at the end of the school year. This same member of the research team (this author) also conducted the semi-structured interviews with teachers at the beginning and end of the school year.

The bi-weekly field notes described what was happening in the classrooms during literacy instruction time. As the research team met and compared notes, themes began to emerge and notes became more focused on peer interactions, teacher and student bids for attention, and teacher feedback. The final observation conducted by this author utilized the Classroom Assessment Scoring System (CLASS: Pianta et al., 2008). The CLASS is an observation tool used to assess classroom quality by observing ten dimensions including climate, teacher sensitivity, regard for student perspectives, behavior management, productivity, and quality of feedback (Pianta et al., 2008). For the sake of reliability, a researcher with a PhD accompanied this author to complete the CLASS observations, and met after each observation to come to a consensus on CLASS scores.

Research Questions

In this study, the grounded theory approach began with the question, "What's happening here?" (Charmaz, 2006). Specifically, when teachers in self-contained special education classrooms received resources and supports to provide comprehensive conventional literacy instruction to students with severe disabilities, what happened in their classrooms? How did students respond during activities based on constructivist teaching? Did teachers continue to rely on behaviorist methods of teaching, and if so, how did students respond during activities based on behaviorist teaching? How did students respond when teachers employed a mix of behaviorist and constructivist approaches in a single lesson?

Other questions that guided the grounded theory approach follow Johnston's (2004) work regarding teacher beliefs. Specifically, questions included: who do these teachers think their students are, and what do they think they as teachers are doing? Does this change over the course of a school year? What value statements are teachers making with their words, the lessons they present, and their expectations for student involvement?

Research Design

This study used a grounded theory approach to analyzing field notes and interviews collected over one school year. In total, eleven observations were conducted in Classroom 1 and 13 observations were conducted in Classroom 2. Each teacher was interviewed in a semi-structured format at the beginning and end of the school year (see Appendix A). The interviews were conducted by the author. Each final observation included a 20-minute observation using the CLASS, resulting in numeric ratings on ten dimensions. Two members of the research team conducted the CLASS together, and later discussed the results to reach consensus.

Analysis

Data was analyzed using grounded theory methods following Charmaz (2006). Data was analyzed in four phases: initial coding, focused coding, theoretical coding, and memo writing. The four phases were progressive but also interactive. Coding was situated within a theoretical framework which includes the following ideas: (1) the purpose of public education is to prepare students for meaningful participation in society; (2) education is social and interactive, teaching students about their role(s) in society; and (3) teachers' beliefs about learners and learning (epistemology) significantly impact their instruction.

Initial coding. For the first phase, open coding was done by a research team led by the author and including three first-year Master's students in Speech-Language Pathology. First,

data was coded line-by-line and/or incident-by-incident, depending upon how informative and consequential incidents were. As Charmaz recommends, the team coded using gerunds to describe the actions of study participants to capture processes that were explicit or implicit in the data. Close attention was paid to goals, motivations, and perspectives of participants as stated in interviews and implied through actions. During this phase, the team coded the same sets of field notes, then compared and combined codes at weekly meetings. Once codes were compared and discussed, the team looked at the same set of notes again, then a new set. In this way, the data analysis team shared different perspectives and generated emerging themes in the data.

Focused Coding. Themes emerging in initial coding were used to apply more focused coding to an expanding body of data. As the focused codes were applied both to data sets that had been coded line-by-line and to data sets that had not yet been coded, the research team continued to meet weekly to compare and refine codes. As we compared data with data and codes with data, we continued to refine codes and compare them with earlier data to improve the fit between codes and data. The final set of focused codes can be found in Appendix B; they are arranged according to the system developed during the theoretical coding phase.

Theoretical Coding. Theoretical coding serves to integrate focused codes by relating them to one another (Charmaz, 2006). In order to understand how codes were related, two methods of theoretical coding were applied. Both methods served to strengthen the focused coding system by making implicit relationships between actions and outcomes explicit, leading to fresh perspectives and refined codes.

First, in the early stages of focused coding, comparing classroom to classroom and lesson to lesson yielded codes that were paired opposites of one another (for example, “students appear highly engaged” vs. “students appear disengaged”). Following these paired opposites, I found

that certain paired codes strongly clustered with other paired codes, so that a picture began to emerge of a cluster of actions that seemed to go together, each paired with opposite actions that as a whole also seemed to go together. Once these clusters were identified, a color-coding system was applied in order to further investigate the concurrence or dissonance between codes identified as belonging to the same cluster. This system is the organizing framework for the focused codes presented in Appendix B.

The second method used to understand how codes were related to one another involved applying a coding framework to the data using context/conditions, actions/interactions, and consequences/outcomes. The purpose of applying this framework was to relate the context and conditions of the lesson (seating arrangements, content, presentation, presence of communication devices, etc.) to the actions and interactions that took place (class discussions, student initiations and responses, teacher questioning, teacher feedback, etc.) and to the consequences and outcomes of these actions and interactions (student expressions of interest, disinterest, pleasure, frustration; student engagement in the process of learning; student involvement in the product of an activity; use of communication devices; etc.).

Memo Writing. In the fourth phase of data analysis, memo-writing was used to extend, clarify, and compare focused codes. It was used to develop and fine-tune the categories emerging from the data. Memo-writing was used to move from coding to analysis, and prompted refinements and clarifications to the focused coding system. Along with the clustering and color-coding used in the theoretical coding phase, memo writing allowed major categories to emerge.

Analysis of Cognitive Demand. A final layer of analysis was applied to the data after clusters of codes had been identified. Once lessons and interactions were grouped into those that

were behaviorist in nature and those that were constructivist in nature, an analysis was conducted on the cognitive tasks required within each interaction. Within interactions classified as behaviorist, teachers were directive with students and expected rote responses that required students to comply, or perform a behavior, rather than think. This developed into the category *teaching to do*. Within interactions classified as constructivist, teachers were inviting with students and expected students to offer contributions, which teachers then built upon to connect contributions to the lesson and scaffold learning. This developed into the category *teaching to think*, which included all interactions that required students to engage cognitively in learning. Within these interactions, there was not a single correct answer, nor a single correct pathway to understanding. In other words, students were asked to create meaning rather than acquire it, which is consistent with a constructivist view of learning (Ertmer & Newby, 1993).

Having solidified the *behaviorist* and *constructivist* categories, analysis proceeded to the next level by characterizing the cognitive processes used by students within lessons and activities in each classroom across the school year. The Dynamic Learning Maps project developed an expanded depth of knowledge taxonomy to allow more nuanced descriptions of cognitive processes for students with significant cognitive disabilities (Dynamic Learning Maps, 2013). This taxonomy was used to describe the cognitive challenges offered and the cognitive processes used by students during literacy lessons in this study. Cognitive processes at the lower depths of knowledge, such as attending, responding, and replicating, were all that were offered during lessons coded as behaviorist. Lessons described as constructivist involved cognitive processes at the higher depths of knowledge including remembering, understanding, applying, analyzing, evaluating, and creating.

Summary

This study examined data collected as part of a larger study in order to investigate the ways that teachers in self-contained special education classrooms implemented a comprehensive literacy program with their students with severe disabilities. A grounded theory approach was used to analyze interviews conducted by the author and field notes collected across one full school year by a team of researchers with experience teaching or providing speech and language services to students with severe disabilities. Results of this investigation add to our collective understanding of the application of more constructivist approaches to literacy instruction in self-contained classrooms serving students with severe disabilities.

CHAPTER 4: RESULTS

The purpose of this study was to understand what happens when teachers are challenged to provide comprehensive conventional literacy instruction to students with severe disabilities in self-contained special education classrooms, using instructional techniques common in general education but rarely offered to students in self-contained special education classrooms. The data analysis yielded several themes with strong and clear support in the data. These themes are discussed in detail with examples from the data. The results are reported using labels assigned to classrooms, teachers, and paraeducators described in chapter 3; all participants from Classroom 1 include a 1 in their identifier, and all participants from Classroom 2 include a 2 in their identifier. When students are referenced, they also are identified by classroom. This identification system was selected in order to place the emphasis not on the individuals in the classroom, but on the interactions between them as they engaged in teaching and learning.

The analysis of the two classrooms over the course of one school year led to a classification system of instructional practices that were ultimately described as either behaviorist or constructivist in nature. While one teacher (Teacher 2) began the school year from a strongly behaviorist perspective and the other (Teacher 1) began the school year from a more constructivist perspective, the analysis did not lead to direct comparisons between teachers. Instead, lessons and interactions within lessons could be categorized as behaviorist or constructivist in nature. Over the course of the school year, both teachers strengthened their constructivist instructional practices, while elements of instruction rooted in behaviorism persisted in certain settings and activities, such as small groups with paraeducators. Through

comparing lesson to lesson and incident to incident, within and across classrooms, a clear picture emerged of the kinds of learning and interactions that were taking place when different instructional practices were used. This led to the following major findings:

(1) Teacher control was inversely related to student engagement. The more control teachers exerted, the less students communicated and participated; as teachers released control student communication, participation, and engagement increased.

(2) Teacher clarity about the goals and purposes of lessons supported a collaborative construction of learning and the use of instructional feedback.

(3) When teachers combined a release of control with clarity about the purposes of lessons, students engaged in learning that had higher cognitive demands and led to more authentic and generalizable learning.

As the two teachers implemented a literacy curriculum rooted in the constructivist perspective, shifts were observed in both classrooms. Each classroom became a more responsive and collaborative learning environment, with deeper and more authentic learning opportunities.

The Inverse Relationship Between Teacher Control and Student Engagement

The first major finding was that there was an inverse relationship between teacher control and student engagement. This inverse relationship was evident through three of the themes that emerged from the data: (1) High levels of teacher control corresponded with low levels of student engagement and interest, (2) Low levels of teacher control, specifically student-centered instruction, corresponded with high levels of student engagement and interest, and (3) As teachers shifted from teacher-directed (controlling) to student-centered (responsive) instruction, engagement and interest increased. Incidents of misbehavior provide one indicator of student

engagement, and frequent observations of misbehavior were noted within lessons and activities with high teacher control, and rarely observed within student-centered instruction.

High Teacher Control Corresponded with Low Student Engagement

High teacher control appeared to limit student communication and participation. Teachers controlled communication in numerous ways including but not limited to: (1) telling students what to say, (2) offering limited options on communication devices, (3) turning devices off or taking them away when students used them out of turn, and (4) insisting on a single correct answer. Each of these resulted in limited opportunities for students to explore their devices and experiment with language and communication. Controlling what students were allowed to say and when they were allowed to speak restricted peer interaction and resulted in most interactions occurring between individual students and the teacher, one at a time.

Evidence of high teacher control was ample in Classroom 2 during the first half of the school year. Teacher 2 exerted high levels of control over communication, participation, interaction, lessons, and all aspects of the classroom. Teacher 2 was highly aware of the fact that she controlled the lessons, materials, and interactions between paraeducators and students. Speaking about this in an interview in September 2010, she said, “My goal is to sit down and task analyze everything so my staff understands what these kids need to be doing every step of the way." During a conversation after an observation in November, when the observer suggested she involve her paraeducators in lesson preparation so they could understand the goals and become more involved, she stated that she preferred to do all planning and preparation for lessons herself, because she wanted things done right. During a conversation with Teacher 2 in November, an observer wrote, “She admitted that she has trouble delegating things as she wants them to be done right and if she gives things out to do, they may not be done right.” Other forms

of control in this classroom became apparent through observations, and were made particularly apparent through her efforts to release control throughout the school year.

Students in Classroom 1 had much higher verbal skills than students in Classroom 2. Because of this, Teacher 1 did not have to make decisions about which communication options to offer on devices, or which forms of alternative communication to offer. However, Teacher 1 exercised some control over student communication during the early months of the study, particularly through the use of verbal prompts. Like Teacher 2, she released control over the school year, fostering greater student engagement.

Teacher control over student communication. During the early months of the study, Teacher 2 tightly controlled her students' opportunities for communication. Teacher 2 stated in an interview in September that she was intentionally using the Verbal Behavior process, which is based upon principles of Applied Behavior Analysis. Relying predominantly on Discrete Trial Teaching, the Verbal Behavior process is a regimented system that by its nature requires teachers to exercise a high level of control over their students (for an overview, see Leaf & McEachin, 1999). The strict nature of this instructional strategy was evident in Teacher 2's practice. In the beginning of the school year, nonverbal students had no independent access to communication devices. The teacher used a single-switch voice output device, which she held in her hands and presented to one student at a time. Students only had an opportunity to communicate when the device was presented to them. Furthermore, the device always had ONLY the correct answer available as the teacher changed it to match each lesson. Students had no opportunities to communicate out of turn, to request a turn, or to give a response other than the correct answer. Teacher 2 even controlled communication for students who were verbal, by telling them what to say, or asking them to repeat her exact words.

As Teacher 2 worked to provide all of her students with communication opportunities, she began to incorporate an increasing number of voice-output devices during literacy instruction time. As the availability of devices increased, students were observed exploring them. When students pressed buttons repeatedly or out of turn, their communications were most often ignored. When students persisted, paraeducators either turned the devices off or moved them out of reach. As such, the adults maintained control over students' communication and interaction opportunities. Further, the teacher's insistence on the correct answer from the correct student at the correct time resulted in observations of students offering appropriate on-topic contributions that were ignored or reprimanded as incorrect. An example of this occurred in early September:

> The purpose of this activity is to send students to centers. Teacher 2 is holding up pictures of each student and giving them their own picture after they say "me." When the teacher shows a picture of a female student, a boy calls out, "girl!" Although "girl" is a vocabulary word the class has been working on, this comment is ignored. The teacher persists until the girl whose picture it is says, "me," and gives her the picture.

Other examples were observed in late September when Teacher 2 was leading a discussion about favorites. She was attempting to give a limited set of choices to each student to find out their favorite toys, books, games, and foods. Students attempted to initiate communication using voice output devices to repeatedly say, "That's the one I want," "Let me see it. I think that looks really cool," and "Who else likes that?" Their communications were not acknowledged unless it was their turn. Teacher 2 only acknowledged students when it was their turn to answer her questions, and paraeducators did nothing except answer direct questions from the teacher.

In late November, Teacher 2 was working toward more responsiveness, but maintained a high level of control over communication. For example,

> Teacher 2 says, "We're going to go around and have everyone say their names." She takes a Step by Step [a sequential message communication device] and records the student names on it in front of them. She does so in the order that they are seated around the table. She goes to Student 2e first and he hits the switch, but the volume is too low.

> He hits it again and it says the next student's name. Teacher 2 sees the problem and sets the device to back to the beginning for him. She starts over again and works her way around the table.
>
> Teacher 2 moves into an activity in which students are supposed to say one another's names. She moves around the room, plugging students' switches into the Step by Step device with all of the names she has recorded. Twice, when students hit their switch the device says the wrong name. Teacher 2 has to reset the device and have them push their buttons again.
>
> Meanwhile, one student is leaning on his switch and is repeatedly saying, "I have something to say about that." No one responds.
>
> Teacher 2 is prompting one student to say his name again, using the device and his name written on a card. "No, try again. Read it." The student runs away to the trampoline.

Student 2e, who had access to an 8-switch device, was observed repeating words and phrases. Teacher 2 attempted to respond several times; at one point she told him, "I need you to pay attention," and took the device away, but she gave it back and continued responding to some of his initiations. When she responded to Student 2e's initiations, he was observed smiling and demonstrating excitement. For many of the other students, the only requirement of the lesson was to push a button when it was presented to them, and they were observed yelling, getting antsy, and seeming distracted.

Teacher 2 controlled students' communication in other ways at various times. For example, when she did provide a communication device with two options she only accepted one option as the correct answer and the other was wrong. She controlled when students had a turn by providing a communication device at the moment it was to be used and then taking it away and only acknowledging communication that was solicited. Finally, she controlled students' communication by taking communication devices away from students or switching communication devices off so that students could not use them when it was not their turn.

One outcome of the control Teacher 2 exerted over the communication in the classroom was a low level of engagement and involvement. An example from an observation in early September illustrates the low level of engagement and involvement that was observed when Teacher 2 exercised high control over communication opportunities:

> Each student is in his/her own seat around a u-shaped table. Teacher 2 is passing out binders and asks who doesn't have one yet. She notices Student 2a does not. Teacher 2 programs herself saying "that's me" into a single switch device and repeats her question "Who doesn't have a book?" She then uses hand-over-hand to make Student 2a press the button. She gives Student 2a his binder. Student 2a appears passive and disengaged throughout; he at no point looks or responds.

Over the course of the school year, Teacher 2 worked to release control over student communication and became more responsive to student initiations. The result was an increase in student engagement and involvement over time.

Teacher 1 also shifted over the school year to release control over student communication and become more responsive. During the early months of the study, her control over student communication took the form of cloze and initial-sound prompts to get students to say the word she deemed to be the correct answer. In early November, one observer noted, "It is interesting that Teacher 1 has reverted to this process of saying the first part of a word and then pausing for kids to complete it. It has turned into an interesting guessing game for some of the kids, but I'm still not sure many of the kids are understanding what it is they are supposed to be doing other than guessing what it is their teacher wants them to say." For example:

> Early November:
> Teacher 1 prompts a student to describe a classmate by pointing to a big smile on her own face and saying, "<Student name> is ha…" The student completes, "Happy."
>
> Teacher 1 asks Student 1g, "Can you think of a word to describe yourself?"
> Student 1g replies, "I like the color pink."
> Teacher 1 says, "So you are a good…?" (gestures for drawing/writing)
> Student 1g says, "Colorer?"

Teacher 1 says, "Do you know what that word is? When you go to art class. You are a good…?" (elongates beginning sound and pauses for Student 1g to complete)
Student 1g can't get it so Teacher 1 tells her "Artist."

Early December:
Teacher 1 asks the group, "What was the special thing about a yearbook? You take your yearbook and you pass it around to your friends to write you a …?" No response. She continues, "What do we call those things that you think back on? We have a good mem …?" No student responds so she continues, "I have a good…?" (points to head)
Student 1b: "Mind!"
Teacher 1 (shaking her head): "I have a good mem…?"
Student 1b: "Memories!"

While students were free to offer their own ideas much of the time, there were incidents in which Teacher 1 had a specific answer she wanted to hear, and used meaning prompts and verbal prompts to ensure that students eventually gave the desired response even when their initial responses (e.g., colorer) where contextually correct. While students in Classroom 1 often called out responses to open-ended questions, responses were less frequent during this "guessing game."

Teacher control over interactions with students. The teacher in Classroom 2 controlled her interactions with her students by controlling and limiting their communication options. She was also highly directive; she told students specific behaviors to perform, such as "show," "touch," "say," and "look." She controlled her students' responses using prompting procedures, beginning with a directive then providing a verbal prompt, gestures and modeling, and moving to physical prompts such as hand-over-hand to ensure compliance with her directive when students were not initially successful. There were many occasions when she or her paraeducators began at the level of hand-over-hand without moving systematically through a least-to-most prompting hierarchy. Responses that were not the one she expected were either ignored or met with a clear, "No," and repetition of the original directive.

The one-on-one interactions Teacher 2 had with her students dominated the interactions in the classroom. When students initiated interactions their efforts were either ignored or met with a clear, "No." The one-on-one interactions were controlled by the teacher's judgment of student responses as either correct or incorrect, and by her insistence on the correct response including the use of hand-over-hand to force the student to select the correct answer. In ensuring control over student learning by delivering instruction one-to-one, Teacher 2 maintained an environment in which peer interaction was nonexistent and paraeducators' interactions with students was limited.

Limited paraeducator-student and peer interactions. Teacher control was evident in the extent to which paraeducator-student interactions and student-student interactions were limited in Classroom 2. Paraeducators in Classroom 2 sat between students and remained silent and inactive. Their primary function for the first several months appeared to be to act as physical barriers between students so they would stay within their assigned spaces. Many observations include notes about paraeducators and students "waiting silently" while Teacher 2 worked individually with one student at a time. During the first half of the school year, paraeducators remained passive until they received specific directions from the teacher. As a result, paraeducators ignored student communication attempts, failed to engage students who were waiting with nothing to do, did nothing as students misbehaved or cried, and did nothing as Teacher 2 left students waiting while managing another student's misbehavior. Their passivity was, in part, a result of not knowing the goals of lessons or activities.

Teacher 2 indicated that she maintained control over the goals, lessons, and materials to ensure things were done right. Because Teacher 2 felt she had to do things herself she intentionally excluded paraeducators from all aspects of lesson planning, preparation, and

implementation. In an interview that occurred in January 2011, one paraeducator expressed frustration with this situation:

> PE2c: Stop treating us like we just there. Be a little bit more open with us. Understand we all have different backgrounds, different training. Accept our ideas instead of acting like they don't exist. I don't like working with ones who think their way is the only way. Try different things to see what works best. Trust us enough to know we're going to do what you expect. Basically trust. I think a lot of teachers don't-- first they have to understand they can't do it all. Trust us to do it while they're there and while they're not there. Even if it's not their way, trust us that our way might work too. If it's not effective, we can talk about it. Talk every day, so we're on the same page and we can work together.

Despite paraeducators having valuable education and experience, their input was not welcome in Classroom 2, and they did not know what they should be doing to support students. As a result, the paraeducators in Classroom 2 spent a great deal of time waiting passively for instructions. Because Teacher 2 did not include paraeducators in lesson planning or preparation, the paraeducators encountered the lessons for the first time as Teacher 2 taught them. Paraeducator interactions with students were further suppressed by Teacher 2's strict expectations for how lessons would go; there was no room for contributions or deviations from the lesson from either students or paraeducators.

Teacher 1 stood in stark contrast to Teacher 2 with respect to the involvement of paraeducators. In fact, Teacher 1 depended on her paraeducators in planning and implementing all aspects of the school day. Many observations of Classroom 1 began with morning lessons about calendar and weather being led by a paraeducator. Part of the literacy block in Classroom 1 involved students rotating through small groups led by Teacher 1 and paraeducators. Teacher 1 described her relationship with her paraeducators in September:

> My assistants are teachers. First and foremost. My classroom would not run without them… Even in a smaller classroom setting, I can't get to all the kids. So they are the extensions of me. I make sure they know the goals for the kids, know their strengths and

> needs and they can work on them. They are teachers in my mind, and that's what we tell the kids too.

Observers frequently observed Teacher 1 asking her paraeducators for their opinions about lessons, exchanging ideas and modifying activities on the fly with their input in a collaborative manner. Paraeducators interacted with students frequently, demonstrating a significant contrast to Classroom 2.

Inflexibility in lessons. Teacher 2's high level of control was evident in the inflexibility of lessons. Many of the early observations in Classroom 2 were of lessons that centered on a single vocabulary word. During these early lessons, Teacher 2 had expectations for particular responses, and would only accept those responses as correct. The only response option she provided for students who required AAC was the correct response. Teacher 2 even controlled when they could provide the correct response. During observations early in the year, students who had more communication options were observed offering responses that Teacher 2 could have extended and built upon. Instead, she deemed the efforts incorrect and insisted that students give the predetermined correct response. For example, on one occasion she told a student to read a word and the student began to spell it. She corrected the student, said the word, and instructed the student to repeat it. On another occasion she pointed to letters and instructed a student to "Say it," making the letter sound and expecting him to repeat the sound. The student stated the letter names, demonstrating knowledge rather than directly repeating the sound, but Teacher 2 corrected the student with the feedback, "No, that's reading it. Say it." Then she repeated the letter sounds for him to imitate. She repeated the exact same feedback several times without explicitly explaining the difference between "reading" and "saying" letters. Eventually, the student caught on to the activity and was able to comply. In earlier months of the study, Teacher 2 also demonstrated inflexibility in how she allowed students to respond. She used a

system of prompting to force students to respond in uniform and predetermined ways (e.g., using a particular communication device) when other communication approaches (e.g., partner-assisted scanning or eye gaze) may have allowed individual students to respond without prompting. In earlier months of the study, Teacher 2 reinforced these expected responses using extrinsic rewards, a system in which instructional feedback was excluded.

Teacher control through extrinsic rewards. During the early months of the study, Teacher 2 attempted to control students' behavior through the use of extrinsic rewards including edible rewards, such as cereal and popcorn. During this time, receiving or failing to receive an edible reward took the place of instructional feedback. Students either received the reward or were told, "No," and directed to try again. It was clear in the data that incorrect answers did not function as opportunities to provide instructional information; answers were simply right or wrong. Further, an analysis of Teacher 2's use of extrinsic rewards revealed that they did not necessarily function as anticipated with all of the students. Numerous observations were recorded in which students actively rejected edible rewards, and these rejections were accompanied by behaviors indicating anger or distress. For example:

> Teacher 2 is going from student to student telling them to show her the word "safe" in their binders. When they comply, she gives them a few pieces of cereal. When she tries to give the cereal pieces to Student 2b, he hits at them. She offers a different edible reward and he says, "No." She says, "Ok," and moves on to the next student. Student 2b hits the desk and grunts. On his next turn, he complies with her next instruction (to say "I will talk," the next rule), but he continues to express displeasure by whining and Teacher 2 asks a paraeducator to take him out of the group and work on something else.

Even when students were complying with directions and were perhaps intrinsically motivated to participate, Teacher 2 delivered rewards that served more as distractions from the lesson than as rewards. When the extrinsic rewards seemed to have an impact they functioned to ensure

compliance with directives, which were geared toward teaching students to *do*, as opposed to teaching students to *think*.

Teacher is directive. During the early observations, Teacher 2 was consistently directive with both the students and with the paraeducators. Directions were geared toward telling students and paraeducators what to do (behaviors to perform) without allowing or requiring them to do any thinking of their own. Many directions began with action verbs such as "say," "show," and "touch," or phrases such as, "You need to…" and "I need you to…" Many of Teacher 2's directives were decontextualized, because she did not share the purpose or goals of lessons with the group. As a result, students' compliance with directives often appeared to be isolated and rote. When Teacher 2 involved the paraeducators, she was directive with them as well, and gave no context or overarching purpose for her directions. For example, in late November:

> While Teacher 2 is talking to one of the girls on the other side of the room, Student 2e uses his 8-switch device to say "girl" 3 times. PE2c slides over and turns off the device. Teacher 2 comes over quickly and says, "don't turn it off." PE2c slides back to her place. Student 2e continues to explore his device and no one responds. PE2a tells him to stop.

Paraeducators were directed to provide physical guidance to ensure student compliance or to remove misbehaving students from the group. When paraeducators interacted with the students, they were highly directive, usually telling students to sit or work. For example, near the end of the second month, a paraeducator was observed telling a student, "Work first, then snack. You need to wait. Work first." Paraeducators were directive with the students in part because Teacher 2 directed them to be, but perhaps also because Teacher 2 modeled this style. Teacher 2 instructed paraeducators to exert physical control over students, and they also used physical control as a strategy without being told.

In Classroom 1, Teacher 1 and PE1a rarely used directives during instruction. Directives were occasionally used to have students complete procedural tasks such as putting their backpacks away or putting away materials. However, in the earliest months of the study, PE1b was directive with students during small-group instructional time. An example from early November:

> PE1b says, "Student 1a, can you write Student 1b or should I write it for you?"
> Student 1a replies: "I can do it."
> After Student 1a works for a few seconds he announces, "I did it!"
> PE1b looks at it and says, "You almost got it. Let me write it so you can copy it. You almost got it, but you didn't get some of the letters. Student 1b, help us write your name so Student 1a can copy it."
> PE1b is being very directive and provides lots of written models for the boys to trace and copy. All three boys write names of someone else they've chosen to write about and then PE1b says, "We have no girls in our group so everyone needs to write *he* right here." (points to the blank)
>
> PE1b continues to be very directive. She tells kids how to spell all of the words they write or gives them a model to copy or trace.

Even in Classroom 1, where directives were rare during instruction, they were used in some situations and by some people. However, while adults were occasionally verbally directive, there were no observations of physical control, as occurred in Classroom 2.

Physical control. In Classroom 2, adults controlled students' bodies and behavior by physically guiding them from one location to another, sitting between them to inhibit their interactions with other students, and using hand-over-hand to force students to perform an action such as hitting a button on a communication device. Teacher 2 directed paraeducators to physically control students. For example, during a game of Simon Says she told a paraeducator, "Make him stomp his feet." She also directed paraeducators to pull students' hands away from their communication devices. For example, she told a paraeducator to "help" a student "wait" with using his switch (in other words, hold the student's hands so he could not touch his switch).

Hand-over-hand was used frequently and for many activities. Hand-over-hand was used to cause students to cut, paint, glue, write, draw, color, make selections on the interactive white board, make lunch selections on a chart, press buttons on communication devices, and make selections from visual choices given. Often when hand-over-hand was used, students were observed looking elsewhere and paying no attention to the activity their hands were doing. It is quite possible that other communication options, such as partner-assisted scanning or eye gaze, would have allowed students to think, make authentic selections, and become more independent communicators over time; however, these options would have required the teacher to relinquish control, acknowledge incorrect responses, and teach correct responses over time using corrective or instructional feedback and modeling.

Students demonstrate low engagement. During lessons in which Teacher 2 exerted a high level of control over the lesson, the students, and the interactions, data indicated that students were disengaged and disinterested. Notes include observations of students yawning, putting their heads in their hands, putting their heads on their desks, whining, grunting, crying, refusing to comply, pushing away materials, screaming, grinding their teeth, slumping in their seats, yelling, and leaving seats/running away. Importantly, as the year progressed, Teacher 2 began to relinquish some control and became more responsive to students' communication attempts, often acknowledging and building on their comments and relating them to the lesson. During these later lessons, the students no longer showed signs of being disengaged or bored; instead notes include observations of students showing signs of engagement, interest, and excitement. This shift formed part of the evidence that instructional practices rooted in a constructivist perspective corresponded with high levels of student engagement and interest.

Low Teacher Control Corresponded with High Student Engagement

In contrast to lessons that were teacher-controlled, lessons that invited and built upon contributions from students were associated with increased levels of student engagement and interest as well as decreased levels of misbehavior. While high teacher control was associated with interactions being limited to the teacher with one student at a time, low teacher control was associated with group activities. In lessons with low teacher control and high teacher responsiveness, teachers invited and built upon contributions and students had the opportunity to model for and learn from one another. Observations of these interactive group lessons included frequent notes of students attending, expressing interest, offering contributions, making connections, smiling, expressing pride in their own learning, and displaying excitement.

Inviting and building on contributions. As teacher *directiveness* emerged as a theme, it became clear that there were different and contrasting ways teachers solicited participation. Within this theme some teacher behaviors were identified as *inviting*. This inviting behavior was evident in the ways teachers phrased their questions and comments and the ways students actively contributed and chimed in without having to wait for their turn. In other words, when teachers were being *inviting,* any student who had something to contribute was invited to contribute, and the students understood that their contributions were welcome. These invitations were open-ended which allowed for a variety of responses. For example, Teacher 1 and PE1a asked students questions such as, "What do you notice?" "What is different?" "What other words can you use to describe someone?" and "If you were going to describe ____ compared with ____, what could you say?" Adults in Classroom 1 also invited student contributions by making comments. For example, Teacher 1 commented on pictures during shared book reading, and students added to these comments. The use of open-ended questions and comments allowed

students to share their own ideas without having predetermined correct answers. In these situations, students responded by chiming in, calling out answers, and raising their hands.

In Classroom 1, teachers and paraeducators tended to address questions to the whole class or to their group during small group time. When students contributed, Teacher 1 almost always responded in a way that built upon the contribution, whether it demonstrated understanding or that the student needed additional support. For example, in November, Teacher 1 was soliciting contributions for a chart about emotions, and writing students' responses on chart paper. When answers made sense, she affirmed them, and when they did not, she provided information (instructional feedback), but she never ignored a response nor did she respond with the type of directive, negative response observed in Classroom 2. The following example comes from Classroom 1:

> Affirming:
> Teacher 1 asks the class, "What makes us sad?" Student 1a offers, "When I miss dad."
> Teacher 1 says, "That would make us sad. Missing dad," writing this on the chart.
>
> Instructional feedback:
> Teacher 1 asks the group, "What about disgusted? Everybody make a disgusted face. What makes us disgusted?"
> Student 1d: "Food."
> Teacher 1: "Food can make us disgusted. Who has a food that makes them disgusted?"
> Student 1b: "Pretzels."
> Teacher 1: "You just ate pretzels yesterday. If a food is disgusting you never want to eat it. What is a food you never want to eat?"
> Student 1b thinks for a minute and says: "Pasta"
> The group laughs a little as Teacher 1 writes *pasta* on the chart.
> One girl offers, "Liver," and another child calls out, "Broccoli."

By welcoming students' contributions and building on them, Teacher 1 was able to affirm responses that made sense and provide scaffolding for students who needed more information, without categorizing any response as correct or incorrect. Her responsiveness to student

contributions reinforced the idea of "inviting" further contributions because all contributions were used to add to the classroom discussion.

By addressing questions and facilitating discussions with the whole class, the adults in Classroom 1 provided opportunities for students to model for and learn from one another. For example, in March, Teacher 1 asked students to match pictures with vocabulary words on a chart; each student had to identify a different word. As Teacher 1 supported students in identifying their words, she used several strategies: emphasizing the initial sound, asking, "What is the first letter?", pointing to smaller words (e.g. us) within larger words (e.g. famous), and asking students to match their word cards with the same word on the word wall. Students attended closely to one another, and called out relevant comments, such as noting that other vocabulary words displayed around the room were also on the word wall.

When teachers were responsive to student contributions and built on them in meaningful ways, students demonstrated high levels of engagement and interest. Further, students and adults demonstrated greater enjoyment of learning by smiling, laughing, joking, and expressing pride in learning. This was observed often throughout the year in Classroom 1, and began to emerge in the spring semester in Classroom 2. The shift from instructional practices that were highly controlling to instructional practices that were responsive to students was accompanied in Classroom 2 by a major shift in engagement and learning opportunities.

The Shift from Controlling to Responsive

Both teachers made a shift from instructional practices that were more controlling to instructional practices that were more responsive over the school year. This shift was markedly different between the two teachers, as they began at different points on the controlling-

responsive spectrum, but both shifts occurred with marked increases in classroom conversation, participation, and engagement. The change was especially dramatic in Classroom 2.

In February of 2011, Teacher 2 began implementing new strategies to allow students more communication opportunities, and she increased her responsiveness to student comments. She provided one student with an 8-choice voice output device and another with an elbow switch that said, "Tell me something about that." Two examples from this observation demonstrate her emerging responsiveness to unsolicited communication attempts from students:

> They go to the next page of their rule book. The student with the Cheap Talk [communication device] continues to joke around. He covers his eyes and uses his device to say, "Can I see?" Teacher 2 responds, "Sure you can," and goes over to him to look at his book. He says it again and she points to his book, and asks, "What do you see?" In the book, he points to the picture of someone writing. Teacher 2 says, "Yes, you are right –we write in here. That is a picture of someone writing."
>
> The student with the elbow switch pipes up, "Tell me something about that." Teacher 2 responds, "I am, <student name>. Thank you. I'll keep going. That tells me that you need more information."

While the two incidents demonstrated that Teacher 2 was beginning to be more responsive to students' communications, the lesson that followed demonstrated the impact this had on student engagement in the lesson. The purpose of the lesson was for each student to write a page for a book to complete the sentence, "I can…" Teacher 2 had programmed an 8-location communication device with a variety of verbs and asked students to select one for their book. She then allowed each student to select a colored marker, and to write his or her name without tracing or copying. The students responded enthusiastically:

> Teacher 2 lets student go to town and make a scribble. He is thrilled with himself. She praises him and then provides the follow up strategy of "Here's how I write your name." She provides him with the correct model. As she writes the model, he watches her write closely.
>
> Teacher 2 asks students to make their "I can" selections on the interactive white board. Some students choose quickly and return to their seats smiling; these same students

watch intently as she reads each student's page out loud to the class. The student with the Cheap Talk repeats his verb after Teacher 2 reads his page aloud.

By March, every student in Classroom 2 had their own mode of communication. When students talked out of turn, Teacher 2 provided information about the appropriate use of communication by saying things like, "Can you listen for a minute?" and "<Name> is talking now." Rather than ignoring out-of-turn contributions, Teacher 2 gave students information about how to communicate in a group by waiting until others were finished talking. Teacher 2 attempted to respond to every comment made by students, and students provided many comments. They also were observed attending closely and smiling frequently. At the same time, Teacher 2 appeared to be happy and excited with the conversations. She began including paraeducators by asking them to contribute, and they modeled appropriate comments, sometimes using students' communication devices. During the spring months, there were no edible rewards offered, questions were open-ended rather than testing or "show me" questions, and Teacher 2 attributed meaning to communication attempts. Students were engaged and focused, and students with challenging behaviors were observed as present and engaged for entire lessons.

During conversations with Teacher 2, which occasionally included paraeducators, members of the research team shared positive feedback about the changes observed in the classroom. One observer complimented the adults on leaving communication devices turned on and in front of students, and commented on how fast the students had progressed from banging on devices to using them interactively. This observer noted that the adults seemed pleased with this observation and said it was hard to notice the change themselves. Each time an observer gave positive feedback to the adults in Classroom 2 on becoming more responsive, adults were even *more* responsive in the next observation; positive feedback may have supported the teacher

and paraeducators to move to a higher level of responsiveness and the impact of these observers cannot be ignored.

Teacher 2 spoke to one observer about some of the changes she felt she had made by the end of spring: she was letting go of her need to have things just so, she was letting students take the lead and letting lessons be more child directed. She said she had learned that communication can be messy and can't follow a tight structure. Teacher 2 also reported that the students got mad and antsy when they did not have access to their communication devices, so she was making sure students had them across the school day. She said that she finally felt she was making progress and a connection with students who had frustrated her all year.

By releasing control and becoming more responsive to student contributions, Teacher 2 transformed her classroom. Students who had been passive became active in lessons, students who had misbehaved became engaged, and the whole group of students and adults began engaging in discussions with many students contributing. It was quite noticeable that paraeducators who sat waiting during the first few months of the school year were, by spring, chiming in to discussions, modeling responses, smiling, laughing, and engaging with students.

An example occurred in late March of how Teacher 2's responsiveness drew in three students, whose engagement levels Teacher 2 had previously found frustratingly low:

> Teacher 2 turns to her computer and quickly pulls up a file of communication choices that show up on the interactive white board. They are choices of things that make them happy. Teacher 2 asks, "<Student name>, will you come up and talk about this?" He goes up to the board and she gives him a chance to choose what makes him happy. He uses the white board stylus and touches many of the choices on the board. She responds to each thing he chooses. He starts breathing heavily and wants to touch all of them again. Teacher 2 reads the choices as he chooses them, "Listen to music, play with friends, do food science." After that one, he gets excited and jumps up and down. She writes his choice on the chart paper.
>
> Teacher 2 calls on the next student, "Student 2e, come on over here." He smiles, gets up and walks to the board. Teacher 2 asks, "Student 2e, is there anything on here that you

> feel happy with?" He uses the stylus and quickly touches some of the symbols: food science, play with friends, listen to music. Teacher 2 slows him down, then responds "You are right—we are very happy when we listen to music." She takes that as his answer to fill in the poem and goes over and writes it on the chart paper.
>
> PE2b shares that the student next to her would like to go next. This student is eagerly looking on. She gets up and quickly walks up to the board and immediately touches the symbol for: play instruments. This student is rarely engaged so Teacher 2 is excited and says, "YES!!!" She writes down the student's choice on the poem.

During this same observation, misbehavior was notably absent. There were no incidents in which students cried, screamed, or attempted to leave the table, as with earlier observations. In fact, when Student 2e turned to his neighbor and touched his hand and communication device, his behavior was treated as a learning opportunity instead of misbehavior, demonstrating a shift in mindset for the adults in this classroom. Teacher 2 noticed what Student 2e was doing and told the neighbor, "<Student name>, tell him to stop." She then commented, "<Student name> needs his personal space." Student 2e then lightly punched his neighbor on the arm. PE2c immediately moved over to Student 2e and said, "Show me your personal space." She swept her arm in an arc on the table in front of him, explaining that this arc was his personal space. He copied her arm motion, and there were no further incidents recorded of misbehavior. This represented a shift in treating misbehaviors as opportunities to provide information about learning in a group, and a shift in which a paraeducator entered the situation and took care of it, rather than waiting for Teacher 2 to handle it herself or removing the student under the teacher's direction.

As evidence of student engagement increased, other changes became evident. By spring, students in Classroom 2 were no longer limited to rote responses. As a result, they began learning how to think rather than simply to follow directions. This appeared to be supported by a shift in Teacher 2's understanding of the purposes and goals of lessons. At the same time, the

same types of instruction were seen across the year in Classroom 1, where Teacher 1 demonstrated clarity of purpose from early in the school year. Clarity of purpose appeared to support responsive instructional practice.

The Relationship between Clarity of Purpose and Instructional Practice

Teacher clarity about the goals and purposes of lessons appeared to influence instructional practices. High levels of clarity appeared to provide a framework within which a collaborative construction of learning was possible. Additionally, high levels of clarity appeared to support the use of instructional feedback. Clarity of purpose appeared to support meaningful teacher responses that connected student contributions to lessons and scaffolded understanding for students.

At the beginning of the year in Classroom 2, there was a lack of clarity about goals and purposes of lessons for the teacher, paraeducators, and students. Many of the responses Teacher 2 asked students to give were decontextualized, with no apparent purpose beyond compliance. This resulted in students passively waiting to be told what to do, paraeducators passively waiting to be told what to do, and the teacher providing cursory and uninformative feedback (e.g. "No."). At the beginning of the year in Classroom 1, some level of purpose was implied through the nature of the lesson, but Teacher 1 did not explicitly clarify the purposes of lessons and may not have had clarity of purpose herself. This lack of clarity led one observer to note, "Students didn't seem to get what they were supposed to be doing. Could have used some more background…The students are not offering answers and the things they do say aren't really making sense," and "[the students] aren't having much success." While Teacher 1 struggled to engage students in describing their classmates and themselves, she tried to scaffold their

contributions into describing words, but had difficulty. Had the purpose and goal of the lesson and activity been made clear, both Teacher 1 and her students may have had more success.

By winter in Classroom 1, the teacher frequently set the purpose for lessons and activities by stating it clearly for everyone. This provided the foundation for student comments and for scaffolding of student comments to relate them to the lesson. By spring Teacher 2 began to gain clarity of purpose and convey it to her students and paraeducators. Students and paraeducators in Classroom 2 became more involved and made more frequent contributions, which Teacher 2 built upon and related to the lesson. Feedback became more detailed and instructive in both classrooms.

Clarity was reflected in the ways that teachers explained the purposes of lessons or activities, made learning goals clear, or summarized what was accomplished or learned during a lesson. Teachers explicitly shared clarity of purpose with their students when they explained what they were learning, why they were learning it, or how it could be used in the future. When teachers made the purpose and goals of a lesson explicit, they also gave clarity of purpose to the paraeducators, which increased their ability to support student learning. In order to explore the impact of clarity of purpose on instructional practice and student learning, examples will be given for the impact of teacher clarity, student clarity, and paraeducator clarity.

Teacher Clarity

An illustration of clarity of purpose about a shared reading experience can be found in Classroom 1 in November, after the class worked together to create a chart about emotions:

> Teacher 1 tells her students, "I'm going to read our book. It has lots of emotions in it. As I am reading the book today, I want you to listen so you can name, or show or choose how you would feel if that was happening to you. Remember, we're reading to see how we would feel, what emotion we would have in that situation."

> Part way through the book she reminds all kids, "Remember, we're reading so you can tell me how you would feel."
>
> After they've read the book, Teacher 1 goes back through the pages, asking the class how they would feel in each situation. At the conclusion of the lesson, she tells them, "As we go through the day, look at the people around you and see if you can decide how they are feeling or how you are feeling."

As Teacher 1 went back through the pages to ask students how they would feel in each situation, students offered many contributions, with almost all of the students calling out answers and raising their hands. When she asked, "How would you feel if you forgot your books?" one student said, "Nauseous," a word that did not appear in the book and thus demonstrated the student's clarity of the task. Teacher 1 frequently made statements that explained the purposes of lessons and activities. She gave reminders of goals and purposes during lessons. She often affirmed students' contributions by rephrasing or extending their comments to make the connection to the goals and purposes of the lessons explicit. She reminded students of connected lessons and experiences, and asked them to make connections. With each instance, the teacher demonstrated clarity regarding her own instruction.

Teacher 1 also demonstrated clarity of purpose when she explained how students could use what they were learning in the future. This was particularly evident in her use of the word wall. As students learned vocabulary words, they added the words to the word wall. Teacher 1 asked individual students to place new words on the word wall, supporting them when needed to think about the beginning sound of the word to find its place on the wall. In this way, she taught students how to use the beginning sounds of words to locate them for use in the future. Teacher 1 also referred to the word wall during writing time to encourage students to use the information available. She not only expected them to correctly spell the words on the word wall, but also encouraged them to use parts of the words to support their spelling, and to search for familiar

words within longer words to support their decoding. Word wall instruction included choral spelling, word meanings, making personal connections to words, creating sentences using word wall words, and information about how to use the word wall in reading and writing. This ongoing attention to the word wall was rich with instructional information about letters and words that supported reading and writing other, novel words. Furthermore, it gave the teacher an opportunity to hone her skills in communicating purpose and goal clearly.

By March, Teacher 2 was consistently introducing lessons by explaining what the students would do and why. Coupled with the increase in student access to communication and the increase in Teacher 2's responsiveness to student contributions, there was a remarkable shift in Classroom 2 in the quality of lessons. Rather than sitting and waiting for a directive, students knew what the lesson was about and freely contributed. Paraeducators understood the goals of the lessons, and contributed to the discussion by modeling responses or responding to students. Because everyone was focused on the goal of the lesson rather than a predetermined outcome for each interaction, adults were able to connect student contributions to the lesson rather than insisting on correct answers. For example, in March, Teacher 2 had a poem about feelings programmed on a sequenced message communication device. She told her students, "We are going to read a poem and I have it right here on this device. We're going to listen to the feelings poem first and then we're going to practice showing those feelings. Look, Student 2e is smiling. He's happy." During the lesson that followed, Teacher 2 gave the following responses to student contributions:

> Student 2d hits the [device] and there is a technology glitch. Teacher 2 says in a dramatic way, "I'm sad when it's not working—it's not working." She turns to re-record the poem on the [device]. One student says, "Girl." Teacher 2 acknowledges him and says, "A girl is going to read this."

> During the part of the poem about *silly*, Teacher 2 comments that a student is "being silly. He's showing us silly." The student uses his device to say, "Show me." Teacher 2 responds, "Show you? I can show you." She walks over to a cabinet and gets out a large tabletop mirror. "I can show you silly—here's what silly looks like," and she holds the mirror up to the student's face. The student is absolutely tickled with himself. He has a big grin and has both his hands on his cheeks.

Throughout the lesson, Teacher 2 found ways to respond to whatever the students were offering. Rather than saying, "No" or directing students, she offered a variety of information to support their understanding. When students were "cracking up" while Teacher 2 was trying to discuss the words *sad* and *scared*, she got out a class-made book about feelings and showed students photographs they had taken showing sad and scared faces. She talked about feeling scared when she heard noises in the middle of the night. She talked about things that might scare students, like unfamiliar noises. When Teacher 2 began talking about *tired*, two of the paraeducators contributed to the discussion, commenting about when they feel tired and pantomiming sleep. Every student was actively engaged for most of the lesson, and Teacher 2 treated each response as a learning opportunity by connecting back to feelings, making this lesson markedly more instructional than those from earlier months of the study. It was evident that her clarity about the overarching purpose of the lesson allowed her to respond to a variety of student contributions, rather than insisting on predetermined answers.

Student Clarity

During the early months of the school year in Classroom 2, when there was no evidence of clarity of the purposes of lessons or activities, students passively waited to be told what to do and interactions were brief and decontextualized. However, clarity of the purposes of lessons began to emerge in February when Teacher 2 began making statements to tell students what they would be doing during lessons and why. In February, she introduced an activity in which students would make pages for a book called "I Can":

> Teacher 2 introduces the lesson. "We are going to talk about all of the things you can do. We have been talking about all of these things like…bouncing, reading, playing, mixing, watering our flowers, writing, laughing, dancing." Student 2c attempts to sign "bouncing" and Teacher 2 responds to him, "I know Student 2c, you like that bouncing," and she signs it back to him. She tells the group, "We are going to talk about things that we can do and make a page for our book."

Clarity of purpose emerged as evidence of a shift in teachers as they moved from *teaching to do* to *teaching to think*. This allowed students to develop cognitive clarity and created a distinction between instruction and assessment. When Teacher 2 directed her students to provide rote responses with very little context, she provided no information about what they were learning or why. To the observation team, it appeared that the lesson was that compliance with the teacher resulted in an edible reward. This was problematic because it served as the basis for literacy instruction for the first few months of the school year. When Teacher 2 began explicitly stating the goals and purposes of lessons, there was a dramatic shift from students complying with directives to students contributing to whole-group discussions in meaningful ways. During the final months of the study, when students offered contributions that did not necessarily make sense, Teacher 2 linked their contributions to the lesson in a way that provided scaffolding to understanding the concepts. When she knew the purpose of a lesson, she could help students make connections to the purpose, even if their initial responses were not "correct." In this way, Teacher 2 began to support her students' engagement in higher-order thinking skills.

Paraeducator Clarity

When paraeducators did not have clarity about the purposes and goals of lessons and activities, they passively waited to be told what to do. This was observed frequently during the early months of the school year in Classroom 2, and one paraeducator expressed frustration with her lack of clarity of purpose:

> PE2c: Sometimes I don't feel like I'm doing enough to help the teacher. Sometimes I think *she* could do more. I feel like I'm at a standstill, instead of progressing more to help the kids. Sometimes I feel like a babysitter. Sometimes I have to ask, working with her, "What are you reaching for?" [Sometimes I think I understand a lesson] but the next day she changes that task. She throws something else in there that I don't feel like goes with, but she knows what she's reaching for.

When paraeducators had clarity of purpose, they were proactive, contributed to class discussions, and supported student learning. As noted above, paraeducators in Classroom 1 were observed collaboratively planning and modifying lessons with Teacher 1, sharing their opinions and knowledge of students' needs. During the literacy block, one paraeducator provided phonics instruction that was clearly differentiated for each student. Her instruction was responsive, using instructional feedback and scaffolding. Another paraeducator led a writing group, supporting students in writing that was focused on getting their ideas on paper rather than mechanics or form.

Teacher Responsiveness and Clarity of Purpose Supported Higher Cognitive Demands and Authentic Learning

When teachers were responsive to student contributions and had clarity about the purposes of lessons, students engaged in learning that had higher cognitive demands and led to more authentic and generalizable learning.

High control, low-clarity lessons were associated with rote responses, passivity, and waiting to be told what to do. Learning was situation-specific, in that students were told what to do in the moment but this did not help them know what to do in other situations. Low control, high-clarity lessons involved higher cognitive demands and led to learning experiences that were generalizable. As teachers progressed through a literacy curriculum rooted in a constructivist perspective that provided clarity about the purposes and goals for lessons, students engaged in learning with increasing cognitive demands and greater authenticity.

Low Cognitive Demands; Low Authenticity

When teachers did not have clarity about the purposes of lessons, they tended to rely on eliciting the "correct" answer from students using prompting procedures. Teacher 1's strategy was to provide cloze tasks and initial-sound prompts to elicit "correct" answers from her students. Teacher 2's strategy was to direct her students to repeat her words, or to "tell" her by pushing a switch she had programmed with the correct answer (often immediately prior to offering it to the student). When the teachers used these strategies, the students in Classroom 1 learned to guess what their teacher wanted them to say, and the students in Classroom 2 learned to repeat words or press a switch when it was presented to them. In particular, students in Classroom 2 were learning compliance with directions without necessarily engaging cognitively in literacy or learning. Throughout the fall, Teacher 2 would ask a question, program an answer into a device, then hand the device to a student who would be expected to simply hit the button to make the device speak. As the year progressed, Teacher 2 continued to teach switch-activation even when her intentions were clearly different. For example, in November Teacher 2 told her class that they were going to review the vocabulary words *who*, *me*, and *I*. She said they were going to practice answering some questions. However, she asked one question then provided edible rewards to students for using a shared 8-switch device:

> Teacher 2: "Who is going to help me pick a color for our Froot Loops?"
> Student 2e: (tapping his chest) "Me."
> Another student gets noisy and Teacher 2 tells him, "Wait." A different student is handed the Cheap Talk 8 with color choices. She immediately chooses "purple" for everyone. Teacher 2 responds to the communication and starts passing out purple Froot Loops.
>
> Teacher 2 goes around and gives everyone chance to choose a color on the Cheap Talk 8. Teacher 2 rewards a challenging student for being quiet; the reward is a Froot Loop. She lets him choose a color again on the Cheap Talk 8. As with his previous selections, he continues to choose purple.

> Teacher 2 uses hand-over-hand with one student who has challenging motor skills. (This student could be working on making choices using partner assisted scanning.)

While Teacher 2 had stated a purpose for the lesson, the lesson did not appear to relate to that purpose. All students received an edible reward for activating any switch on the device. Further, what students learned was situation-specific, because they did not typically have access to color choices to receive Froot Loops.

High Cognitive Demands; High Authenticity

When teachers were clear about the purposes and goals for lessons, they tended to convey this information to the students. They also tended to find ways to relate student contributions to the purposes of the lessons, guide students to think about how they could apply what they learned in the future, and challenge students to participate in conversations and activities with higher levels of cognitive demand.

Teacher 1 frequently asked her students to demonstrate understanding by connecting vocabulary words or events in a story to something relevant to them. This was not an assessment activity. She ensured that it was instructional by providing support for students when they needed it. For example:

> Teacher 1 asks Student 1e to give her a sentence using the word "to." He hesitates. "Where are you going to tonight?" she asks him. He doesn't say anything and she waits for a couple of seconds. "I am going--" she prompts. He repeats, "I am going." "I am going to--" she says. He finishes the sentence, but I don't hear with what. Then she guides him again to say "I am going to--" (*I get the sense she knows where he is going tonight, and selected that sentence because of it, but I don't hear where it is.*)

Teacher 1 also referred to activities the class had shared in together in order to support her students in making connections:

> Teacher 1: "Let's go on to *proud*. We just did something yesterday that should make you all feel proud." She pauses to give kids a chance to think, but no one responds. "Where did we go yesterday?"
> Student: "Bowling?"

> Teacher 1: "Yes, bowling. So how did you feel when you got those ribbons for bowling? Show me how you were feeling." She pauses to look at everyone showing what proud looks like. "What else makes you feel proud?"
> Student 1b appears to still be trying to clarify: "When I throwed the ball and I knocked the pins down."
> Teacher 1: "Yeah, when you got a strike. Did that make you feel proud?"
> Student 1b nods and smiles.

Teacher 1 frequently asked students to compare and contrast, give opinions, make and check predictions, and make judgments about books. While reading a book about yearbooks, Teacher 1 had students fill in a Venn diagram comparing yearbooks to photo albums. She was able to guide students to fill in several features that applied only to yearbooks, only to photo albums, and applied to both.

In February, Teacher 1 led a discussion about the difference between *you're* and *your*. The first response offered by a student was, "That one has an E on it." Teacher 1 built upon that comment to talk about contractions, which two words were put together to make *you're*, and how *you're* and *your* could be used in sentences. During the discussion, several different students offered contributions and created sentences. Teacher 1 helped them with their sentences by reminding them, "This one is *you are* and this one is *it belongs to you*." By being clear about the purpose of this part of the lesson, Teacher 1 was able to continually restate the pertinent information in different ways to help students be successful in creating their sentences.

In the later months of the study, Teacher 2 began to demonstrate clarity of purpose in her teaching, and to engage her students in activities with higher cognitive demands. For example, in early March she did a shared reading with the book *Today I Feel Silly: And Other Moods that Make My Day* (Curtis & Cornell, 1998). She stated her purpose by reminding students they had been talking about feelings words, then telling them, "We're going to pay attention to a book. We're going to do a picture walk so we're going to look at all of the pictures in this book." In

this lesson, each student had independent access to his or her own communication device. Teacher 2 sat in a rolling chair while she read, rolling from student to student as they made comments. Rather than controlling turns, Teacher 2 went to whoever had something to say. The observer noted, "There is definitely a lot of talking going on and Teacher 2 is doing her best to attend to each student." Students pointed to pictures, made comments, and demonstrated excitement. A student Teacher 2 had stated was very difficult to engage attended closely during this lesson, and the following interaction occurred:

> Teacher 2 rolls to Student 2f while holding the book up and says, "You know what my favorite part is? The cat." Another student speaks up with a device and Teacher 2 responds to him while staying with Student 2f. She holds the book in front of Student 2f and lets her pound excitedly on the page. Teacher 2 says to everyone that Student 2f likes the girl on this page. PE2b makes a comment that Student 2f has red hair like the girl in the picture.

In late March, Student 2f had independent access to an 8-switch device during a shared reading around a poem about feelings. She offered frequent comments using her device, which Teacher 2 responded to with further information. Most notably, Student 2f participated by making a sad face and a scared face as her classmates were doing; this was a surprise to Teacher 2, because Student 2f was always smiling and laughing. Student 2f also responded verbally twice. The observer noted, "The student who usually has challenging behaviors, yells and leaves the table was present and engaged the entire time. The students that are really physically involved, motorically pulled it together to participate using the devices. They did things that I didn't think they could do." When Teacher 2 was clear on the purpose of an activity (e.g. elicit interest and interaction) and responded to student contributions rather than controlling student responses, she increased her students' cognitive engagement in authentic literacy learning opportunities.

In lessons throughout the spring, Teacher 2 asked her students to apply their knowledge of vocabulary words by demonstrating feelings or identifying things that made them feel

different emotions. She brought their attention to the idea that different people can feel different ways about the same thing, and helped students make connections between learning and themselves. Because the students in Classroom 2 had a different range of needs than the students in Classroom 1, support for higher-level thinking skills looked different. However, by the end of the year, Teacher 2 had begun to offer scaffolding, support, and connections so students could engage in remembering, understanding, applying, analyzing, and evaluating knowledge. In an example from April, Teacher 2 showed a picture of a smiling father sitting in the grass with a baby on his lap. When Student 2g commented, "That's disgusting," Teacher 2 responded, "You think that's disgusting? Maybe if daddy was all dirty." Because the purpose of this lesson was to help students understand the meanings of the words *happy* and *disgusted*, Teacher 2 linked comments back to the purpose by providing information about the meanings of these words.

Summary

The results of the study indicated that when teachers provided comprehensive literacy instruction using constructivist teaching methods, students demonstrated higher levels of attention, interest, and communication than they did during instruction using behaviorist teaching methods and focusing on rote skills. Additionally, when teachers applied constructivist methods they challenged students to participate in learning activities with higher cognitive demands and made applications for using new skills clear. High student engagement and more cognitively challenging learning opportunities appeared to be functions of (1) teachers releasing control over communication and interactions, and instead inviting student contributions and building upon them and (2) teachers having clarity about the purposes of lessons and activities, and making the purposes of learning clear for students and paraeducators as well.

CHAPTER 5: DISCUSSION

The purpose of this study was to examine the instructional practices of teachers in self-contained special education classrooms as they worked to provide literacy instruction in a manner more consistent with general education (e.g., comprehensive literacy instruction, constructivist teaching methods) than with traditional special education (e.g., mastery of rote skills, behaviorist teaching methods). The findings indicated that when teachers engaged students with severe disabilities in literacy instruction rooted in constructivist teaching methods, students were more engaged, demonstrating higher levels of attention, interest, and communication than the levels observed during lessons rooted in behaviorist teaching methods. Furthermore, when teachers applied constructivist methods they challenged students to participate in learning activities with higher cognitive demands and made applications for using new skills clear. High student engagement and more cognitively challenging learning opportunities appeared to be functions of teachers inviting student contributions in group settings; teachers having clarity about the purposes and goals of lessons; and teachers responding to contributions in ways that affirmed them, built upon them, or provided instructional feedback.

This study provided powerful insight into the limited utility of behaviorist teaching methods during literacy instruction for students with severe disabilities. While behaviorist teaching methods have long been used in special education to teach isolated skills including some literacy subskills, these methods address skills in a limited and decontextualized way that students with severe disabilities find difficult if not impossible to apply meaningfully outside the settings where they were taught (Agran, 2011; Erickson et al., 2009; Katims, 2000a). This study

demonstrated that in breaking down complex literacy skills using task analysis and other approaches consistent with a behaviorist paradigm, teachers provided instruction that left students with severe disabilities disengaged or engaged at very low levels. As the name "behaviorism" implies, behaviorist instructional practices in the current study relied on eliciting observable behaviors within the context of literacy and language instruction. In this way, teachers were teaching students to *do* things, but were not encouraging students to *think*.

Cognition and language cannot be broken down into component behaviors without sacrificing their purpose, application, and use over time (Chomsky, 1959). While behaviors may be taken as evidence of cognition and language, cognition and language are not themselves behaviors. The constructivist perspective acknowledges and values the mental activity involved in cognition and language. Constructivist teaching methods focus intentionally on making purposes of lessons clear and emphasize application and use while students are learning. In the constructivist view, learning is deeply contextualized. Commonly used in general education, constructivist approaches were noted with increasing frequency across the year of the current study and appeared to support communication and literacy for the participants with severe disabilities.

In this study, two teachers with very different instructional styles demonstrated that constructivist instructional practices were highly effective at engaging students and encouraging thinking. It was evident at the beginning of the year that the instructional practices of Teacher 1, who had a background in general education, naturally drew from constructivism as she engaged students in the collaborative construction of learning. It was also evident at the beginning of the year that the instructional practices of Teacher 2 were rooted in behaviorism, as she directed students to respond in predetermined, rote ways to develop decontextualized skills. Teacher 2

also referred to behaviorist teaching methods during her first interview, and stated that she was using the Verbal Behavior process. From the beginning, students in Classroom 1 made many contributions and connections to lessons while students in Classroom 2 waited passively for brief and highly directive interactions with the teacher. As Teacher 1 further refined her constructivist teaching practices, and as Teacher 2 began to shift toward constructivist teaching practices, both classrooms became more engaging, instructive, and collaborative learning communities.

It was notable that as the teachers progressed through a literacy curriculum rooted in the constructivist perspective, their clarity of the purposes and goals for the lessons improved. Perhaps by having cognitive clarity about the purposes and goals for lessons, teachers were better able to connect student contributions to lesson goals, which in turn allowed teachers to release control and respond meaningfully to a wider variety of contributions.

Behaviorism in Special Education

Four decades ago, behaviorism represented a "way in" for individuals with severe disabilities to gain access to education. In the 1960's and 1970's, studies showed that the behavior of persons with severe disabilities could be changed in the areas of eating, dressing, toileting, and self-help using Applied Behavior Analysis, thus demonstrating that persons with severe disabilities could learn (Spooner & Brown, 2011). This precipitated a shift from merely providing institutional care to teaching skills and assessing skill acquisition, which moved the field of special education forward. Unfortunately, the field of special education, especially for students with severe disabilities, has continued to rely on behaviorist teaching methods rather than develop additional approaches that would extend beyond the behaviors and isolated skills that were the focus in the 1960's and 1970's. Behaviorist teaching methods, effective for teaching isolated skills related to the performance of tasks, have been inappropriately applied to

cognitive and language development and continue to represent a "way in" for students with severe disabilities who often must prove an ability to learn in order for their teachers to start providing instruction (see, e.g., Giangreco, 2011). Current textbooks for teaching students with severe disabilities recommend highly controlled instruction focused on discrete behaviors, using task analysis to break complex processes into discrete behavioral components, isolating discrete behaviors rather than teaching them in meaningful contexts, reinforcing responses, and using systematic prompting (see, e.g., Browder & Spooner, 2006; Snell & Brown, 2011). These recommendations are specifically applied to literacy instruction as well as other academic subjects. It was not surprising that Teacher 2, who reported that her licensure, training, and experience were in special education focused on students with severe disabilities, relied on approaches rooted in behaviorism. However, her shift toward constructivist teaching practices and the accompanying increase in her students' engagement, communication, and cognition support the views of a growing number of researchers who criticize the ongoing use of behaviorist teaching practices in literacy instruction for students with severe disabilities when the goal is cognitive development (see, e.g., Erickson et al., 2009; Erickson et al., 2006; Katims, 2000a; Kliewer, 2008; Kliewer & Biklen, 2001; Kohn, 1999).

For many reasons, the behaviorist perspective to teaching literacy to students with severe disabilities has the potential to be quite negative. Three of these reasons will be discussed within the context of this study: (1) the behaviorist perspective leads to poor teaching practices and low expectations for students, (2) the behaviorist perspective imparts a harmful implicit curriculum, and (3) the behaviorist perspective relies on dangerous assumptions about students with severe disabilities and limits future opportunities.

Poor Teaching Practices and Low Expectations

A teacher's epistemological perspective drives her instructional practices and expectations for her students (Cunningham & Fitzgerald, 1996; Fang, 1996; Jordan et al., 2009; Silverman, 2007). When the behaviorist perspective is applied to literacy instruction, it fosters ineffective instructional practices and low expectations, both of which lead to poor learning outcomes (Katims, 2000a; Keefe & Copeland, 2011; Kliewer & Biklen, 2001; Zascavage & Keefe, 2007). A major feature of behaviorism is that tasks are broken down into component parts, then each part is taught to mastery (Snell & Brown, 2011). Along the way, the focus is on making accommodations to each task so that students can successfully master them. By making component tasks easier for students to perform, the big picture of what students need to learn is often lost. When accommodations minimize or eliminate cognitive demand, students are no longer engaged in thinking or learning. They are simply completing tasks. This type of instructional practice does little to teach students with severe disabilities genuine literacy skills that they can apply in the real world. This type of instructional practice was observed frequently in Classroom 2 during the early months of the study, and Teacher 2's statements during interviews reflected her low expectations for her students. For example, when Teacher 2 only offered her students voice output devices programmed with the correct answer at the moment she wanted them to provide that answer, she eliminated all cognitive demand from their participation in class discussions and communicated clearly that she only expected them to be able to accomplish the most rudimentary tasks with maximum support. The students' participation involved the motor task of pressing a button, but no thinking or planning. In the early months of the study, Teacher 2's expectations for her students' literacy development were low; in September, she said, "Reading and understanding is being able to follow a picture schedule, or a

text schedule or a photo schedule." Her focus on discrete observable behaviors caused her to rely on assessment and instruction of behaviors as a total curriculum, costing her students opportunities to think, plan, and reason. The cost to her students during the early months of the study was made apparent after Teacher 2 began to shift toward a more constructivist perspective. Once her expectations for cognition and learning rose, students responded with increased involvement in learning.

Harmful Implicit Curriculum

Schools not only impart the knowledge and skills outlined in the explicit curriculum; they also function to socialize students and expand their psychological repertoires through a variety of experiences, relationships, opportunities, and challenges that reside in the implicit curriculum (Dreeben, 1968). Factors such as the structure of classrooms, expectations for students, teaching approaches, and messages conveyed through learning materials comprise an implicit curriculum (Eisner, 2002). The sociocultural activities of the classroom and the implicit curriculum teach children about who they are, how they are valued within the school, and what kinds of people they may become (Johnston, 2004). Inappropriately applied behaviorist teaching practices can inadvertently impart lessons to students with severe disabilities that are harmful to their identities as people and as learners. In the current study, the behaviorist instruction targeting decontextualized literacy skills implicitly reflected the expectation that the students were not capable of learning in meaningful ways. Consistent with numerous textbooks and research articles focused on behaviorist approaches to teaching academics to students with severe disabilities (see e.g., Browder et al., 2008; Browder et al., 2009; Browder & Spooner, 2006; Browder et al., 2006; Hockenbury et al., 2000; Snell & Brown, 2011; Spooner et al., 2012), Teacher 2 believed her students were only capable of being trained to provide restricted, rote

responses. To an outside observer, the implicit curriculum in Classroom 2 during the early months of the study was one in which students learned: (1) to wait to be told what to do and say, (2) to be passive recipients of information, (3) that little was expected of them, (4) that their ideas were not important to classroom discussions, (5) that only correct answers were welcome, (6) that they should not interact with anyone other than the teacher during learning time, (7) that compliance was of high value to their teacher, and (8) that if they did nothing, someone would complete activities for them. This implicit curriculum is consistent with observations of other researchers who have argued that an overarching behaviorist perspective provides an inferior implicit curriculum, failing to teach students academic, social, and cultural knowledge required to succeed in life beyond school (e.g., Brownell et al., 2010; Jackson et al., 2009).

Assumptions that Limit Opportunities

When applied to literacy and language, behaviorist practices conflict with the *criterion of the least dangerous assumption.* This criterion challenges educators, when selecting teaching strategies, to consider which assumptions will have the least dangerous impact on students' opportunities to learn skills that will allow them to lead happy and productive lives (Jorgensen, McSheehan, & Sonnenmeier, 2007). When teachers assume incompetence in students with severe disabilities, they have low expectations for their students and fail to provide learning opportunities. Researchers have noted that the assumption that students with severe disabilities will not learn to read is a dangerous one, because it leads to a de-emphasis on reading instruction, creating a self-fulfilling prophecy that is then used to support continued denial of reading instruction (Downing, 2005b; Keefe & Copeland, 2011). On the other hand, when teachers assume competence in students with severe disabilities, they have high expectations for their students to learn and provide higher quality learning opportunities. It is far less dangerous

to provide high-quality instruction to a student who may not be able to benefit from it than it is to provide little or no instruction to a student who could have learned to read, to communicate, and to exercise control over his or her life (Jorgensen et al., 2007).

In the early months of the study, Teacher 2's assumptions about her students led her to provide literacy instruction in a controlling and directive way. Her literacy instruction denied her students opportunities to think, plan, reason, communicate, and interact with peers. Consistent with research on teacher self-efficacy and teacher change (Durando, 2008; Guskey, 2002; Jorgensen et al., 2007; Jung, 2007; Romi & Leyser, 2006; Silverman, 2007), Teacher 2's shift toward providing frequent authentic learning opportunities was supported by observational evidence that students were engaging, communicating, and learning. As observers pointed out Teacher 2's increasingly effective literacy instruction, Teacher 2 expressed pleasure at the feedback and continued to shift toward higher expectations for her students and higher quality instruction. However, it was not until Teacher 2 began implementing more effective literacy instruction that students had the opportunity to demonstrate their competence.

Verbal Behavior

According to Chomsky's 1959 review of Skinner's *Verbal Behavior*, the insights gained through behaviorist research are genuine, yet they can only be applied to complex human behavior such as language in an artificial and superficial way. Chomsky argued that any attempt to discuss language in terms of behavior omits recognition of factors of great importance that may not be as easy to study as observable behaviors, but are worth pursuing. Chomsky went on to explain that verbal behaviorism is an impossible construct. He made the case that verbal behaviorism fails to take into account internal factors such as attention, will, drive, and impulse; furthermore, communication is subtle, complex, and often nonverbal; and, finally, stimuli for

communication can only be controlled in artificially contrived settings. Chomsky noted that listeners can only identify the stimulus for a communication once they have heard the response; only when a person has spoken do we know what they have noticed and what they are thinking about. Chomsky rejected verbal behaviorism because behaviorism applies a limited set of concepts to complex undertakings such as cognition and language; yet cognition and language are not observable behaviors that can be developed using stimulus/response/reinforcement. Hence, the inappropriate application of behaviorist approaches to language, literacy, and cognition serves to limit our understandings rather than extend them. The current study provided evidence for Chomsky's view and suggests that behaviorist teaching methods limit opportunities for cognition and language learning rather than support their development in students with severe disabilities. This is, in fact, not new information. It has been shown through years of research that the verbal behavior approach often results in gains in decontextualized linguistic targets, but participants in most studies fail to generalize learned behaviors beyond the training context (Abbeduto & Boudreau, 2004).

From Behaviorism to Constructivism

In the behaviorist approach, instruction is teacher-centered, and teachers act as possessors and disseminators of knowledge that is perceived to be absolutely true. Instruction requires students to engage in rote memorization and relies on repeated drills in decontextualized and simplified skills. Garrick Duhaney and Duhaney (2000) provide one of the clearest descriptions of the behaviorist approach, stating that "the learner recapitulates the teacher's interpretation of the world," (p. 394). By contrast, in the constructivist approach students are expected to form their own interpretations of the world by integrating new knowledge with what they already know. Instruction is student-centered, and teachers act as facilitators within a cooperative

learning community. Instruction requires students to discover, construct, apply, and understand knowledge (Garrick Duhaney & Duhaney, 2000). This study contributes to a growing body of evidence that in the context of literacy instruction, students with severe disabilities do not learn best using behaviorist teaching methods that rely on teacher-directed instruction; passive student participation; and simplified, decontextualized content (Erickson & Clendon, 2009; Erickson et al., 2010; Hatch, 2009; Katims, 2000b; Koppenhaver et al., 2007; Koppenhaver & Yoder, 1993). This study provides evidence that students with severe disabilities benefit from constructivist teaching methods and authentic, contextualized literacy learning opportunities. As Teacher 2 shifted from behaviorist to constructivist teaching methods, her students' engagement, attention, and communication increased. This evidence supports the idea that as a field, education for students with severe disabilities requires a similar shift. Many educators and researchers continue to rely on inappropriately applied behaviorist teaching methods that have been proven ineffective and serve to widen the gap between students with severe disabilities and their peers (Agran, 2011; Brownell et al., 2010; Downing, 2005b; Erickson et al., 2009; Katims, 2000a; Katims, 2000b; Keefe & Copeland, 2011; Kliewer & Biklen, 2001; Ryndak et al., 2009). While the behaviorist perspective focuses on skill acquisition, we know that there is a distinction between skill acquisition and development (Daniels, 2007). In order to address the true purposes of schooling for students with severe disabilities, a shift toward constructivist teaching practices and a focus on development rather than skill acquisition is necessary (Erickson et al., 2006; Jordan et al., 2009).

Situating the Findings in the Theoretical Framework

This study was situated in a theoretical framework encompassing three main ideas: (1) the purpose of public education is to prepare students for meaningful participation in society; (2)

education is social and interactive, teaching students about their role(s) in society; and (3) teachers' beliefs about learners and learning (epistemology) significantly impact their instruction. The findings showed major shifts within these three main ideas, particularly in Classroom 2.

First, there was a shift in the way Classroom 2 reflected the purpose of education for the students who were educated there. At the beginning of the year, the apparent purpose was to teach students compliance as demonstrated through: obedience, waiting, visual attention, silence, repetition/imitation, and activation of communication devices when they were offered. Students were not learning skills that would allow them to meaningfully interact with the world, to socialize, to problem solve, to evaluate, or to gain desired information. By the end of the year, the apparent purpose was to teach students to contribute to discussions, offer comments, make choices and demonstrate preferences, show interest in books, interact with peers, and understand concepts of print. The teacher's purpose shifted dramatically from completing each lesson to engaging students as learners during lessons. At the beginning of the year, the teacher placed emphasis on the products of activities, and directed paraeducators to use hand-over-hand to ensure that students produced the intended artifacts of each lesson without concern for the contributions students could possibly make. By the end of the year, Teacher 2 placed emphasis on the process of each activity, allowing students to explore and create; the emphasis was not on the finished product but on student engagement and learning during lessons. Her purpose shifted toward preparing students for meaningful engagement during group conversations and meaningful engagement in literacy learning, both essential for meaningful participation in society. The purpose of education in Classroom 2 became far more closely aligned to the purpose of education for students without disabilities.

Second, there was a dramatic shift in Classroom 2 from one-on-one instruction between adults and students to interactive group discussions. Learning is a social and interactive undertaking (Bandura & Walters, 1963; Bodrova & Leong, 2007; Vygotsky, 1978), and one-on-one instruction is far less effective than group instruction, which offers students opportunities for social interaction, active participation, and communicative engagement (Kliewer & Biklen, 2001; Koppenhaver & Yoder, 1993; Mike 1995). The shift in Classroom 2 from individually delivered, highly directive instruction to responsive group discussion represented an increase in opportunities for peer modeling, negotiating roles within group discussions, and exploring communication. Consistent with research exploring the impact of parent-child storybook interactions that emphasized moving away from directives toward engagement with natural comments and questions (Skotko et al., 2004), the current study revealed increased engagement and interaction as teachers made a similar shift in the classroom. This suggests that teachers who foster group discussions and opportunities for group learning for students with severe disabilities can engage them not only in meaningful literacy learning, but also in an implicit curriculum that will expand students' psychological repertoires and teach them that they are valued members of society.

Third, Teacher 2's practice shifted in a way that implied a shift in her beliefs about her students and how she should teach them. A teacher's beliefs about knowledge and learning (epistemology) form the basis of instructional practice, influencing goals, methods, selection of materials, and the organization of classrooms and activities (Cunningham & Fitzgerald, 1996; Ferrara, 2012). According to Jordan and her colleagues (2009), teachers with naive beliefs about the nature of knowledge, such as the belief that knowledge is certain and there is always one right answer, are less effective teachers and rely heavily on lower-order thinking skills such as

memorization and recall. Such teachers rely primarily on teacher-controlled instruction and extrinsic motivators. On the other hand, teachers who believe that knowledge is uncertain, situated in individual perspectives, and subject to change are more effective teachers and engage their students in higher-order thinking (Jordan et al., 2009). Such teachers are more likely to use student-centered and cooperative instructional methods, and to rely on intrinsic motivation. The training Teacher 1 received in a general education teacher preparation program led her to enter the study with the belief that knowledge is uncertain, situated in individual perspectives, and subject to change. In contrast, Teacher 2 may have held these beliefs for students without severe disabilities, but there was no evidence that these beliefs extended to the students in her classroom. Across the school year, Teacher 2 made a clear shift in practice that implied a shift toward viewing learning as a collaborative co-construction of knowledge between students and teachers.

Constructivism in Special Education

Consistent with the current general education perspective of literacy, the literacy curriculum used by the teachers in this study was rooted in an interactive perspective that views reading as a transaction between reader and text (Ferrara, 2012). In this perspective, the reader requires accurate processing of text, background knowledge, language ability and a purpose for reading in order to connect with, and make meaning of, text. For students with little exposure to previous literacy instruction, the curriculum addressed emergent literacy skills, which are rooted in the interactive perspective. Emergent literacy focuses on the construction of early understandings about reading and writing, including narrative knowledge, vocabulary, knowledge about the world, phonological awareness, concepts of print, functions of print, alphabetic knowledge, and the perception of self as learner (Erickson & Hatton, 2007). By using

the interactive perspective of literacy development (including conventional and emergent literacy), the curriculum obviated the use of behaviorist teaching techniques; integrating text, background knowledge, language, understandings about literacy, and purposes for engaging in literacy clearly requires a construction of knowledge and cognitive engagement.

Within the context of lessons that were later described as constructivist in nature, students had many more opportunities to learn, and these opportunities challenged students to engage in deeper levels of learning than the opportunities afforded during lessons described as behaviorist. These constructivist lessons and learning incidents were observed frequently in Classroom 1 throughout the school year, and began to appear in Classroom 2 during the final months of the study. The notable features of these lessons were that student contributions were invited and built upon; that there were frequent opportunities for learning and making connections; that teacher responsiveness to student contributions meant that students could connect to concepts in a variety of ways; and students were challenged to engage in higher-order thinking skills. Within the context of constructivist lessons, students displayed high levels of engagement and interest and engaged in cognition rather than performing behaviors. Taken all together, the claim can be made that the same teaching methods that have been touted as best practice in general education were far more effective in self-contained classrooms for students with severe disabilities than traditional special education teaching practices.

Implications, Limitations and Future Research

This study contributes to a small but growing body of research that students with severe disabilities make progress in their communication, participation, reading, and writing when they are given access to literacy instruction that resembles quality instruction from general education (Erickson et al., 2005; Erickson & Koppenhaver, 1995; Koppenhaver & Erickson, 2003). This

body of research provides evidence that students with severe disabilities make progress in their literacy development when they have many opportunities to read and write in meaningful ways, engage in group activities and interactions, and receive responsive feedback from their teachers (Erickson et al., 2005; Koppenhaver & Erickson, 2003). Results of this study clarify and explicate some of the processes that support literacy learning, and provide a view of changes that occurred when one teacher shifted from a behaviorist perspective to a constructivist perspective in her literacy instruction for students with severe disabilities.

This study does, however, have limitations. For example, it was limited in scope and depth. The scope was limited by the fact that the classrooms were located in the same school district. Because the nature of special education, curricula, teacher education, and the use of self-contained settings varies significantly by state, region, and district, it will be necessary to explore these issues in other schools, school systems, and geographic locations. The depth of the study was limited by the fact that themes emerged through data analysis late in the study, or after the completion of the data collection phase of the study; therefore, there was not an opportunity to interview teachers as they shifted from a behaviorist perspective to a constructivist perspective. In the future, studies may use deductive coding to better understand and explore this theme from the beginning.

Future research should examine teacher epistemology and practice with respect to literacy instruction for students with severe disabilities in a variety of school settings (i.e. general education, separate classrooms, separate schools) and across geographic locations. States in which inclusion rates are high and teacher education programs prepare all teachers to educate students with disabilities should be compared to states in which inclusion rates are low and teacher education programs prepare special and general education teachers separately. As

education for students with severe disabilities progresses as a field, we will need to examine the epistemology that underlies practices, and challenge the beliefs and practices that limit students' opportunities for communication, participation, thinking, and learning.

According to Eisner (2003), "the really important dependent variables in education are not test scores or even skills performed in the context of schools; they are the tasks students are able to complete successfully in the lives they lead outside of schools," (p. 651). Students come to school to learn to socialize, think, plan, and reason (Zascavage & Keefe, 2007). If students with severe disabilities leave school with the ability to communicate, participate, and gain and convey meaning through print at a level proficient enough to conduct their daily affairs, they will leave school with the tools they need to have happy and productive lives (Erickson et al., 2009; Katims, 2000b; Keefe & Copeland, 2011).

APPENDIX A

Semi-structured teacher interview questions

Background Information

How many years have you been teaching?

What certifications do you have?

Teacher Literacy Beliefs: Reading

What do you do if a student isn't familiar with the topic of a given book?

When selecting a book for a student with significant disabilities, what kinds of things do you consider?

How do you know if a student understands what they have just read?

How do you decide how often a student should read a given book?

While reading a book, how do you provide opportunities for the student to make personal connections to the text?

How do you help your student to hold words and language in their head while they are reading?

Teacher Literacy Beliefs: Writing

What do think are the most important concepts for beginning writers to learn?

What you do when a student you are working with types "ft" instead of "feet"?

What do you do when a student writes the following: aples iz big

When a student writes, how is the topic selected?

What you think is the relationship between reading, writing, communicating, and listening?

What are the roles of your assistants in the classroom?

What are their educational/professional backgrounds?

APPENDIX B

Focused Codes

LE: low student engagement/interest

LS: low sensitivity to students' needs and interests

(for example, talking about adult topics or students' parents in a negative way, or dismissing students' contributions to stick to the lesson)

ER: extrinsic rewards

Td: teaching to DO (not think)

D: directive

(note the verb that describes what the teacher is directing the student to do; it may be inferred)

HOH: hand over hand

Ig: Ignoring student attempts at communication or participation

WC: Withholding modes of communication

(turning off devices, moving devices away)

HE: high student engagement/interest

HS: high sensitivity to students' needs and interests

(asking for student input, building on student contributions or ideas)

IR: intrinsic rewards

Tt: teaching to think (not just do)

I: inviting (rather than directing)

(note the verb that describes what the teacher is inviting the student to do; it may be inferred)

B: building on student attempts at communication or participation, whether solicited or not

PI: peer interaction (any kind, academic or not)

CC: cognitive clarity

(teacher explains the purpose of a lesson or activity, or summarizes what was done, or explains how students can use what they are learning- anything that increases students' understanding of why they are learning and what the goal is for an activity)

REFERENCES

Abbeduto, L. & Boudreau, D. (2004). Theoretical influences on research on language development and intervention in individuals with mental retardation. *Mental Retardation and Developmental Disabilities Research Reviews, 10*, 184-192.

AbleNet, Inc. (2005). *MEville to WEville Early Literacy and Communication Program*. Minneapolis/St. Paul, MN: AbleNet, Inc.

Adams, M. J. (1990). *Beginning to read: Thinking and learning about print.* Cambridge, MA: The MIT Press.

Agran, M. (2011). Promoting literacy instruction for people with severe disabilities: Achieving and realizing a literate identity. *Research & Practice for Persons with Severe Disabilities, 36* (3-4), 89-91.

Al Otaiba, S. & Hosp, M. K. (2004). Providing effective literacy instruction to students with Down syndrome. *Teaching Exceptional Children, 36* (4), 28-35.

Bandura, A. & Walters, R. H. (1963). *Social learning and personality development*. New York, NY: Holt, Rinehart and Winston, Inc.

Beck, J. (2002). Emerging literacy through assistive technology. *Teaching Exceptional Children, 35* (2), 44-48.

Bodrova, E. & Leong, D. J. (2007). *Tools of the mind: The Vygotskian approach to early childhood education* (2nd ed.). Upper Saddle River, NJ: Pearson Education, Inc.

Brady, K. & Woolfson, L. (2008). What teacher factors influence their attributions for children's difficulties in learning? *British Journal of Educational Psychology, 78* (4), 527-544.

Breton, W. (2010). Special education paraprofessionals: Perceptions of preservice preparation, supervision, and ongoing developmental training. *International Journal of Special Education, 25* (1).

Brighouse, H. (2006). *On education.* New York, NY: Routledge.

Broer, S. M., Doyle, M. B., & Giangreco, M. F. (2005). Perspectives of students with intellectual disabilities about their experiences with paraprofessional support. *Exceptional Children, 71* (4), 415-430.

Browder, D. M., Ahlgrim-Delzell, L., Courtade, G., Gibbs, S. L., & Flowers, C. (2008). Evaluation of the effectiveness of an early literacy program for students with significant developmental disabilities. *Exceptional Children, 75* (1), 33-52.

Browder, D., Gibbs, S., Ahlgrim-Delzell, L., Courtade, G. R., Mraz, M., & Flowers, C. (2009). Literacy for students with severe developmental disabilities: What should we teach and what should we hope to achieve? *Remedial and Special Education, 30* (5), 269-282.

Browder, D. M. & Spooner, F. (Eds.). (2006). *Teaching language arts, math, & science to students with significant cognitive disabilities*. Baltimore, MD: Paul H. Brookes Publishing Co.

Browder, D. M., Wakeman, S. Y., Spooner, F., Ahlgrim-Delzell, L., & Algozzine, B. (2006). Research on reading instruction for individuals with significant cognitive disabilities. *Exceptional Children, 72* (4), 392-408.

Brownell, M. T., Sindelar, P. T., Kiely, M. T., & Danielson, L. C. (2010). Special education teacher quality and preparation: Exposing foundations, constructing a new model. *Exceptional Children, 76* (3), 357-377.

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis.* Los Angeles, CA: Sage Publications.

Chomsky, N. (1959). A review of B. F. Skinner's *Verbal Behavior*. *Language, 35* (1), 26-58.

Cochran-Smith, M., Feiman-Nemser, S., McIntyre, D. J., & Demers, K. E. (Eds.). (2008). *Handbook of research on teacher education: Enduring questions in changing contexts* (3rd ed.). New York, NY: Routledge, Taylor & Francis Group.

Cole, M. (1990). Cognitive development and formal schooling: The evidence from cross-cultural research. In L.C. Moll (Ed.), *Vygotsky and education: Instructional implications and applications of sociohistorical psychology* (89-110). New York, NY: Cambridge University Press.

Cunningham, J.W. & Fitzgerald, J. (1996). Epistemology and reading. *Reading Research Quarterly, 31* (1), 36-60.

Curtis, J. L. & Cornell, L. (1998). *Today I feel silly: And other moods that make my day*. New York, NY: HarperCollins.

Daniels, H. (2007). Pedagogy. In H. Daniels, M. Cole, & J. V. Wertsch (Eds.), *The Cambridge companion to Vygotsky* (307-331). New York, NY: Cambridge University Press.

Deardorff, P., Glasenapp, G., Schalock, M., & Udell, T. (2007). TAPS: An innovative professional development program for paraeducators working in early childhood special education. *Rural Special Education Quarterly, 26* (3), 3-15.

DEC/NAEYC. (2009). Early childhood inclusion: A joint position statement of the Division for Early Childhood (DEC) and the National Association for the Education of Young

Children (NAEYC). Chapel Hill: The University of North Carolina, FPG Child Development Institute.

Diamond, K. E. & Innes, F. K. (2001). The origins of young children's attitudes toward peers with disabilities. In M. J. Guralnick (Ed.), *Early childhood inclusion: Focus on change* (159-177). Baltimore, MD: Paul H. Brookes Publishing Co.

Downing, J. E. (2005a). *Teaching communication skills to students with severe disabilities* (2nd ed.). Baltimore, MD: Paul H. Brookes Publishing Co.

Downing, J. E. (2005b). *Teaching literacy to students with significant disabilities: Strategies for the K-12 inclusive classroom*. Thousand Oaks, CA: Corwin Press.

Downing, J. E. (2006). Building literacy for students at the presymbolic and early symbolic levels. In D. M. Browder & F. Spooner (Eds.), *Teaching language arts, math, & science to students with significant cognitive disabilities* (39-61). Baltimore, MD: Paul H. Brookes Publishing Co.

Downing, J. E. & Peckham-Hardin, K. D. (2007). Inclusive education: What makes it a good education for students with moderate to severe disabilities? *Research & Practice for Persons with Severe Disabilities, 32* (1), 16-30.

Dreeben, R. (1968). *On what is learned in school.* Reading, MA: Addison-Wesley Publishing Co.

Durando, J. (2008). A survey on literacy instruction for students with multiple disabilities. *Journal of Visual Impairment & Blindness, 102* (1) 40-45.

Dynamic Learning Maps. (2013). *The DLM Expanded Taxonomy of Cognitive Processes.* Unpublished manuscript. Lawrence, KS: University of Kansas, Center for Educational Testing and Evaluation.

Eisner, E. W. (2002). *The educational imagination: On the design and evaluation of school programs* (3rd ed.). Upper Saddle River, NJ: Pearson.

Eisner, E. W. (2003). Questionable assumptions about schooling. *Phi Delta Kappan, 84* (9), 648-657.

Erickson, K. A. & Clendon, S. A. (2009). Addressing literacy demands of the curriculum for beginning readers and writers. In G. Soto and C. Zangari (Eds.), *Practically speaking: Language, literacy, and academic development for students with AAC needs* (p. 195-215). Baltimore, MD: Paul H. Brookes.

Erickson, K. A., Clendon, S., Abraham, L., Roy, V., & Van de Carr, H. (2005). Toward positive literacy outcomes for students with significant developmental disabilities. *Assistive Technology Outcomes and Benefits, 2* (1), 45-54.

Erickson, K., Hanser, G., Hatch, P., & Sanders, E. (2009). Research-based practices for creating access to the general curriculum in reading and literacy for students with significant intellectual disabilities. Chapel Hill, NC: Center for Literacy and Disability Studies.

Erickson, K. A., Hatch, P., & Clendon, S. (2010). Literacy, assistive technology, and students with significant disabilities. *Focus on Exceptional Children, 42* (5), 1-16.

Erickson, K. A. & Hatton, D. (2007). Expanding understanding of emergent literacy: Empirical support for a new framework. *Journal of Visual Impairment & Blindness, 101* (5), 261-277.

Erickson, K. A. & Koppenhaver, D. A. (1995). Developing a literacy program for children with severe disabilities. *Reading Teacher, 48,* 676-684.

Erickson, K. A., Koppenhaver, D. A., & Cunningham, J. W. (2006). Balanced reading intervention and assessment in augmentative communication. In R. J. McCauley & M. E. Fey (Eds.), *Treatment of Language Disorders in Children* (309-345). Baltimore, MD: Paul H. Brookes Publishing Co.

Erickson, K. A., Koppenhaver, D. A., Yoder, D. E., & Nance, J. (1997). Integrated communication and literacy instruction for a child with multiple disabilities. *Focus on Autism and Other Developmental Disabilities, 12* (3), 142-150.

Ertmer, P. A. & Newby, T. J. (1993). Behaviorism, cognitivism, constructivism: Comparing critical features from a design perspective. *Performance Improvement Quarterly, 6* (4), 50-72.

Fang, Z. (1996). A review of research on teacher beliefs and practices. *Educational Research, 38* (1), 47-65.

Ferrara, S. L. (2012). *Literacy and the inclusive classroom.* New York: Nova Science Publishers, Inc.

Fisher, D., Frey, N., & Thousand, J. (2003). What do special educators need to know and be prepared to do for inclusive schooling to work? *Teacher Education and Special Education, 26* (1), 42-50.

Fisher, M. & Meyer, L. H. (2002). Development and social competence after two years for students enrolled in inclusive and self-contained educational programs. *The Journal of the Association for Persons with Severe Handicaps, 27* (3), 165-174.

French, N. K. (2001). Supervising paraprofessionals: A survey of teacher practices. *The Journal of Special Education, 35* (1), 41-53.

Garrick Duhaney, L. M. & Duhaney, D. C. (2000). Assistive technology: Meeting the needs of learners with disabilities. *International Journal of Instructional Media, 27* (4), 393-401.

Gerber, M. M. (2011). A history of special education. In J. M. Kauffman & D. P. Hallahan (Eds.), *Handbook of Special Education* (3-14). New York, NY: Routledge, Taylor & Francis Group.

Ghere, G. & York-Barr, J. (2003). *Employing, developing, and directing special education paraprofessionals in inclusive education programs: Findings from a multi-site case study.* Institute on Community Integration (UCEDD) and Department of Educational Policy and Administration, University of Minnesota.

Giangreco, M. F. (2010). One-to-one paraprofessionals for students with disabilities in inclusive classrooms: Is conventional wisdom wrong? *Intellectual and Developmental Disabilities, 48* (1), 1-13.

Giangreco, M. F. (2011). Educating students with severe disabilities: Foundational concepts and practices. In M. E. Snell & F. Brown (Eds.), *Instruction of students with severe disabilities* (7th ed.) (1-30). Upper Saddle River, NJ: Pearson Education, Inc.

Giangreco, M. F. & Broer, S. M. (2005). Questionable utilization of paraprofessionals in inclusive schools: Are we addressing symptoms or causes? *Focus on Autism and Other Developmental Disabilities, 20* (1), 10-26.

Giangreco, M. F., Suter, J. C., & Doyle, M. B. (2010). Paraprofessionals in inclusive schools: A review of recent research. *Journal of Educational and Psychological Consultation, 20,* 41-57.

Gindis, B. (1999). Vygotsky's vision: Reshaping the practice of special education for the 21st century. *Remedial and Special Education, 20* (6), 333-340.

Gordon, D. T., Gravel, J. W., & Schifter, L. A. (Eds.). (2009). *A policy reader in universal design for learning.* Cambridge, MA: Harvard Education Press.

Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice, 8* (3/4), 381-391.

Hatch, P. (2009). *The effects of daily reading opportunities and teacher experience on adolescents with moderate to severe intellectual disability.* (Doctoral dissertation.)

Hockenbury, J. C., Kauffman, J. M., & Hallahan, D. P. (2000). What is right about special education. *Exceptionality, 8* (1), 3-11.

IDEA (Individuals with Disabilities Education Act Amendments) of 1997, PL 105-17, 20 U.S.C. § 1400 (1997).

IDEA (Individuals with Disabilities Education Improvement Act) of 2004, PL 108-446, 20 U.S.C. § 1400 (2004).

Jackson, L. B., Ryndak, D. L., & Wehmeyer, M. L. (2009). The dynamic relationship between context, curriculum, and student learning: A case for inclusive education as a research-based practice. *Research & Practice for Persons with Severe Disabilities, 33-4* (4-1), 175-195.

Johnston, P. H. (2004). *Choice words: How our language affects children's learning*. Portland, ME: Stenhouse Publishers.

Jordan, A., Schwartz, E., & McGhie-Richmond, D. (2009). Preparing teachers for inclusive classrooms. *Teaching and Teacher Education, 25,* 535-542.

Jorgensen, C. M., McSheehan, M., & Sonnenmeier, R. M. (2007). Presumed competence reflected in the educational programs of students with IDD before and after the Beyond Access professional development intervention. *Journal of Intellectual & Developmental Disability, 32* (4), 248-262.

Jung, W. S. (2007). Preservice teacher training for successful inclusion. *Education, 128* (1), 106-113.

Katims, D. S. (2000a). Literacy instruction for people with mental retardation: Historical highlights and contemporary analysis. *Education and Training in Mental Retardation and Developmental Disabilities, 35* (1), 3–15.

Katims, D. S. (2000b). *The quest for literacy: Curriculum and instructional procedures for teaching reading and writing to students with mental retardation and developmental disabilities.* Reston, VA: MRDD.

Kauffman, J. M. & Hallahan, D. P. (Eds.). (2005). *The illusion of full inclusion: A comprehensive critique of a current special education bandwagon* (2nd ed.). Austin, TX: PRO-ED, Inc.

Keefe, E. B. & Copeland, S. R. (2011). What is literacy? The power of a definition. *Research & Practice for Persons with Severe Disabilities, 36* (3-4), 92-99.

Kliewer, C. (2008). *Seeing all kids as readers: A new vision for literacy in the inclusive early childhood classroom*. Baltimore, MD: Paul H. Brookes Publishing Co.

Kliewer, C. & Biklen, D. (2001). "School's not really a place for reading": A research synthesis of the literate lives of students with severe disabilities. *The Journal of the Association for Persons with Severe Handicaps, 26* (1), 1-12.

Kliewer, C., Biklen, D., & Kasa-Hendrickson, C. (2006). Who may be literate? Disability and resistance to the cultural denial of competence. *American Educational Research Journal, 43* (2), 163-192.

Kohn, A. (1999). *Punished by rewards: The trouble with gold stars, incentive plans, A's, praise, and other bribes*. Boston, MA: Houghton Mifflin.

Koppenhaver, D. A. (2000). Literacy *in* AAC: What should be written on the envelope we push? *AAC: Augmentative & Alternative Communication, 16* (1), 270-279.

Koppenhaver, D. A., & Erickson, K. A. (2003). Natural emergent literacy supports for preschoolers with autism and severe communication impairments. *Topics in Language Disorders, 23* (4), 283-292.

Koppenhaver, D. A., Hendrix, M. P., & Williams, A. R. (2007). Toward evidence-based literacy interventions for children with severe and multiple disabilities. *Seminars in Speech and Language, 28* (1), 79-89.

Koppenhaver, D. A. & Yoder, D. E. (1993). Classroom literacy instruction for children with severe speech and physical impairments (SSPI): What is and what might be. *Topics in Language Disorders, 13* (2), 1-15.

Kozulin, A. & Gindis, B. (2007). Sociocultural theory and education of children with special needs: From defectology to remedial pedagogy. In H. Daniels, M. Cole, & J. V. Wertsch (Eds.), *The Cambridge companion to Vygotsky* (332- 362). New York: Cambridge University Press.

Laws, G., Byrne, A., & Buckley, S. (2000). Language and memory development in children with Down syndrome at mainstream schools and special schools: A comparison. *Educational Psychology, 20* (4), 447-457.

Leaf, R. & McEachin, J. (1999). *A work in progress: Behavior management strategies and a curriculum for intensive behavioral treatment of autism*. New York, NY: DRL Books.

McLeskey, J., Rosenberg, M. S., & Westling, D. L. (2010). *Inclusion: Effective practices for all students.* Upper Saddle River, NJ: Pearson Education, Inc.

Meyer, A. & Rose, D. H. (2000). Universal design for individual differences. *Educational Leadership, 58* (3), 39-43.

Mike, D. G. (1995). Literacy and cerebral palsy: Factors influencing literacy learning in a self-contained setting. *Journal of Reading Behavior, 27* (4), 627-642.

Musick, J. & Stott, F. (2000). Paraprofessionals revisited and reconsidered. In J. P. Shonkoff & S. J. Meisels (Eds.), *Handbook of early childhood intervention, 2nd ed.* (pp. 439-453). New York, NY: Cambridge University Press.

National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). Common core state standards. Washington, DC: National Governors Association Center for Best Practices & Council of Chief State School Officers.

NC School Report Cards. (2011). Student performance, 2010-2011 school year. Retrieved from http://www.ncreportcards.org.

NCLB (No Child Left Behind Act) of 2001, PL 107-110, 115 Stat. 1425, 20 U.S.C. § 6301 (2001).

North Carolina Department of Public Instruction Exceptional Children Division (2012). Report of children with disabilities that receive special education Part B, Individuals with Disabilities Education Act, implementation of FAPE requirements, reporting year 2011-2012. Retrieved from http://ec.ncpublicschools.gov/reports-data/child-count/reports/april-1

NICHCY (National Dissemination Center for Children with Disabilities). (2012). Categories of disability under IDEA. Retrieved from http://nichcy.org/disability/categories.

Okagaki, L., Diamond, K. E., Kontos, S. J., & Hestenes, L. L. (1998). Correlates of young children's interactions with classmates with disabilities. *Early Childhood Research Quarterly, 13* (1), 67-86.

OSEP (U. S. Department of Education, Office of Special Education Programs). (2011). *Part B, Individuals with Disabilities Education Act, Implementation of FAPE Requirements.* Retrieved from https://www.ideadata.org/arc_toc13.asp#partbCC.

OSERS (U. S. Department of Education, Office of Special Education and Rehabilitative Services). (2010). *Thirty-five years of progress in educating children with disabilities through IDEA.* Retrieved from http://www2.ed.gov/about/offices/list/osers/idea35/history/idea-35-history.pdf.

Peck, C. A., Staub, D., Gallucci, C., & Schwartz, I. (2004). Parent perception of the impacts of inclusion on their nondisabled child. *Research & Practice for Persons with Severe Disabilities, 29* (2), 135-143.

Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2008). *Classroom assessment scoring system: Manual K-3.* Baltimore, MD: Paul H. Brookes Publishing Co.

Pickett, A. L. (1997). Paraeducators in school settings: Framing the issues. In A.L. Pickett & K. Gerlach (Eds.), *Supervising paraeducators in school settings: A team approach* (pp. 1-24). Austin, TX: PRO-ED.

Pressley, M. (2009). Effective beginning reading instruction. *Journal of Literacy Research, 34* (2), 165-188.

Putnam, R. T. & Borko, H. (2000). What do new views of knowledge and thinking have to say about research on teacher learning? *Educational Researcher, 29* (1), 4-15.

Riggs, C. G. & Mueller, P. H. (2001). Employment and utilization of paraeducators in inclusive settings. *The Journal of Special Education, 35* (1), 54-62.

Romi, S. & Leyser, Y. (2006). Exploring inclusion preservice training needs: A study of variables associated with attitudes and self-efficacy beliefs. *European Journal of Special Needs Education, 21* (1), 85-105.

Ruppar, A. L., Dymond, S. K., & Gaffney, J. S. (2011). Teachers' perspectives on literacy instruction for students with severe disabilities who use augmentative and alternative communication. *Research & Practice for Persons with Severe Disabilities, 36* (3-4) 100-111.

Ryndak, D. L., Moore, M. A., Orlando, A., & Delano, M. (2009). Access to the general curriculum: The mandate and role of context in research-based practice for students with extensive support needs. *Research & Practice for Persons with Severe Disabilities, 33-4* (4-1), 199-213).

Shapiro, A. (1999). *Everybody belongs: Changing negative attitudes toward classmates with disabilities.* New York, NY: Garland Publishing, Inc.

Silverman, J. C. (2007). Epistemological beliefs and attitudes toward inclusion in pre-service teachers. *Teacher Education and Special Education, 30* (1), 42-51.

Skotko, B. G., Koppenhaver, D. A., & Erickson, K. A. (2004). Parent reading behaviors and communication outcomes in girls with Rett Syndrome. *Exceptional Children, 70* (2), 145-166.

Snell, M. E. & Brown, F. (2011). Selecting teaching strategies and arranging educational environments. In M. E. Snell & F. Brown (Eds.), *Instruction of students with severe disabilities* (7th ed.) (122-185). Upper Saddle River, NJ: Pearson Education, Inc.

Spooner, F. & Browder, D. M. (2006). Why teach the general curriculum? In D. M. Browder & F. Spooner (Eds.), *Teaching language arts, math, & science to students with significant cognitive disabilities* (1-13). Baltimore, MD: Paul H. Brookes Publishing Co.

Spooner, F. & Brown, F. (2011). Educating students with significant cognitive disabilities: Historical overview and future projections. In J. M. Kauffman & D. P. Hallahan (Eds.), *Handbook of Special Education* (503-515). New York, NY: Routledge, Taylor & Francis Group.

Spooner, F., Knight, V. F., Browder, D. M., & Smith, B. R. (2012). Evidence-based practice for teaching academics to students with severe developmental disabilities. *Remedial and Special Education, 33* (6), 374-387.

Stainback, S. & Stainback, W. (1996). *Inclusion: A guide for educators.* Baltimore, MD: Paul H. Brookes Publishing Co.

Striffler, N. (1993). *Current trends in the use of paraprofessionals in early intervention and preschool services: NEC*TAS Synthesis Report.* Chapel Hill, NC: National Early Childhood Technical Assistance System.

Takahashi, S. (2011). Co-constructing efficacy: A "communities of practice" perspective on teachers' efficacy beliefs. *Teaching and Teacher Education, 27* (4), 732-741.

Taylor, S. J. (2004). Caught in the continuum: A critical analysis of the principle of the least restrictive environment. *Research & Practice for Persons with Severe Disabilities, 29* (4), 218-230.

van Huizen, P., van Oers, B., & Wubbels, T. (2005). A Vygotskian perspective on teacher education. *Journal of Curriculum Studies, 37* (3), 267-290.

Vaughn, S., Kim, A., Morris Sloan, C., Hughes, M., Elbaum, B., & Sridhar, D. (2003). Social skills interventions for young children with disabilities. *Remedial and Special Education, 24* (1), 2-15.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Cambridge, MA: Harvard University Press.

Yoder, D. E. (2001). Having my say. *AAC: Augmentative & Alternative Communication, 17* (1), 2-10.

Zascavage, V. T. & Keefe, C. H. (2004). Students with severe speech and physical impairments: Opportunity barriers to literacy. *Focus on Autism and Other Developmental Disabilities, 19* (4), 223–234.

Zascavage, V. T. & Keefe, C. H. (2007). Students with severe speech and physical impairments: Reflection of models of social construct in educational decisions for literacy instruction. *Journal of Disability Policy Studies, 18* (1), 32-42

Zigmond, N., Kloo, A., & Volonino, V. (2009). What, where, and how? Special education in the climate of full inclusion. *Exceptionality, 17* (4), 189-204.