2015

Instruction of Students With Disabilities Cognitively Functioning Below Age 2

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COLLEGE OF EDUCATION

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The Individuals With Disabilities Education Improvement Act requires students with disabilities to show progress on the same standards as their nondisabled peers without indicating how teachers should accomplish this goal. Many teachers lack the skills needed to address the unique learning challenges of students who are cognitively functioning below 2 years of age. This study used a qualitative exploratory case study design. The purpose of this study was to explore what was hindering teachers from providing grade level standards-based instruction for their students with multiple disabilities. Piaget's constructivist theory guided this study. Research questions were used to elicit how teachers were providing standard-based instruction and how they were determining strategies for course delivery. Data collection included semi structured interviews with 20 special education teachers who were selected using purposive sampling and who had at least 3 years of experience working with students who had multiple disabilities and had cognitive functioning levels below 2 years of age. Observations of the instructional practices of these teachers were also conducted. Data were analyzed using Hatch's typology; according to study results, teachers based instructional decisions on their individual beliefs about students, personal level of content knowledge, and custodial needs of students due to disabilities. In classroom observations, there was a lack of grade-level content. A professional development-training plan for teachers was created on standards-based content to shift perceptions about students and to develop appropriate instructional strategies. The social change implications of this study will benefit teachers by providing students with disabilities access to standards-based curriculum instruction to meet legislative requirements.

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Acknowledgments

I wish to acknowledge the guidance and support given to me from my committee members, Dr. James B. Schiro and Dr. Lucian A. Szlizewski.

I would also like to thank the faculty who participated in this study. I am fortunate enough to work with teachers who always believe in the children they work with and who never stop seeing the potential in each one. Each day they truly make a difference in the lives of the children, the families, and the world we live in. Finally, I would like to thank my friends for their unending encouragement and support during this journey.

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Section 1: The Problem

The Individuals With Disabilities Education Improvement Act (IDEIA, 2004) requires students with disabilities to show progress on the same standards as their nondisabled peers without indicating how teachers are accomplish this goal. Teachers often lack the skills needed to address the unique learning challenges of students who are cognitively functioning below 2 year of age (Karvonen, Wakeman, Browder, Rogers, & Flowers 2011). Educators also struggle to ensure that these students are successful on the same academic-level content standards as their nondisabled peers.

This section contains a definition of the problem and a rationale for the problem by including evidence of the problem at the local level. In this section, I also present the literature on the issue. The section includes the definitions of terms used in the study and an explanation of the significance of the study. I also present guiding questions of the study with a review of the current literature on this problem. A discussion of the implications for the study follows, and finally, the section ends with a summary of the problem.

Definition of the Problem

Teachers are having difficulties providing standard-based instruction for students with multiple disabilities who have cognitive functioning levels below 2 years of age and in determining appropriate instructional strategies in Grades K-12 in a large California school district. State and federal legislation mandates that all students will participate in standards-based instruction using grade-level content standards (Browder et al., 2007).

According to IDEIA (Yell, Shriner, & Katsiyannis, 2006), students with profound multiple disabilities who function below 2 years of age who attend public school (kindergarten through 12th grade) are expected to work on the same grade-level standards as typically developing peers. Further, a new movement across the nation, Common Core Standards, ensures that all students have the skills and knowledge necessary to succeed in college, career, and life upon graduation. The focus of this movement is on consistent high standards across all the states (Porter, McMaken, Hwang, & Yang, 2011). These standards promote equity by ensuring that all students are well prepared to collaborate and compete with their peers. However, if a student has no understandable or predictable method of intentional communication, educators may have challenges in trying to provide grade-level content instruction at the functioning level of the student.

When a student has a cognitive developmental level of 2 years of age or below, expectations are often congruent with the abilities and skills of a typically developing child of that chronological age. Browder (2008) and Gibbs, et al. (2009) showed that educators often place students who have emerging communication skills due to the presence of a disability into early literacy levels that remain comparable to their cognitive development. As a typically developing student progresses through their elementary years, their literacy skills continue to improve; however, many students with severe and profound disabilities remain at an early literacy level or below well into high school. As these students get older, their need for age-appropriate and age-respectful content changes. Korsten, Foss, and Berry (2007) pointed out that a 10-year-old functioning at a

6-month level is not the same as a 6-month-old functioning at a 6-month level. This is where knowledge of typical child development is essential. Children who function below 2 years of age are still at presymbolic or nonsymbolic levels and cannot grasp abstract concepts (Anisfeld, 2014). Those students who are chronologically anywhere between 5 years of age and 18 years of age but cognitively function below 2 years of age increase the challenge. Many students who have profound disabilities have no intentional communication and are at the presymbolic or nonsymbolic level. These students communicate with nonsymbolic behaviors such as gestures, touches, physical orientations, body movements, facial expressions, eye movements, vocalizations, and aberrant or self-injurious actions (Ogletree & Fischer, 1996).

Former U.S. President Gerald Ford altered education for students with special needs in 1975 when he signed into law Public Law 94-142, known as the Education for All Handicapped Children Act. This law has been the foundation of all special education legislation. Legislators have changed Public Law 94-142 to IDEIA. It was due to this legislative effort that the children with severe and profound disabilities to receive education in public schools (Yell et al., 2006; Zettel & Ballard, 1982). With the inception of special education legislation, legislators created a mandate that required all students to have access to the general curriculum. Few people understood the consequences of this mandate for students with severe disabilities (Spooner & Browder, 2006). This policy left many in the field to grapple with the meaning of “access to general curriculum” for students with severe disabilities. This legislation mandates that teachers and district

officials have to provide standards-based instruction in academic content areas for all students with disabilities (Browder et al., 2007).

Throughout the U.S. education system, practitioners continue to debate over a clear definition of what access means for these students. Additional complications exist for educators to know how to provide instruction to these students. Building on the previous legislation, proponents of the national Common Core Standards movement are now calling for all students to "meet higher standards and be college and career ready" (Mathis, 2010, p. 8). The national Common Core Standards movement is placing a more rigorous content focus on public education than ever before (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). Kearns et al. (2009) determined that the most important functional skills in the 21st century that align to college and career readiness must encompass all students. However, the manifestation of these skills during instruction has left students failing due to the high level of rigor. College and career readiness describe areas in which all students can show growth and progress. These pieces include communicative competency; fluency in reading, writing, and math; appropriate social skills; independent work behaviors; and support access skills, all of which encompass independent living skills (National and State Center Collaborative [NCSC], 2013). There is no differentiation in the academic expectations of the national Common Core Standards for students with profound multiple disabilities who developmentally function below 2 years of age.

IDEIA requires that students with special needs have a standards-based individual

education plan (IEP) that defines how they will have access to grade level content. Ahearn (2006) acknowledged how daunting it can be for a teacher to connect the child's IEP goals, which address key functional needs, to grade-level content standards when the student is struggling to acquire minimal life-skills. Often, teachers do not have the content knowledge or strategies to break down the core concepts to teach the basic elements of the standards (Mastropieri, Scruggs, Graetz, Norland, Gardizi, & Mcduffie, 2005; Moats, 1994).

When legislators created IDEIA, educators became responsible to determine the best practices of instruction for use with students who have significant intellectual disabilities (Yell et al., 2006) for practical and academic outcomes. Educators have been seeking some direction to provide grade-level academic content instruction in the general education curriculum areas of English language arts, mathematics, and science. There has been no dedicated curriculum to provide teachers direction on how to teach grade-level content at the functioning level of the student. Legislation does not require commercial curricula to be developmental in scope and sequence.

Rationale of the Study

Evidence of the Problem at the Local Level

Many California students with disabilities were failing legally required state assessments causing districts to face penalties for lack of achievement levels. According to the 2012 California Alternate Performance Assessment (CAPA) results posted on the California Department of Education (2013) website for the large Southern California

school district that served as the subject of this study, over half of the students in Grades 2-11 to whom educators administered the lowest level of assessment, as determined by the IEP team, were below proficiency levels. According to the statewide assessment, many California students were failing required state assessments. When teachers fail to indicate student progress in general education grade-level curriculum, they are out of compliance with state and federal legislation. State officials place districts whose students fail to achieve annual yearly progress in program improvement (Porter, Linn, & Trimble, 2005). The district officials must formulate an action plan to show improvement in student achievement based on standardized testing. If a school remains in need of improvement, other sanctions and corrective actions can apply and may include staff restructuring, implementing a new curriculum, and/or state takeover of the school. Program improvement status could mean a financial loss that could affect special education services at county and district levels. When these services involve students with multiple disabilities who have cognitive functioning levels below 2 years of age, compliance issues may result in due process hearings and legal ramifications if the students cannot exhibit appropriate educational benefit due to the lack of appropriate educational opportunities stemming from inadequately trained staff.

IDEIA (2004) and the No Child Left Behind Act (NCLB, 2002) mandated that teachers and district officials provide standards-based instruction in academic content areas for students with disabilities. However, students with disabilities require diverse accommodations and instruction in order to access the general curriculum (Jennings &

Rentner, 2006). Students with multiple disabilities who have cognitive functioning levels below 2 years of age typically require ongoing intensive supports to participate in school activities (Westling & Fox, 2008). Teachers have to modify curriculum into something that only slightly parallels grade-level core content, which, in part, is why grade-level-equivalent expectations are unrealistic for students with this level of severity of disabilities.

Once educators determine that a student is eligible for special education services based on one of the 13 disability categories that qualify for special services, the educators convene a group of stakeholders to develop an IEP. The team of stakeholders includes parents, teachers, administrators, and, when possible, the student. The goal of the IEP is to design an educational plan for the student that balances the educational benefit of the program with the other components of an educational experience, such as access to nondisabled peers and social and emotional development (McGovern, 2015). Current instructional strategies in academic content areas rely on typically developing cognitive skills in a nondisabled child. Among teachers and researchers, there is little agreement about the appropriate curriculum content or instructional settings for students who have severe disabilities.

IDEA requires an IEP team to consider the least restrictive environment (LRE) in which the student will receive educational benefit. LRE means access to general education curriculum appropriate to chronological age as much as possible and access to nondisabled peers in order to participate in as much of a typical educational experience as

possible (McGovern, 2015). Traditional instructional strategies have addressed academic content standards for a child with a disability the same way a teacher would provide instruction to a nondisabled child. Parrish and Stodden (2009) agreed that it is unreasonable to hold students with this level of severity of disabilities to the same educational expectations and outcomes as students without disabilities. I was able to find one commercial curriculum that provides instructional strategies that are standards-based and has differentiation for students with mild disabilities and severe disabilities. Teachers have little to no tools or training on how to teach a child with severe multiple disabilities grade level content.

Aside from the challenge of legislative expectations of curricular content or instructional strategies, special education teachers also face a number of other factors that create difficulty in providing a typical educational experience for students with disabilities. The first challenge is figuring out instruction. The teacher must determine how to make standards meaningful and then how to measure progress (Browder, Wakeman, Flowers, Rickelman, Pugalee, & Karvonen, 2007). The next challenge is the instructional setting determined by the IEP. Inclusion in a general education classroom is by far the preferred method of instruction for students (Downing, & Peckham-Hardin, 2007a). However, schools place few special education students with severe to profound disabilities in an inclusive setting (Cooper-Duffy, Szedia, & Hyer, 2010). Another challenge for the special education teacher in working with students with multiple disabilities who have cognitive functioning levels below 2 years of age is the

configuration of most special education classrooms (Algozzine, Morsink, & Algozzine, 1988). There are multiple grade levels, multiple disabilities, and multiple levels of abilities and independence. Students with multiple disabilities who have cognitive functioning levels below 2 years of age have multiple challenges that may range from delayed cognition to medical needs. Determining the best course of instruction becomes a time management issue. These students lack the ability to acquire academic skills with independent practice.

Evidence of the Problem From the Professional Literature

There were no studies found in which researchers examined standards-based instruction, at grade level, and specifically defined the student population as having multiple disabilities who have cognitive functioning levels below 2 years of age and being developmentally below 2 years of age. Researchers have not addressed the expectation of holding this population of students accountable for the progress in the general education curriculum. This project study helps to fill that gap. The gap between research and practice is most evident when teachers attempt to provide students with multiple disabilities who have cognitive functioning levels below 2 years of age access to general education curriculum without adequate resources. In research studies on students whom professionals diagnose with significant cognitive disabilities, researchers have not defined the specific level of severity of the disability.

For many teachers, there have been challenges in trying to provide instruction to meet the legal mandates for curriculum access. These challenges include few models of

instruction using grade-level standards (Browder et al., 2012). There is a significant lack of evidence-based strategies to draw from to support academic content instruction (Browder et al., 2008; Browder, Wakeman, Spooner, Ahlgrim-Delzell, & Algozzine, 2006; Courtade, Spooner, & Browder, 2007; Karvonen, Wakeman, Flowers, & Moody, 2013), and a limited knowledge base of academics among teachers working with students with multiple disabilities who have cognitive functioning levels below 2 years of age (Horrocks & Morgan, 2010; Otis-Wilborn, Winn, Griffin, & Kilgore, 2005), has led teachers to teach the functional skills that are familiar and not challenging the status quo. Typical training topics special education teachers include behavior management, some reading and math content instruction, and communication. These types of trainings are inadequate for special education teachers who work with the most challenging students: those with multiple disabilities who have cognitive functioning levels below 2 years of age.

Research on instruction with students with severe and profound disabilities yields limited numbers of studies on grade-level academic content (Browder, Ahlgrim-Delzell, Flowers, & Baker, 2012; Browder et al., 2006; Miller, 2012; Spooner, Knight, Browder, & Smith, 2011). Scholars (Browder et al., 2008; Browder et al., 2006) have found that teachers are drawing instructional strategies from a developmental focus to teach early childhood concepts and skills related to English language arts (ELA) and math. These skills are foundational and usually exist as functional academics, such as telling time or counting coins. Ruppar, Dymond, and Gaffney (2011) found that many teachers rated life

skills higher than skills linked to general education content. The teachers perceived that students' cognitive ability and communication skills should determine what they should learn. One factor that may explain the perceived inability of students to do academic tasks stems from the teachers' lack of knowledge about general education content. Hanging on to the functional mentality, Timberlake (2014b) found that teachers exercised a cost-benefit rational to their decisions about what should be taught. Teachers would determine what academic content and skills were going to have the greatest long-term impact on a student after they left school such as managing money and preparing meals. "The highest cost was defined as "wasting time" or using limited instructional time for skills deemed unimportant, whereas benefits were activities perceived to have long-term value such as preparing meals" (Timberlake, 2014b, p.1). Teachers assigned the value of teaching specific academic content by its functional application to independent living. If the content did not meet this criteria it is defined as a "waste of time" to teach.

Although legislation has determined that students with disabilities require access to general education curriculum, there are no defining parameters for instruction of content (Browder, Wakeman, & Flowers, 2009; Goldstein & Behuniak, 2010; Karvonen, Wakeman, Flowers, & Browder, 2007). Without any assistance in making the shift to academic instruction, many teachers have trouble with planning curriculum, learning how to teach the curriculum, and adapting materials for these students. Instruction is provided on isolated skills instead of systematically linking concepts. Without solid curriculum, Ruppar (2014) found that teachers are missing a scope and sequence of skills and lack

active engagement strategies. Ruppar supported the earlier findings of Causton-Theoharis, Theoharis, Orsati, and Cosier, (2011) who found that instruction for students with severe disabilities lacked any meaningful curriculum and had no resemblance to grade-level content. These concerns link back to the lack of supports that a special education teacher has in grade-level content instruction—content that is often inappropriate or beyond the developmental capacity of this population.

Many special education teachers do not possess the necessary content knowledge to meet the needs of the students education officials expect them to teach. The lack of content knowledge hinders the ability to break down and analyze the standards or make grade-level modifications as needed for real differentiation of instruction (Karvonen, Wakeman, Browder, Rogers, & Flowers, 2011; Otis-Wilborn et al., 2005). Quenemonen (2008) acknowledged that only a few theories about the most effective and best practices for the academic instruction of students with significant cognitive disabilities exist. Many practitioners may have a better understanding of these critical areas and understand, better than most, that students with the same disabilities may still have different cognitive characteristics and cognitive needs. The current debate in education continues to be over what situational and appropriate outcomes educators should expect from these students.

The findings of this project study contribute to the body of literature on the education of students who are developmentally functioning at or below 2 years of age and may help determine appropriate instructional strategies that would serve these students' best interests rather than fulfilling inappropriate legislative expectations.

Definition of Terms

Free and appropriate public education: An amendment under IDEA 2004 that specifies the requirements of a school district to provide a "free and appropriate public education" to anyone who has a qualifying disability living within the school district boundaries. Education and all related services must be at no cost to students and must comply with all conditions of the IEP that meets the federal requirements (Turnbull, 1993).

Multiple disabilities: "Means concomitant impairments (such as mental retardation-blindness or mental retardation-orthopedic impairment), the combination of which causes such severe educational needs that they cannot be accommodated in special education programs solely for one of the impairments" (Nakken & Vlaskamp, 2007, p. 84).

No Child Left Behind Act (NCLB): Federal legislation that enacts the theories of standards-based education reform. NCLB (2002) "ensures that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging state academic achievement standards and state academic assessments" (p. 1193).

Multiple disabilities with cognitive functioning measured below 2 years of age: "People with profound and multiple learning disabilities (PMLD) may have extremely delayed intellectual and social functioning, limited verbal abilities, severe

communication skills, and often have associated medical conditions" (Bellamy, Croot, Bush, Berry, & Smith, 2010, p. 233).

Public Law 180-446 or Individuals With Disabilities Education Act (IDEA): "A Federal Act to clarify the responsibilities of each state in providing special education services for students who qualify for special education services" (Yell, Rogers, & Rogers, 1998, p. 219).

Significant cognitive disabilities: "When cognitive functioning and adaptive behavior is significantly below age expectations, there are significant limitations present in two more adaptive skills areas, such as daily living skills, communication, self-care, social skills, academic skills and works skills and the condition is present from early childhood" (US Department of Education, 2005, p.2).

Standards-based IEP: "A process and artifacts that is framed by the state standards and that contains goals aligned with, and chosen to facilitate the student's achievement of, state grade-level standards" (Ahearn, 2006, p. 13).

Significance

This study is significant in the context of educational legislative reform changes across the United States. This project study will provide training for teachers, administrators, parents, and legislators on another way to provide instruction that is meaningful and relevant to the success of students with multiple disabilities who have cognitive functioning levels below 2 years of age.

With the movement toward college and career readiness, students with multiple disabilities who have cognitive functioning levels below 2 years of age can contribute to their communities through supported and customized efforts across employment settings. The inclusion of students with multiple disabilities who have cognitive functioning levels below 2 years of age provides teachers with the opportunity to refine the instructional practices. By taking a more holistic view of the student, teachers can entertain methods of blending academics with embedded developmentally and mentally appropriate functional needs, like access to nondisabled peers and socialization skill development. The business of creating independence in all children and preparing them to be active participants in this society is one that can often cross disability boundaries.

Guiding/Research Questions

The research on the education of students with disabilities supports the outcomes of the actions of former President Ford and Public Law 94-142. All students have a right to a public education. Students with disabilities can learn and have the capacity to do so in a public school setting including a general education classroom with nondisabled peers. Educational researchers have identified strategies that facilitate the learning process for students with moderate to severe disabilities. However, the piece that is missing is the level of severity of disability of the students involved. There are examples of instruction for students who have disabilities from blindness to autism in the moderate-to-severe cognitive and developmental range. Some scholars have addressed the idea of inclusion of students with these disabilities in general education classrooms. However, I

did not find any studies on the needs of the students with multiple disabilities who have cognitive functioning levels below 2 years of age in our public school system. There were no studies on instruction on grade-level content standards for students who function below 2 years of age while in Grades K-12. The Elementary and Secondary Education Act requires accountability for all students on statewide assessments in standards-based grade-level content.

In this study, I examined how special education teachers are bridging the gap between expectation and application.

The following are the two main research questions that guided this project study:

1. How are teachers providing standards-based instruction to students who have multiple disabilities who have cognitive functioning levels below 2 years of age and who are developmentally functioning below 2 years of age?
2. How are teachers determining appropriate instructional strategies for use with students who have multiple disabilities who have cognitive functioning levels below 2 years of age and who are developmentally functioning below 2 years of age?

Review of the Literature

Conceptual Framework

Children learn about the world around them by experiencing it through their senses especially by observing others. When legislators brought students with disabilities

into the public education system through Public Law 94-142, constructivism became a practical learning theory for these students (Katsiyannis, Yell, & Bradley, 2001; Watson, 2001) who needed to use strategies of modeling and peer interaction to grasp concepts. Even nonverbal students in the sensory motor stage of development (Piaget, 1962) respond to peers in a different way than they might react to stimuli at home among family. Proponents of the constructivist learning theories consider every learner as unique and individual with distinctive and complex background, skills, and ideas (Henson, 2015). This has become a cornerstone of special education teachers' belief about students with disabilities and impacts the perceptions of teachers about how they provide educational programming to their students.

The precise nature of special education is constructivist. The foundation of special education instruction is the IEP (Kurth & Mastergeorge, 2010). Through assessments, the IEP team determines the areas of deficit. The team then writes these areas into the plan for targeted instruction to show student growth and progress. The team looks for the setting that would provide the LRE possible yet provide interaction with nondisabled peers (McGovern, 2015). The eventual outcome is to help the student become as independent as possible. When the focus is on what a student can do rather than on what he or she cannot do, educators can create additional opportunities for teachable moments (Giangreco, Dennis, Edelman, & Cloninger, 1994). Teachers learn to build on the abilities of a student and assist the student in constructing new perspectives and ideas (Mechling, 2006; Windschitl, 1999) according to his or her own methods, ideas, and

experiences. To extend the constructivist theory into curricular processes, teachers apply differentiation of instruction and universal design for learning focusing on student-centered teaching to meet the needs of individual students.

Literature Review Procedure

Using current research, I examined the problems that stem from the expectations of Public Law 94-142 which include revolves around what to teach and how to teach students with cognitive levels below 2 years of age. Historical trends in education for students with severe disabilities perpetuate the perception that these students cannot learn and that educators should not teach them anything beyond functional skills to increase independence. Teacher must decide between instruction of functional skills or academic skills. The question for most teachers is how to make access to general education curriculum for students with severe disabilities meaningful and relevant. The history, experience, and beliefs of the teacher influence each area. The way a teacher implements legislation in the classroom will often come down to what he or she believes about the educational benefit for these students. In addition, I examined special education legislation as far back as 1954 and research published in peer-reviewed journals, in English, up to 2015.

I used terms or combinations of terms (e.g., *severe disabilities, severe and profound disabilities, teaching students with significant cognitive disabilities, severe mental retardation, multiple disabilities who have cognitive functioning levels below 2 years of age, students with severe developmental disabilities*) to identify the research base

of academics and students with significant cognitive disabilities. I used both electronic and print resources to determine which articles to include in the review as well as electronic databases including Education Research Complete, Education: A SAGE Full-Text Collection, ERIC, ProQuest Central, Science Direct, Ed/IT Digital Library, Oxford Education Bibliographies, and the Teacher Reference Center. Finally, I also used several professional journals that contained content dealing with the education of students with moderate to severe and profound disabilities.

In a critical review of literature addressing the instruction of students with multiple disabilities who have cognitive functioning levels below 2 years of age in Grades K-12, I found some contradictory results. Several scholars supported the effective use of academic instruction of students with severe and profound disabilities. A student with multiple disabilities can learn something by participating in a general education classroom, but it may not be appropriate to have the same expectations or grade-level outcomes based on content standard. Students learn much more than academics in a classroom setting. As students physically age up, the need for social and emotional development can become the determining reason for inclusion in some general education classrooms with access to their same-age, nondisabled peers.

Historical Trends

The Compulsory Attendance Act (1852) made Massachusetts the first state in which official's established compulsory education for all students. This law created mandatory attendance in a public school for all students with the exception of children

who had physical or mental disabilities. By 1918, legislators in all states had passed some form of compulsory attendance law; however, each state's officials were still able to determine their own policies for the education of students within that state (Dorn, Fuchs, & Fuchs1996). Even with compulsory education on the books in every state, educators barred many students with disabilities from receiving an education. Well into the 20th century, judges in some courts continued to discriminate against students with disabilities through the legislative process. They would exclude students from school based on the judgment of school officials as to whether a child could benefit from participation in the class (Yell et al., 1998). In 1958, the Supreme Court of Illinois, in *Department of Public Welfare v. Haas*, determined that the districts held no responsibility for the education of students who society considered "feeble minded" or those deemed "mentally deficient" because they possessed limited intelligence and had no need for a good education (Yell et al., 1998, p. 219). There existed a perception towards students with disabilities that they could not learn. Many court cases relieved school districts of any responsible for these children as students and allowed school districts not to educate children with disabilities.

With a belief that formal public education was wasted on children with disabilities, each state addressed the needs of this population by state institutions, segregated sites or simply forcing parents to keep these children home. In 1967, almost 200,000 persons with significant disabilities lived in state institutions. Many of these

restrictive settings provided only minimal food, clothing, and shelter (U.S. Department of Education, 2010). When legislators enacted the Education for All Handicapped Children Act (1975), educators were excluding more than 1.75 million children from public education (Weber, 2006; Zettel & Ballard, 1982). Another 3.5 million children with disabilities attended school, but school officials "warehoused" them in segregated facilities where they languished in classrooms without help or curriculum adapted to their needs (U.S. Department of Education, 2010). Bowen and Harvey (2006) found that in the past educators had no expectations for students with disabilities within the classroom. Taking their lead from the courts, past educators justified excluding students with disabilities as not able to learn.

Functional Skills and Academic Skills

From the early 1970s, when students with disabilities began public education there has been debate over the best practices for teaching students with severe disabilities. Shurr and Bouck (2013) and Ruppar, Gaffney, and Dymond (2015) have traced the shifting landscape of educational philosophy in society on how and what to teach students with disabilities from developmentally appropriate curricula to functional curricula and now to general education standards-based curricula. The educational landscape is at the mercy of shifting beliefs, curricular practices, and research. The greatest factor at play in the educational system for dictating change is state and federal legislation. With the signing of Education for All Handicapped Children Act (1975), children gained the right to a full educational opportunity (Brown, Nietupski, & Hamre-

Nietupski,1976). A debate continues on what is the most appropriate way to educate students with multiple disabilities who have cognitive functioning levels below 2 years of age. Courtade, Spooner, Browder, and Jimenez (2012) offered an alternate viewpoint to the traditional belief of simply teaching developmentally or functional skills building towards independence and expanded on seven different principles based on the idea that all students should have access to a full educational opportunity. These researchers focused on the possibilities of students with disabilities instead of focusing on the limitations and shortcomings of these students.

When faced with a student who doesn't fit the typical expectations of a learner, teachers and administrators are often at a loss of what to do to meet the needs of the student. Many teachers and administrators retain an attitude of perceived incompetence toward these nontypical students (Agran, Wehmeyer, Cavin, & Palmer, 2010; Downing & MacFarland, 2010) when teaching general education curriculum. The general education perception is to teach general education standards for the sake of teaching standards (Agran, Alper, & Wehmeyer, 2002; Ayres, Lowrey, Douglas, & Sievers, 2011) without prioritizing the focus to meaningful, individualized outcomes that will have a direct impact on a student's adult functioning. Teachers do not always understand the reasoning behind the requirements to focus on grade-level content for students with significant intellectual disabilities. Without a clear understanding of the requirements or agreement with them, educators teaching grade-level competencies at the functioning level of the student might neglect the student's right to an appropriate education

guaranteed by the law. This approach tends to allow instructors to focus on whatever the teacher believes to be appropriate functional skills that the student will need upon completion of the program in order to be as independent as possible. The question goes back to the role of accountability for progress in general education curriculum as mandated in legislation.

High-stakes testing on the academic core content is the current method of accountability. Bowen and Harvey (2006) described the argument about using the "enacted" curriculum, which the state assessments measure, or addressing a comprehensive curriculum that provides a holistic educational experience. Instruction using the enacted curriculum often leaves students with disabilities out of the loop due to a lack of instructional experiences. This approach often relegates students with disabilities to working on functional skills in the curricular areas of math and language arts, while a more comprehensive curriculum reflects the recognition that students learn more than just academics in a classroom. Educators who focus on only academic core content often exclude other areas of learning that might be of value to students with multiple disabilities who have cognitive functioning levels below 2 years of age. Some educators agree that embedding the functional skills within the academic content would be an appropriate practice (Soukup, Wehmeyer, Bashinski, & Bovaird, 2007). These educators believe in blending the academic accountability of standards with the more functional skills needed for independence after the completion of school. This method of instruction would then meet the needs of both general education and special education

students. The application of this idea of blending academic content and functional skills is difficult for teachers.

There is a distinct lack of research on standards based instruction for students with multiple disabilities who have cognitive functioning levels below 2 years of age. Few research-based strategies for differentiation of instruction have been conducted with the students who have the most significant disabilities and learning challenges (Downing, 1996; Wolery, Ault, & Doyle, 1992; Snell, & Brown, 2014). There has been some focus on ELA and math but little research on students with severe and profound disabilities in the areas of science and social studies. Several scholars addressed reading instruction and basic numeracy for students with cognitive disabilities. Katims (2000) found that educators viewed reading instruction in a variety of different ways for students with significant or severe disabilities throughout the years. There were several different techniques and strategies that educators used over the years to teach reading to this population of students. Many teachers did not consider reading instruction as important as vocational, functional, and social skills. Browder, Courtade-Little, Wakeman, and Rickelman (2006) and Hudson and Test (2011) agreed with Katims but found the reason for inconsistency of strong instructional strategies stemmed from a belief among teachers that these students did not have the ability to learn academic content. Jimenez, Lo, and Saunders (2012) found that some strategies used in ELA instruction, such as scripted lessons, used multiple modalities to engage students with severe disabilities.

With so much attention on communication and repetition, it was easy for teachers to go back to functional skill instruction and academic instruction became secondary. Collins, Hager, and Galloway (2011) reinforced this ongoing point of contention between functional and academic instruction among practitioners when they examined how issues of functional skill instruction and academic skill instruction have been an either or situation in classroom practice. Many teachers teach content that is not academic grade-level content while embedding functional skills specific to the individual student needs. The instructional change comes when the focus is on grade-level standards and the functional aspect of applying academic skills.

The curricular philosophy termed the *functional model* stands as a foundational approach to the education of students with disabilities. It emphasizes natural contexts for learning, equity in education, and post school outcomes within inclusive societies. In the absence of curricular direction, teachers focus on post-secondary outcomes and independence for students with disabilities. Students with multiple disabilities will always need instruction on functional skills for independent living (Kleinert, Garrett, Towles, Garrett, Nowak-Drabik, Waddell, & Kearns, 2002). Ayres et al. (2011) and Bouck (2012) both emphasized the need to maintain the functionality of independent living skills as the foundation best suited to achieve long-term student independence but acknowledged the need for general education curriculum. IDEA 1997 legislation provided states a way to give alternate achievement assessments to students who were not successful on the general standardized state assessment (Karvonen, Flowers, Browder,

Wakeman, & Algozzine, 2006). These alternate achievement standards could be alternative ways for students with moderate to severe disabilities to meet content standards and show success on state assessments. The law left the content of the assessment up to individual states. Goldstein and Behuniak (2010) found that within each state, officials were making accountability decisions with little regard for the students whom the outcomes affected most. Although legislation requires all states to have alternative assessments, there is a wide variety of methods of measurement for these assessments. NCLB legislation required alternate achievement standards relate to the grade-level standards (Browder, Spooner, Wakeman, Trela, & Baker, 2006). Teachers had to start with the academic content standards for the grade level in which the student should be enrolled according to age, not functioning level, for instruction. Teachers took the standards and adapted or extended them to meet the individual needs of the students. By adapting the standards or extending the standards, teachers were able to expand the curriculum for students who qualified to be given the alternate assessment to include those functional elements (Dymond & Orelove, 2001).

New methodology promoted by the National Center and State Collaborative (2013) indicates that students with moderate to severe disabilities can learn grade-level standards while working on basic numeracy skills. Supporting deficits in basic foundational skills across the mathematical learning progressions is a principle of Common Core State Standards. Teachers can work on these basic skills concurrently with general education content standards by teaching real-life application of math skills and

concepts (Collins, Karl, Riggs, Galloway, & Hager, 2010). Saunders, Bethune, Spooner, and Browder (2013) looked at the use of real-life examples of mathematical concepts to teach generalization to students with disabilities. Along with the real-life application, Jimenez and Staples, (2015) found the use of systematic explicit instruction using theme-based math lessons with embedded prompting and feedback procedures, supported numeracy skill acquisition. Browder, Jimenez, Spooner, Saunders, Hudson, and Bethune, (2012) continued to build on the idea of real life application and theme-based math lessons with explicit instruction by focusing on not "what" skills of early numeracy should be taught to students with significant cognitive disabilities but "how".

A primary area of focus in general education has been on literacy, researchers began to look at teaching students with significant disabilities the literacy skills expected in general education settings. Browder and Courtade-Little, et al. (2006), Downing (2005), Smith, Demarco, and Worley (2009); and Copland and Keefe (2007) conducted studies on teaching literacy to students with significant disabilities. While there were marked differences in models of approach, researchers did agree on some key elements. The first element identified across all studies was collaboration between general education and special education teachers. Collaboration requires the expertise of both teachers to make adaptations to the lessons. The general education teacher brought content expertise, while the special education teacher understood the individual needs of the student. Other key elements, researchers were able to identify, included building relevancy for students, linking literacy skills to the use of augmentative and alternative

communication systems, and providing a literacy-rich, age-appropriate environment. These scholars supported the importance of inclusion of students with disabilities in the general education setting, but this was dependent upon the level of severity of the students' disabilities.

Each research team approached literacy instruction differently, but they came to similar conclusions. Differences occurred from the use of thematic units (Smith et al., 2009) to functional sight word instruction using time delay (Browder et al., 2006). Most researchers found that instruction for students with profound disabilities relied on functional rather than academic skills (Browder, Mims, Spooner, Ahlgrim-Delzell, & Lee, 2008; Browder et al., 2012; Browder et al., 2006; Copland & Keefe, 2007; Coyne, Pisha, Dalton, Zeph, & Smith, 2012), such as labeling or learning directionality of text and one-to-one correspondence through text pointing or visual tracking (Taylor, Ahlgrim-Delzell, Flowers, & Browder, 2010; Mims, Hudson, & Browder, 2012).

Another challenge occurs, when attempting to define a specific population of disabled students. Browder et al., (2006) discussed the lack of specific definition by researchers for the term "significant cognitive disabilities" (p. 392) with regard for scope of disability. Everhart, Alber-Morgan, & Park (2011) considered students with significant cognitive disabilities to have cognitive abilities above 2 years of age, and are capable of functioning in an age-graded inclusion system. Inconsistency of instruction is a challenge with students who have cognitive abilities less than 2 years of age (Everhart et al., 2011). Siegel and Wetherby (2006) found that many students with multiple disabilities who have

cognitive functioning levels below 2 years of age are nonverbal and lack consistent, intentional communication skills, which has been an obstacle for the progression of reading skills. Some students with a cognitive level of less than 2 years of age need differentiated access to content material and a means to express what they know. Downing (2006) found that some students lack intentionality of communication and are inconsistent communicators. Teachers find it difficult to determine what behaviors indicate literacy awareness with students who have no reliable communication skills (Shevin, & Klein, 2004). Practitioners place more concentration on the functional aspect of communicating basic needs and wants rather than trying to figure out methods for students to acquire literacy skills (Alper, 2003). The desire to understand what a student needs or wants causes the teacher to shift the focus of instruction to functional and nonacademic skills.

When students need to have physical support to participate in a lesson and lack attention skills to follow an activity, practitioners tend to believe those students cannot learn academic content. When students exhibit a lack of basic interactive skills (Katmis, 2000) or communication skills (Browder, Ahlgrim-Delzell, Courtade, Gibbs, & Flowers, 2008), there exists a perception regarding the importance of providing instruction in independent living skills as essential curriculum components (Agran et al., 2002) as opposed to academic content.

Access to General Education Curriculum

IDEA provides a legal justification for using general education curriculum as the basis and structure for instruction of all students. The justification is that students with disabilities must have access to and show progress on general education curriculum but does not provide a straightforward definition of what is meant by access (Ahearn, 2006). Since districts do not have clear policies regarding access or even definitions of its meaning, it has subsequently been interpreted to mean different things (Agran, Alper & Wehmeyer, 2002; Soukup, Wehmeyer, Bashinski, & Bovair, 2007). An operational definition of access continues to elude educators (Dymond, Renzaglia, Gilson, & Slagor, 2007; Hudson, Browder, & Wakeman, 2013; Ryndak & BiIlingsley, 2004), even though federal legislation requires that students with disabilities have access to general education curriculum. curriculum (Browder, Spooner, Ahlgirm-Delzell, Flowers, Algozzine & Karvonen, 2003). Providing access to general education curriculum should go beyond simply exposing students to content by including them in general education classrooms (Jackson, Ryndak, & Wehmeyer, 2008). Supporters for including students with significant disabilities in grade level general education classes recognized that students also benefit from improved access to the general education. Browder and Spooner, (2006); Downing, (1996); Ryndak and Alper, (1996) have been determining best practices for instructional methodologies for teaching academic content to students with significant cognitive disabilities. Rose and Meyer, (2001); Ryndak, Moore, Orlando, and Delano (2008-2009); and West and Whitby (2008) view access as an opportunity for activities and information

retrieval. Browder et al. (2003); Ryndak, Moore, Orlando, and Delano (2008) thinking in this way recognize the nonacademic advantages of inclusion for students with multiple disabilities who have cognitive levels below 2 years of age. Inclusion means receiving an equitable education where everyone gets what they need to succeed in opportunities and participation (Williamson, McLeskey, Hoppey, & Rentz, 2006).

The IEP can set the stage for blending the functional skills and the academic instruction (Browder, 2015) through real life application. Hunt, McDonnell, and Crockett, (2012) proposed considering an ecological approach to curriculum development for students with cognitive levels less than 2 years of age. These researchers also wanted to support the maintenance of high-priority goal areas associated with independent living skills to guide the selection of IEP goals and instructional approaches, activities, and contexts. The ecological curricular framework could serve to develop standards-based academic goals that reflect a student's individual needs and are applicable to their everyday life.

IDEA requires that the IEP team considers the Least Restrictive Environment for students with disabilities in order to provide a free and appropriate education. Least Restrictive Environment is expanded in the law to include academic and non-academic activities. This includes opportunities for interaction with nondisabled peers which provide social and communicative engagement (Mittler, 2012). When most people consider access to general education curriculum, they are referring to grade-level academic standards, not to life skills or socialization and communication opportunities, or

any other advantages found in peer interaction that students could experience in an inclusive setting (Arthur-Kelly, Foreman, Bennett, & Pascoe, 2008; Roach & Elliott, 2006). Dymond et al. (2007) and Ryndak et al. (2008-2009) found that general education and special education teachers agreed that access needed to be meaningful and relevant to the student's future.

In order to have meaningful learning taking place or even participation, students need to have self-determination and some level of self-advocacy (Agran et al., 2010; Spooner, Dymond, Smith, & Kennedy, 2006), which brings the discussion back to the question of "appropriate" educational instruction. Wehmeyer, Soukup, and Palmer (2010) presented some suggestions to assist and improve access to general education grade-level standards. These researchers studied curriculum modifications and augmentations and how these modifications predicted or affected the students and teachers' behaviors toward promoting access to, and progress in, the general education curriculum. They found that with appropriate curriculum modifications, some students' engagement increased, time on task improved, and competing behaviors decreased.

According to NCLB (2002), students are to have access to general education grade-level content instruction by highly qualified teachers. However, often the special education teacher is lacking in grade-level content knowledge (Mastropieri, Scruggs, Graetz, Norland, Gardizi, & Mcduffie, 2005; Moats, 1994). The responsibility of the IEP team is to define the instructional supports that will provide access to the general education curriculum. Supports for access may be in the areas of cognition and

communication (Browder et al., 2007; Downing, 2005) depending on student need to be as successful as possible and show growth and progress in the general education curriculum.

In a review of literature, I have found evidence of the need for specific research to address the needs of teachers providing instruction and support to students who have multiple disabilities who have cognitive functioning levels below 2 years of age and may not have the cognitive abilities to "fit into" the typical curriculum focus currently in schools across America. I will fill part of this gap in literature and practice by examining the instruction of students with multiple disabilities functioning developmentally below 2 years of age in Grades K-12.

Implications

The most important implication for practice from this research may be a systematic, situational, and differentiated approach to educational instruction for students with multiple disabilities who have cognitive functioning levels below 2 years of age in Grades K-12. Through this systematic approach, educators may be able to effect a new alternate assessment that utilizes a growth model and influences instructional strategies. With this study, I attempted to emphasize and illustrate methods of instruction. New Common Core curriculum and instruction for students taking the alternate assessment was in the 2014-2015 school year (National Governors Association Center for Best Practices, 2010). Teachers will continue to need direction on how to provide greater levels of support for students developmentally below 2 years of age. In this study and the

companion project, I will support the new curriculum and instruction with professional development modules aligned to Common Core Standards with the needed lower levels of support (National Governors Association Center for Best Practices, 2010).

Summary

Instructional practices by teachers providing standards-based instruction to students who are developmentally below 2 years old have a direct impact on the success of students to show progress in the general education curriculum. How teachers are determining appropriate instructional strategies for these students directly relates to their success on the standardized assessments. There must be a better way to show accountability in the process of teaching and learning for all students regardless of the severity of disabilities.

In this project study, I used an exploratory qualitative case study methodology to examine instruction of students with multiple disabilities who have cognitive functioning levels below 2 years of age in Grades K-12. I also looked at how teachers are determining appropriate instructional strategies for these students.

Through federal legislation, officials are attempting to hold all students to the same expectations and criteria for success by mandating standards-based instructional programming. This instructional program will require standardized testing for those students with IEPs. This will be a huge challenge for teachers working with students developmentally below 2 years of age when they are to teach grade-level content at the functioning level of the student while providing educational benefit.

In section 2, I will introduce the methodology and include research questions, design, population, sample, data collection procedures, and analysis.

Section 2: The Methodology

The purpose of this qualitative study was to explore what was hindering teachers from providing grade level standards-based instruction for their students with disabilities who are cognitively functioning below 2 years of age and how teachers are determining appropriate instructional strategies in Grades K-12 in a large California school district.

In this section, I present details of the coded and categorized qualitative findings, descriptions of the teacher participants, and descriptions of the artifacts. The data analysis provided information for administrators and teachers regarding how teachers are addressing this federal mandate for standards-based instruction for students with multiple disabilities who have cognitive functioning levels below 2 years of age who are developmentally functioning below 2 years of age. In this section, I also present the results of this study according to topics that emerged from the data collection designed around the research questions. These findings are used to create a comprehensive training plan in response to the identified needs of teachers within the study district (Appendix A).

Research Questions

The following are the two main research questions that guided this project study:

1. How are teachers providing standards-based instruction to students who have multiple disabilities who have cognitive functioning levels below 2 years of age and who are developmentally functioning below 2 years of age?

2. How are teachers determining appropriate instructional strategies for use with students who have multiple disabilities who have cognitive functioning levels below 2 years of age and who are developmentally functioning below 2 years of age?

Research Design

Qualitative Approach

To explore the answers to my research questions and discover how teachers were providing instruction to their students who were cognitively below 2 years of age, I chose to take a qualitative approach. Qualitative research is interpretative research where the researcher seeks to "understand the world from the perspective of those living in it" (Hatch, 2002, p. 7). A hypothesis is not necessary to start the research, and the researcher is a part of the study as the primary data collection instrument. The researcher can acquire educational knowledge using a constructivist approach (Creswell, 2009) by means of interviews, observations, unobtrusive data, video, journaling, or focus groups (Hatch, 2002). Through the above-stated data collection strategies, the researcher can obtain rich and in-depth information about the subjects of the study. As the qualitative researcher analyzes his or her data, he or she is able to "see patterns, identify themes, discover relationships, develop explanations, make interpretations, mount critiques, or generate theories" (Hatch, 2002, p. 140). The depth of information that the researcher obtains from the data presents a well-defined picture of the subject(s) of the study. According to Creswell (2009), a researcher selects qualitative research if the variables are mainly

unknown, the literature yielded little information, and the study requires further exploration through interaction with participants. This study warrants a qualitative design. In the case of standards-based instruction for students with cognitive levels below 2 years of age, the variables were mainly unknown, very few research studies were available and I wanted to interact directly with the teachers. This type of research relies on getting to know the participants and understanding their perspective on the students they work with and type of instruction they provide.

Case Study

The research design for this study was a qualitative exploratory case study based on the characteristics that Merriam outlined. Merriam (2009) noted that case studies share the following traits: "The search for meaning and understanding, the researcher is the primary instrument of data collection and analysis, an inductive investigative design, and the end product being richly descriptive" (p. 39). To begin, qualitative research is about understanding how people perceive their world and their experiences in authentic settings. Secondly, the data collection and analysis are completely dependent on the skills of the researcher. The researcher can be actively involved in the investigation by creating and maintaining a relationship with the participants so that the researcher can obtain rich and in-depth data through words and pictures rather than through statistical data. The researcher must try to remain unbiased and subjective throughout the data collection process. Qualitative research is inductive; in other words, the researcher collects and analyzes data in an attempt to build a theory or concept rather than deductively proving a

claim or a hypothesis (Creswell, 2009). An exploratory qualitative case study approach supported the purpose of the study by enabling me to explore the actions of teachers working with this subgroup of special education students.

Criteria for Participant Selection

I based selection of individuals who would participant in my study on the experience level of the interested respondents. Participants had to have at least 3 years of teaching experience working with students who had multiple disabilities who have cognitive functioning levels below 2 years of age. The population of this study included the total number of teachers who worked with students who had multiple disabilities who had cognitive functioning levels below 2 years of age within a large Southern California school district. I selected the sample through the process of purposeful and convenience sampling. Merriam (2009) explained that a researcher uses purposeful sampling to select participants who have specific knowledge of the subject and from whom the researcher can gain the most information. The selected teachers for this study had experience and knowledge of this student population. I used convenience sampling due to the availability of sites and respondents (Merriam, 2009).

I invited a total of 20 special education teachers who worked in elementary, middle, and high schools to participate; 2 declined and 18 accepted. The 18 teachers who agreed to participate in the study had classroom experience that ranged from 3 to 30 years. Six teachers taught some configuration of elementary grade bands (kindergarten through fifth grade), six teachers taught some configuration of middle school (sixth

through eighth grade), and six teachers taught some configuration of high school (ninth through 12th grade). All signed an informed consent form.

I sent a participant invitation letter (Appendix B) to all qualifying teachers. The participant letter included an explanation of the purpose of the study. If potential participants were interested in participating in the study, I asked them to complete a general survey (Appendix C) for demographic purposes. I determined the sample from the qualifying respondents. I contacted the qualifying respondents to determine a convenient time for an interview and observation. I conducted interviews at the school site and held observations in the individual classrooms of participating teachers.

Measure for Ethical Protection

I took all measures to protect participants' rights according to the steps Walden University and the Institutional Review Board (IRB) outlined. The IRB reviewed my plan for security and confidentiality of the participants. The IRB assessed the potential for risk of physical, psychological, economic, or legal harm (Sieber, as cited in Creswell, 2009). The IRB considered any special needs of participants, such as persons with neurological impairments and other disabilities. Before participant selection, I developed an informed consent form. I asked each participant to read and sign a human subject's consent form with assurances of confidentiality. I used letter designations for the identities of participants in order to ensure confidentiality.

In the consent form (Appendix D), I specified that participants had the following rights: (a) participate voluntarily, (b) withdraw at any time, (c) understand the nature of

research and any impact on them, (d) ask questions about the conclusions, (e) have privacy protected, (f) understand any benefits that may accrue from the study, and (g) receive a verbal or written consent form (Creswell, 2012).

Data Collection Procedures

I analyzed informal interviews and observations using Hatch's (2002) typological analysis to reveal themes and patterns. I then systematically codified the patterns. I collected informal interviews, observations, and artifacts from 18 teachers between October and December of 2013. I scheduled the observations and interviews at the convenience of the participants. I conducted the roughly 30- to 45-minute observations of lessons prior to the interviews. I entered detailed field notes, which included teaching events and classroom environments, on a laptop computer. I conducted the roughly 45- to 60-minute interviews immediately after the observations or at a convenient time for the participant. Interviews were conducted in the participants' classrooms or other location of the participants selection, using the interview questions along with clarifying questions when necessary. I audiotaped and transcribed the interviews. I asked participants to member check and review transcripts.

The artifacts collected included lesson plans, unit plans, curriculum guides, and classroom schedules. I kept these artifacts, transcribed interviews, and observation notes in a secured storage cabinet in my home. I stored all digital files on a password-protected computer.

Interviews

I digitally recorded and transcribed each interview. Rubin and Rubin (2005) stated that the interview recording "becomes the data that you analyze, first to figure out what follow-up questions to ask and later to develop the themes and theories that will be the product of the study" (p. 110). Even with a digital recording of the interview, it is always prudent to use field notes to prevent the loss of any information. I took field notes on an interview guide (Hatch, 2002). The interview guide ensured that I covered all questions. I used the interview guide to record verbal responses and observations of my interaction with participants (Hatch, 2002; Rubin & Rubin, 2005).

In addition to the written field notes, I transcribed each interview and saved all information on my computer hard drive and an external hard drive. It is important to complete a transcription immediately after concluding the interview for a number of reasons. The main reason to transcribe the interview as quickly as possible is to gauge the usefulness of the interview guide. If the transcription illuminates any discrepancies in the interview guide, the researcher can make corrections or alternations before the next interview (Hatch, 2002). Getting the first transcription done will provide a level of comfort and confidence to the researcher. The transcription provides feedback on the effectiveness of individual interview questions and ascertains if the questions solicit the desired information.

Interview guide. Because interviews were the primary method of data collection in this study, I developed an interview guide (Appendix E) to support consistency of data.

I used a semistructured interview format to draw out participants' perceptions and opinions on how they were providing standards-based instruction for this student population. I presented a draft of the interview guide to several teachers to review and give feedback before I used it for an interview. The teachers who reviewed the draft of the interview guide were not a part of the study's sample but were a part of the larger population. The reviewing teachers gave feedback on the quality and clarity of the format of the guide. Creswell, Hanson, Plano, and Morales (2007) supported the peer review process as an external check of the research process. The peer review process served as an external check for my study to ensure that my questions were clear and concise as well as requesting the right kind of data. I wanted to make sure that the questions made sense to my respondents.

I also conducted pilot interviews with the same teachers who peer reviewed the interview guide. Turner (2010) spoke of pilot interviews as a way for researchers to practice their interviewing skills, rewrite interview questions, and build their interviewing confidence. Just as the peer review supported my study in clarifying my interview guide, the pilot interviews helped to clarify my interview skills. In corroboration of Turner's finding, I was able to practice my interviewing skills and did rewrite some questions based on actual interviewing results.

Interview sessions. Interviews of selected teachers were semi structured and face-to-face. McNamara's (2009) guide for preparing and conducting individual semi structured interviews was extremely useful in preparing for the interviews of study

participants. The preparation of the interviews included: (a) selecting a location that was not distracting to the interviewer or interviewee, (b) explaining to the interviewee the purpose of the interview, (c) clarifying confidentiality and the informed consent form, (d) explaining the type and nature of the interview, (e) clarifying the duration of the interview, (f) providing contact information, (g) asking if there were any questions before starting the interview, and (h) asking permission to record the interview. McNamara's guide also reminded me to: (a) verify that the recording device was functioning properly, (b) ask one question at a time, (c) remain neutral by not displaying any type of emotions or body language, (d) encourage responses by occasionally nodding my head and employing other tactics to keep the interviewee talking, (e) remain calm during note taking so that I did not influence the interviewee responses, (f) provide transitions between topics, and (g) stay in control of the interview.

Each interview began with an introduction in order to establish a sense of ease for the discussion. I used a casual conversational tone in order to ensure the comfort of the interviewee was maintained and conveyed the importance of his or her participation in the interview process (Rubin & Rubin, 2005). Rubin and Rubin recommended that the interviewer make an additional request to conduct the interview in case anything has changed. A day before the scheduled interview, I contacted the interviewee to ensure that it was still a convenient time for the interview to take place. Before launching into the main questions of the interview, the interviewer should review the purpose of the research and the research questions (Corbin, & Strauss, 2014). Rubin and Rubin (2005)

and Hatch (2002) stated that a fair amount of time should be spent on the introduction to establish a personal connection between the participant and the study. This connection builds a willingness on the part of the interviewee to want to be honest and supportive. I believe it is important to develop rapport with the interviewee before asking specific interview questions. The interview guide helped to keep the focus on the interview and not to spend excessive amounts of time on the pre-interview period.

As people, much of our history is passed from one generation to the next through stories and songs. Interviewing research participants is about making a connection to that person and seeing the world through their experiences. Hatch (2002) supported making a connection with the participants; therefore, be respectful at all times, exude interest, and provide confidence to the interviewees. During all interviews, I tried to show that I cared about what the interviewee was saying, but I was also careful to remain neutral regarding the interviewee's opinions or perceptions while still showing interest (Rubin & Rubin, 2005; Corbin, & Strauss, 2014).

As the interview begins, it is the responsibility of the interviewer to become the caretaker of the time. It is important to be respectful of the amount of time the interviewee has available. For me, it was important to let the interviewee know how many questions were involved in the interview and state the amount of time we had for the complete interview process prior to beginning the questions. The pace of the conversation contributes to the emotional level and comfort of the interviewee (Hatch, 2002; Rubin & Rubin, 2005).

We enhance the connection to our participants by listening to their stories and letting the story unfold according to the pace of the teller, not rushing or trying to control or dictate the direction of the story. Hatch (2002) pointed out that the interviewer should always take his or her cue about the direction of the questioning from the participant. Hatch goes on to say that by following the lead of the participant that the interviewer will know when to dig a little deeper into the story or ask the participant to expound on his or her ideas. The purpose behind the interview process is to learn the story of the participant; as such, it is important to keep track of the details of that story (Hatch, 2002; Corbin, & Strauss, 2014). As I listened to the interviewee share their story, it was a natural response to ask for more details based on the question. Hatch reminds the interviewer to capture all the nuances of the interview including thoughts, feelings, observations, and statements. These notes can provide a roadmap for the process by suggesting new questions or keeping track of the original ones (2002). The field notes served as a hard copy of the interview. During the interviews, I was able to use the interview guide to record the sessions in as nonintrusive a manner as possible. Immediately after each interview, I read the handwritten notes to ensure their clarity and to write any final thoughts, feelings, or observations about the session (Hatch, 2002; Rubin & Rubin, 2005). To ensure the confidentiality of each interviewee, I assigned a number to each participant so that there was no need to identify the records by the participant's name. I removed all identifying information from the interview transcripts and coding to protect confidentiality. Each participant received a hard copy of his or her

interview transcript to review, edit, and confirm (Appendix F). I asked participants not to share their transcripts to maintain their confidentiality, and I did not share any personal experiences with the participants.

All interviews took place in either a conference room or a classroom in the school without students or other staff present. Interviewing in a familiar environment made the interviewees more comfortable and helped in avoiding interruptions. I sat face-to-face with the interviewees in an informal setting with the digital recording device on a table between us. Interviewees selected the time and date that was most convenient for them. Interviewing sessions lasted between 45 and 60 minutes.

Observation

Along with interviews, I used classroom observations for data collection. Observations took place during the regular school day according to the availability of the teachers. I recorded observations electronically using a laptop and an observation protocol.

Observation protocol. I developed an observation protocol (Appendix G) for data collection in this study. I used field notes to document how teachers were providing standards-based instruction for this student population by observing the learning environment and classroom instruction. I also conducted pilot observations with the same teachers who peer reviewed the interview guide.

Observation session. I conducted observations in the participating teachers' classrooms during a student lesson. I noted specific instructional strategies and reviewed

classroom environmental structures that indicated standards-based instruction, such as schedule with academic content areas or standards-based materials. Each observation lasted from 30 to 45 minutes.

Artifact Review

In addition to interviews and observations, I reviewed public artifacts associated with study participants' classroom instruction and general student outcomes. Hancock and Algozzine (2006) discussed the usefulness of these types of artifacts to provide a rich source of information and to augment data collected in the interviews and observations. The artifacts collected included lesson plans, unit plans, curriculum guides, and classroom schedules. I kept these artifacts, transcribed interviews, and observation notes in a secured storage cabinet in my home. I stored all digital files on my password-protected computer.

Role of the Researcher

The role of the researcher is important for any researcher to consider before beginning a study. Creswell (2009) asserted that in a qualitative study, the researcher is the primary instrument of data collection. Due to this role, the researcher must be sensitive to all aspects of self that might influence outcomes, including any biases and assumptions, expectations, and experiences. For this study, I was the primary tool for collection and analysis of all data. Glesne (2010) discussed the importance of establishing and maintaining positive field relations between the researcher and the participant. I am a former teacher who has worked with this population and am currently responsible for

professional development to assist special education teachers with the instruction of students with multiple disabilities who have cognitive functioning levels below 2 years of age, but I have no direct supervisory responsibility for any of the teachers who were part of this project study.

Data Analysis

Data Analysis is the tool to derive meaning out of the interviews, observations and artifacts collected through the study. Data without analysis has no meaning (McMillan, & Schumacher, 2014). Hatch (2002) described data analysis as a method to structure the data in order to interpret meaning from the details. According to Hatch's first step, I identified topics for analysis, specifically the topics that corresponded to each research question. Following Hatch's second and third steps, I read the collected data and sorted the data by topic. I then arranged topics by main ideas on a data summary sheet (Appendix J). These topics covered three areas of teachers' responses to the research questions about standards-based instruction for this student population: (a) teachers' methodological belief system about abilities of students, (b) professional development, and (c) characteristics of students.

Hatch's (2002) fourth step was the process of breaking down the data into topics based on the established patterns. The following topics emerged from the patterns identified earlier:

1. Teachers' methodological belief about abilities of students:
    - Functional rather than academic

- Too low to do standardized testing and standards
- IEP goals drive day
- Did not have content areas to determine instruction

2. Professional development:

- Not enough staff to handle behaviors
- No training in standards-based instruction
- No curriculum
- Not enough time to make their materials
- Do not know grade-level content
- No collaboration with general education resources

3. Characteristics of students:

- Diapering
- Feeding
- Medical procedures

After I identified topical patterns, I followed Hatch's (2002) fifth, sixth, and seventh steps by coding the data and assigning them to the appropriate pattern (Appendix K). I used coding to reexamine the data to ascertain if the patterns contained any nonexamples (Hatch, 2002).

Finally, I followed Hatch's (2002) eighth and ninth steps by using Microsoft Office 2008 to correlate data from the defined topics to the interview questions. Next, I examined the transcripts for individual comments related to the research questions. I

assigned pattern codes to the topics identified in the transcripts. I used the responses of all interviewees, classroom observations, field notes, and artifacts to compile data into a summary form.

After analysis of the data from each collection method—interviews, observations, and artifacts—I reviewed all the data to triangulate the data and determine patterns and relationships across collection methods. The final step in Hatch's (2002) typological analysis was to create statements of generalizations. I conducted a review to look for overarching typological patterns and relationships.

I examined discrepant cases to determine if counterevidence was viable. Hatch (2002) cautioned that predetermined categories might keep the researcher from fully exploring other unexpected cases that emerge from the data. He suggested that if other data emerge that do not fit into a category, the researcher should apply inductive analysis procedures to complete the analysis. Hatch endorsed the use of inductive reasoning in the initial phase of identifying categories but then recommended modifying or discarding hypotheses as the researcher examines dissonant or discrepant cases. I found no data that did not fit into a category. I used this process for the analysis of my data for this project study.

Interviews for Topic 1

The first topic that emerged from the collected data concerned the teachers' methodological belief system about the abilities of students. Public opinion regarding the methodology of educating students with multiple disabilities who have cognitive

functioning levels below 2 years of age has changed since the early 1970s. Agreed-upon methodology of instruction has shifted from developmental and functional to general education curricular instruction (Spooner et al., 2006). When I asked teachers to share examples of how they were providing standards-based instruction, all 18 agreed that the primary focus in their classroom was on functional skills at the developmental level of the students. Five teachers mentioned that they taught content areas but still focused on functional academics like pre-reading and math readiness skills such as letter and number identification.

Participant 1 explained that students who are functioning below 2 years of age need to build independent living skills, and she focused on quality of life instead of academics. Participant 6 summed up how most of the participants felt about students with multiple disabilities who have cognitive functioning levels below 2 years of age: “These kids should be working on functional needs at their developmental level.” Participant 10 shared her opinion on the needs of her students:

My students need things that can take them through their life. Kids who live in group homes are taken care of better, when they can take care of themselves. I have to teach my kids how to do simple things like feeding themselves. I look at the quality-of-life issues. I think a lot of this “standards-based instruction” is ridiculous for our kids (Survey Communication - participant 10).

Further, results of the study indicated that the participants did believe that these students were cognitively too low to be included in standardized testing and standards-

based instruction. Participant 2 stated that she “was not going to put on a show to pretend that these students are doing standards when they are not able to and should not be expected to (Survey Communication - participant 2).” Participant 4 pointed out that “standardized testing does not measure what our students can do. It focuses on what they cannot do. That implies that there is no growth and progress at all (Survey Communication - participant 4.” Participant 3 stated: When the test asks about more or less, and our kids do not even have a concept about the number 1, it is a complete waste of time and money. It puts needless stress upon students, parents, and staff (Survey Communication - participant 3).

Another topic area that become evident through data collection was about organization of the instructional minutes of the day and a constant debate between working on and focusing on IEP goals or addressing grade-level standards. Thirteen teachers stated that IEP goals and objectives determined what they were doing with the students. Participants 5, 16, 12, and 14 made the following comments during their interviews: Participants said that IEP goals and objectives are realistic skills parents and staff have agreed individual students need to work on in order to become as independent as possible. Participants agreed these are the things the teacher should be focusing on, not some arbitrary standard which has no meaning for the student. Participant 8 stated,

Goals are the independent skills that our students will need. Mostly the goals in my class are recreation and leisure since that will be what our students will be doing when they leave our programs. These kids will not be getting jobs or even going to

sheltered workshops (Survey Communication - participant 8).Participant 11 concurred that if the student cannot speak, “it doesn’t make sense to work on reading skills. If the student cannot hold a pencil, why should we work on writing standards? (Survey Communication – participant11). Participant 14 added, “the goals and objectives focus on students instead of academics (Survey Communication - participant 14).”

Teacher preparation programs for the moderate to severe teaching credential are highly specialized and focused on a wide variety of topics related to the student population, but lack solid content instruction. Many special education teachers who have the moderate-to-severe teaching credentials do not have pedagogical content knowledge (Otis-Wilborn et al., 2005; Dymond & Orelove, 2001; Spooner, Dymond, Smith & Kennedy, 2006). Only three teachers had any idea what the corresponding grade-level nondisabled students were studying. Two of those teachers came from general education backgrounds. Two of them knew what “trellis” was and how to identify and teach prerequisite skills for grade-level concepts; however, these teachers did not believe they could do this with their students. Participant 4 mentioned “these students cannot identify numbers, so I am not going to do algebra with them. You cannot break it down far enough that my students will be doing algebra (Survey Communication - participant 4).” Participant 5 explained his lack of science instruction by stating he did not think that science was relevant to the needs of the students. Participant 17 said, “I use picture books with my students because they like them. They are not going to understand chapter books. The students will fall asleep (Survey Communication –participant 17).”

Participant 12 added, “I am not a science teacher or math teacher. I teach special education to students who are cognitively too low to understand those grade-level concepts. I cannot break the content down if I do not know it (Survey Communication – participant 12).”

Artifacts and Observation Notes for Topic 1

I attempted to collect lesson plans, unit plans, and IEP goals as the artifacts for this topic area. Four teachers had lesson plans with content and procedures. Most either did not have a lesson plan or simply used a teacher-planning book with a topic listed for the period of the day. In some classrooms, teachers had a schedule posted in plain sight, but it did not have content-based periods. Topics I saw on schedules included (a) Morning Circle (including high school classrooms); (b) story time; (c) toileting; (d) centers; (e) math rotations; (f) IEP goals; (g) current events; (h) fine motor skills; and (i) domestic, vocation, and community-based instruction.

Instruction appeared to consist of one adult with one student at a time doing something such as coloring using hand-over-hand procedures. Sometimes adults would be doing range of motion exercises with students or some sensory activity. There were no unit plans available upon request from any teachers. Some teachers had themes related to general topics but nothing related to standards or grade-level content. Most teachers used large-group instruction or one-to-one instruction.

Interviews for Topic 2

The second major thematic topic that emerged from the data was professional development for teachers. Participants mentioned three challenges to explain why they were not providing standards-based programming. I broke these challenges into subtopics. Challenges mentioned by participants included a lack of curricular supports, a lack of professional development training, and no time to create instructional materials. Participant 2 mentioned these challenges with standards-based instruction: He was not given received any formal training on standards-based instruction. He did not get collaboration time with general education colleagues and he did not curriculum to meet the needs of his students.

Participant 3 agreed that teachers did not know grade-level content of general education because administrators did not give the special education teachers curriculum for their students. Participant 8 said that administrators did not give the teachers the teacher editions of the textbooks. Most teachers in special education did not even know what curriculum the district had adopted for general education students. Participant 7 added:

> Whenever we go to professional development on a content area, it is completely irrelevant to anything our kids can do. When the presenters discuss differentiation, they do not consider the level needed to provide meaningful interaction for our students.

The teachers did not have professional learning communities or ongoing training to work with their students the way the general education teachers receive support for administrators. All the teachers agreed that their credentialing coursework did not adequately prepare them to work with students who have multiple disabilities who have cognitive functioning levels below 2 years of age. Participant 13 shared that she received no training or support on what to do with her students on a daily basis. She believed that the only direction for instruction was the IEP goals and objectives. Participant 11 agreed that she had learned how to work with these kids through trial and error. She added that administrators offered no training to teachers on strategies that work with these kids. Participant 15 thought that it was completely unrealistic to expect teachers to "teach" grade-level content with no training on what it might look like for students with multiple disabilities who have cognitive levels below 2 years of age.

The third area of concern stemmed from having no real curriculum from which to adapt lessons to the needs of the students. Participants 7, 12, and 6 shared the frustration of creating their own instructional materials. Teachers based the instruction on a topic of interest to staff or students. Some teachers designed lessons around a topic that would appear somewhere in the general education curriculum, like volcanoes or letter recognition, but might not be the appropriate grade-level content. However, because there had been no adopted curriculum that included materials for students with multiple disabilities who have cognitive level below 2 years of age, teachers had to create materials to meet the needs of their students. Administrators provided no additional time

for the creation of instructional materials. Participant 18 talked about how she stayed at school for several hours after students had left to create materials. Participant 9 expressed annoyance at the expectation that the special education teachers should create standards-based materials along with all of their other duties, like writing IEP goals and objectives, outside the workday. Participant 10 explained that she did not get a prep period to make the materials necessary for her students.

Artifacts and Observation Notes for Topic 2

I did not collect artifacts specific to this topic. During the observation, I noted staff focused on maintaining control instead of academic instruction. I observed teachers conducting sensory stimulation activities with students. Content instruction was observed to be fundamental readiness skill of academics.

Interviews for Topic 3

The final topic identified from the data collection was characteristics of students with multiple disabilities who have cognitive functioning levels below 2 years of age. Each of the teachers who agreed to participate in the study had between seven and ten students. The students had multiple disabilities with cognitive functioning levels below 2 years of age including autism, cerebral palsy, Down syndrome, Angelman syndrome, and intellectual disabilities. All but three of the students in participating classrooms had medical and behavior challenges. Medical challenges with custodial care needs determine the instructional program. Custodial care needs required extra time away from instruction. Custodial care activities include daily living skill like dressing, eating

(requiring hand feeding or feeding through a gastrostomy tube), moving around (using a wheelchair), and using the bathroom (toileting or diaper changes). Many of these students also had medical challenges such as catheters, gastrointestinal feeding tubes, severe seizures, tracheal or nasotracheal suction, tracheotomy procedures, and the need for oxygen. Some students received medication through breathing treatments or injections. Students with multiple disabilities may also be blind and deaf or have visual impairments and are hard of hearing. These custodial and medical needs shift focus to keeping the students safe and happy. Some of these duties required more than one staff member at a time to meet the needs of an individual student.

Another challenge had to do with allocation of time. The teachers shared concerns that curricular expectations were unrealistic when their students had so many other needs the teachers had to address such as behavior. Participant 4 mentioned that there were not enough staff members to handle behaviors and try to address functional academics. She said that each child needed to have individual instruction. Participant 7 shared that behavior issues determine the tone of the day: If one student began to yell and hit others, it would cause other students to scream and cry. Participant 9 talked about one of his students who was so fragile that she was not able to come to school for fear of contracting a cold. The child had multiple disabilities including deafness and blindness with cognitive functioning levels below 2 years of age. Her disease was terminal, so when she came to school, teachers allowed her to be by herself and do things that made her happy, like sitting in the sunshine. Teachers did not require the student to do anything

that would upset her. Participant 17 stated that with such profound medical needs, the students should have the opportunity to work on sensory stimulation. Participant 1 stated, "feeding and diapering take up all my time. It takes extra time to feed a student with a G-tube [gastrostomy tube], and then suctioning and seizure protocols take additional time."

Artifacts and Observation Notes for Topic 3

I did not collect artifacts specific to this topic. During the observation, Participant 2 had a sign outside the door indicating this classroom was a "no loud noise" zone due to startled reflex of students who would then experience seizures. Teachers structured these classrooms around the custodial care needs of the students. Classrooms had mats on the floor or hospital beds. When asked about the floor mats, Participant 3 explained that staff took students out of their wheelchairs and laid them on the mats for different periods throughout the day. The reason given was so that students could stretch out and not get sores from the wheelchairs. Sometimes staff worked on range of motion with a student; other times the staff left the student by him or herself.

A common element I saw in these classrooms was equipment teachers used to teach the skills of sitting, standing, and walking. When questioned about the different types of equipment, Participant 11 said the equipment was specific to the student and was part of the physical therapy program the student was receiving. The physical therapist required the teacher to put the student into the equipment as part of the classroom program. Participant 9 agreed but explained he followed the Mobilities Opportunities Via Education (MOVE) Program procedures and protocols. I am familiar with MOVE

(Barnes & Whinnery, 1997) and have used the supplemental curriculum. However, none of the teachers who were familiar with the MOVE program could show me the assessments or documentation that are part of the curriculum.

Interview Summary of Results

The participants in this study supported the scholarly published literature and research on the education of students with multiple disabilities who have a cognitive level below 2 years of age. All 18 teachers who participated in this study expressed enthusiasm and dedication to working with their students. The results for Research Question 1, "How are teachers providing standards-based instruction to students who have multiple disabilities who have cognitive functioning levels below 2 years of age?" illustrated in practice what prior research documented. Data collected showed that teachers were not providing standards based instruction at grade level for students with multiple disabilities who have cognitive functioning levels below 2 years of age due to a number of factors. These factors were separated into topic areas and further examined in data analysis.

Collected Artifacts and Observation Summary

Each observation was consistent with the participants' comments on what constituted instructional programming for these students. There was consistency among the 18 teachers in their methodological beliefs about the capabilities of their students. The teachers professed a need for independent living and functional skills instruction for their students that was evident in their instructional practices and environmental structures. The collected artifacts and observations supported the interview responses. Teachers

discussed how the characteristics of the students had a definite impact on instructional strategies and program development. Most teachers did not have content-based schedules or grade-level standards for their students. The lack of lesson planning supported the findings in the literature review and current trends in the field of special education with this level of student population.

Evidence of Quality

I wanted to make sure that my methods for data collection were both reliable and valid in order to ensure quality of study. Creswell (2012) suggested that researchers could establish reliability and validity by a triangulation of data. Methods for triangulation of data in this study included interviews, classroom observations, and field notes. I used classroom artifacts to construct validity for this study. I followed reliability and validity tests as outlined by Yin (2014) and Creswell (2009).

The first test I used was construct validity. Yin (2014) explained that the construct validity test involves numerous facts to make connections to the data, followed by the participant's critique. In addition to triangulation, I used Creswell et al.'s (2007) validity list: member checking; utilization of rich, thick descriptions; peer debriefing; and coding. Creswell et al. (2007) noted, "In member checking, the researcher solicits participants' views of the credibility of the findings and interpretations" (p. 208). The basis of this qualitative exploratory case study was the data collected during the interview process. I shared all conclusions with the participants in order to ensure accurate interpretation of

comments, statements, opinions, and views (Creswell et al., 2007; Merriam, 2009). Each participant was able to review their interviews and make corrections or clarifications.

The second test I used for this case study was internal validity (Yin, 2014). During analysis of data, I used pattern matching throughout the coding process, offered explanations, and addressed any nonexamples or rival explanations as they arose from the research based on the suggestions from Yin. Yin described the third test I used for this case study as external validity. External validity enables researchers to generalize the results of the case study to other defined populations. I believe that this case study is generalizable to other classes and districts within California with the same student population. The challenges facing teachers who work with students with multiple disabilities and cognitive levels below 2 years of age are the same regardless of public agency.

Lastly, Yin's (2014) model for reliability and validity is the establishment of case study protocol. Yin asserted that a study is reliable and valid if the repetition of research procedures reveals the same findings. Careful documentation of procedures and detailed descriptions, which Creswell et al. (2007) also addressed, added to the validity and reliability of this case study research. I was able to use the interview and observation protocols for each study participant. I also believe these same study protocols would produce the same data in other districts, thus providing reliability and validity through establishing study protocols.

Conclusion

In this section, I presented the methodology used to address the two main research questions that guided this project study:

1. How are teachers providing standards-based instruction to students who have multiple disabilities who have cognitive functioning levels below 2 years of age?
2. How are teachers determining appropriate instructional strategies for use with students who have multiple disabilities who have cognitive functioning levels below 2 years of age?

This segment of the study included a description of the selected research design and a rationale for its selection. In this project study, I used a qualitative exploratory case study approach to gather data through interviews with participants, observations of participants' individual classrooms, and reviews of artifacts including lesson plans, instructional unit plans, and general goals and objectives for standards-based educational plans from multiple goal banks. I carried out this research study in a large Southern California school district. Participants included 18 teachers who worked directly with students who had multiple disabilities who have cognitive functioning levels below 2 years of age. This section presented the criteria for selection, which I based on direct experience of the participants. The section also presented measures for ethical protection and procedures as well as my role as the researcher.

In this section, I provided the data recording methods. I used Hatch's (2002) typological process for analysis and interpretation of data collected. An in-depth detailed description of the problem, with responses to the research questions, emerged using a variety of different sources. I ensured reliability and validity by triangulating data from interviews, classroom observations, field notes, and classroom artifacts. In the next section, I will present the resulting findings from data collected and analyzed using the described methodology.

Section 3: The Project

In this project study, I used a qualitative exploratory case study approach to gather data to explore how teachers are providing standards-based instruction to students who have multiple disabilities, have cognitive functioning levels below 2 years of age, and are developmentally functioning below 2 years of age.

These students are chronologically 5 to 18 years of age. The type of project I determined that would best meet the needs of the teachers identified in the data was a series of professional development modules. Other project methodologies that were considered based on the findings of the research included a curriculum plan and policy recommendation paper. I decided that a curriculum plan might be the next step after the professional development training. This would be a way for special education teachers to collaborate with general education teachers to create the adaptations needed by students with more significant cognitive disabilities. The policy recommendation plan will also be a next step for me on a personal level. The change needs to start with the teachers in actual instruction practice. The desired outcome of the project is to develop a comprehensive professional development plan that will provide support and training to teachers working with these students. I designed the professional development implementation plan to address the three primary areas of deficit identified by the data collected in this study. The plan is a guide for administrators and teachers to engage in activities in order to promote a better understanding of how to provide standards-based instruction and determine instructional strategies that will work best for each student.

This project will lay out an overview of a yearlong plan of professional development for teachers using ongoing trainings with practical application in classroom with observations and collaboration. This plan lays the groundwork for capacity building by developing communities of practice and using individual coaching.

This section provides a description of the project goals, project rationale, and project content rationale, review of literature, project implementation, project evaluation, and implications including social change.

Description and Goals

Description

The project primarily involves three structures: workshops, communities of practice, and individual coaching sessions. The project supports administrator observations for accountability. I divided the workshops into topic areas. I selected each topic to address the areas of need determined by the results of data analysis. Workshops will include a variety of research-based strategies, best practices, resources, and activities to provide standards-based instruction for these students.

Goals

The goals of this project align to the main ideas that came out of the research. The training will include the three main themes that came out of the study: (a) the philosophical belief held by most teachers whom I interviewed, (b) the lack of relevant instruction on grade-level content and standards-based instruction, and (c) how to

overcome the general characteristics of the students that restrict traditional methods of teaching and learning.

The primary goal is to create a method for teachers to present grade-level content at the functioning level of the students in order to show concrete progress in general education curriculum. The training will include first calling attention to the way teachers perceive these students. Teachers need to believe that students can succeed if the teachers present concepts in a manner in which students can understand them. To accomplish this goal, teachers will examine the characteristics of the student population with a drive toward merging the independent and functional skills that teachers of this population of students cling to and the academic requirements of the modern era of education. With the Common Core movement, the level of rigor and expectations for teachers and students across the United States has risen. These students are entitled to educational equity and getting what they need to succeed at whatever level that may be, regardless of the opinions of others.

The second goal includes assisting teachers in acquiring content knowledge to identify and teach grade-level standards at the functioning level of the students. The National Center and State Collaborative (2013) created content modules to provide explanations and examples of the concepts contained in the Common Core State Standards that may be difficult to teach or be unfamiliar to special education teachers. They promote an understanding of the concepts so that a teacher can begin to plan how to teach the concepts to students, and they provide teachers with potential adaptations and

modifications to consider when designing materials and instruction. This particular workshop will build on the content basics and incorporate the practical application of trellising down the materials and information to the level needed for students who require greater levels of support.

The last goal includes how teachers consider the characteristics of the disabilities as barriers to learning. Specific characteristics often restrict traditional methods of teaching and learning. Characteristics of disabilities inherent in this student population include poor attention span, no intentional communication, medical complexities, a lack of self-help skills, limited fine and gross motor skills, significant delay in cognitive processing, sensory process issues, and so forth (Nakken & Vlaskamp, 2007, p. 84). Past practices have fixated on custodial care for students with multiple disabilities who have cognitive functioning levels below 2 years of age. Teachers spend so much time addressing medical needs and custodial needs that instructional minutes are limited. This workshop will get beyond diapering and feeding, and teachers will examine ways to create teachable moments throughout the instructional day.

Rationale

The rationale for using the professional development genre to meet the needs of the teachers identified in the data collection process and achieve meaningful change in instructional practices is grounded in evidence-based research. Brown, Stephenson, and Carter (2014) described a new system for professional development that includes all the components shown to help teachers change instructional practices. Multicomponent

training begins with a lecture or presentation, with modeling and role-playing. The next component includes coaching and a format for ongoing feedback on the teachers' implementation of new strategies. Teachers need a mechanism to change instructional practices. Teachers cited numerous challenges to standards-based instruction during the interviews.

In order to change practices, teachers need to have opportunities to learn and practice new skills within the context of the classroom. Professional development takes on urgency when it becomes pertinent to teachers' daily responsibilities and is linked to specific instructional objectives and learning concepts (Darling-Hammond & Richardson, 2009; DeSantis, 2012; Hodge, 2014) and when administrators place value on it. Supovitz and Turner (2000) argued that "dramatic results emerged when experiences were deeper and more sustained" (p. 975). Loucks-Horsley, Love, Stiles, Mundry, and Hewson (2003) agreed with Supovitz and Turner in that effective professional development opportunities that initiate change require multiple opportunities to learn, practice, and interact as well as to actually use the new skills. Knight (2009) and Darling-Hammond and Richardson (2009) discussed job-embedded opportunities for practicing new skills. Most teachers need hands-on experience with new concepts and skills.

Professional development needs to actively engage adult learners and demonstrate the purpose for change. Scholars have (Cranton & King, 2003; Merriam & Caffarella, 1999; C. Smith & Gillespie, 2007; Terehoff, 2002; Zepeda, 2011) determined that adult learning must address individual experiences, show relevancy, and provide opportunities

for reflection upon new information and current practices. Meaningful professional development that includes specific characteristics of disabilities and curriculum support and instruction for students with multiple disabilities who have cognitive functioning levels below 2 years of age has been absent in the general plan for implementation of a standards-based instructional program.

Teachers revealed that they would feel more confident in making a shift in their teaching methodology if their administration provided systematic instructional support. Through a comprehensive professional development plan that is sustained, coherent, and intensive (Garet, Porter, Desimone, Birman, & Yoon, 2001; Matzen, Ryndak, & Nakao, 2009; Supovitz, Mayer, & Kahle, 2000; Weiss & Pasley, 2006), teachers have a better chance to transform their teaching practices into lasting changes. The training will enhance their content knowledge and provide curricular and instructional supports to provide a direction for academic instruction.

The training must be consistent and have structured follow up sessions with active accountability. With administrative support and structured practice, Darling-Hammond, Wei, Andree, Richardson, and Orphanos (2009) concluded that teachers need up to 50 hours of consistent reinforcement of a new teaching strategy before they master it and actually implement it in the classroom practice. The 50 hours of reinforcement for teachers should be in the form of direct instruction, practice opportunities, and focused coaching sessions in order for a new paradigm shift to occur. The professional development plan that I have developed as the companion project to this study will give

teachers instruction and follow-up support both as a community of learners and as individuals.

Review of the Literature

There is extensive research supporting professional development as a vehicle for educators to hone their craft. According to the National Commission on Teaching and America's Future (cited in Richter, Kunter, Klusmann, Lüdtke, & Baumert, 2011), "Strong professional development opportunities must be embedded in the very fabric of public education" (p. 129). The American Federation of Teachers (AFT 2008) "Professional Development is a continuous process of individual and collective examination of practice supports the importance of strong professional development in public education. It should empower individual educators and communities of educators to make complex decisions; identify and solve problems; and connect theory, practice, and student outcomes" (p. 9).

After completion of a credential program, professional development provides opportunities for teachers to refine their craft and learn the skills needed to meet all the needs of their students. Roach et al. (2009) believed that if professional development is the foundation for teachers to reach all students, then all educators must have the opportunity to learn the skills necessary to provide opportunities to learn and access to the grade-level content. The Council of Exceptional Children (CEC, 2009) support professional development as the instructional foundation by which teachers can grow their skills through a specific process that includes active participation in self, peer, and

program evaluation for continuous improvement. Many states require a specific number of hours of professional development in order for teachers to renew their credentials, ensuring that educators are given opportunities to enhance their teaching skills.

In order for professional development to be effective teachers must become active participants in the learning process. Darling-Hammond and McLaughlin (2011) supported earlier work done by Zepeda (2011) in advocating that teachers are more successful as adult learners when they are actively engaged in doing, reading, and reflection; when they work in teams with other teachers; and when they focus on student needs. Garet et al. (2001); Saxe, Gearhart, and Nasir (2001); and Supovitz et al. (2000) explained that the learning opportunities should assist with the discovery of new strategies by modeling the new strategies and constructing opportunities for teachers to practice and reflect on them.

Time is essential to effective professional development and teacher training. Often, school district officials conduct training sessions after school for an hour or single-day workshops. Training workshops must be continuous throughout the year to create a breadth of knowledge. Researchers (Darling-Hammond et al., 2009; Harwell, 2003) have shown that large-group workshops on a regular basis along with small-group collaboration and individual coaching have the greatest impact on changing teaching practices by providing a shared experience or communal responsibility for change. Key principles to effective professional development include consistency and ongoing opportunities to learn and practice new information to ensure teachers gain deep

knowledge of the innovation (DeSantis, 2012; Joyce & Showers, 2002; McLeskey, 2011). In order to increase the depth of knowledge and assist teachers in transforming knowledge into practice, professional development must include time to practice new skill acquisition (Loucks-Horsley et al., 2003).

Providing opportunities for small group collaboration is important in the retention of skills. Slavit and McDuffie (2013) found that teachers were able to gain advice and increase their own knowledge and skills when a systematic structure was presented in the form of professional development. It is natural for teachers to seek out colleagues who shares similar responsibilities and experiences in an effort to improve their own practices (Avalos, 2011; Coggshall, Rasmussen, Colton, Milton, & Jacques, 2012). Teachers must continually discover different ways to adapt instruction and generate new ideas to improve practice (Avalos, 2011).

Effective professional development not only needs to be ongoing and consistent but also focused. Professional development should have a clear purpose (Avalos, 2011; Fullan, 1993; Garet et al., 2001) and correspond to district goals for instructional practices. Effective professional development aligns ongoing training over an extended period of time (Yoon, Duncan, Lee, Scarloos, & Shapley, 2007), subject matter content and how students learn that content (Dopplet et al., 2009; Kennedy, 1998), and opportunities for teacher teams to work collaboratively on student learning (W. Saunders, Goldenberg, & Gallimore, 2009). Scholars (Desimone, 2011; Dickinson & Brady, 2006; Pianata, Hitz, & West, 2010; Van Driel & Berry, 2012) have indicated that effective

professional development must address subject-matter content, pedagogy of instruction, and differentiation. Often teachers who work with students who have special needs do not get a solid foundation in academic content instruction.

Large-Group Workshops

Historically, due to limited training opportunities, professional development has been done in large group lecture formats which haven't been the most effective way to transfer information to teachers. District administers have typically offered professional development in a full day workshop-style model with little or no follow-up beyond the one day event (Darling-Hammond et al., 2009; Lang & Fox, 2003; Yoon et al., 2007). In order to change teaching practices, Moffett (2000) found that districts administrators must extend the full-day workshop style of professional development beyond a minimum of 14 hours. Workshops should include structured practice in classroom application and coaching. Rethinking the delivery format of these workshops can improve outcomes of professional development. Teachers must be actively engaged and interact with information and each other in a consistent format for professional development to be successful (Avalos, 2011). Realigning instruction allows teacher learning to become part of the daily routine (Hunzicker, 2011). Fogarty and Pete (2010) found that when teachers own the learning, real application and varied use of the practice occur more frequently in their classrooms. Blackman (2010) took the idea of teachers' owning their own learning and found that by combining a series of workshops with one-on-one coaching, teachers take more initiative for their own teaching capabilities. Van Driel and Berry (2012)

summarized previous research by stating that teachers have greater success with implementation of new practices once they have acquired knowledge development and have taken ownership of that knowledge.

Professional development does not happen without teacher engagement. Effective professional development happens when teachers are engaged in learning activities that are supportive, job embedded, instruction focused, collaborative, and ongoing. Research by Croft, Coggshall, Dolan, Powers, and Killion, (2010); Knight, (2009) has shown that job-embedded professional development can also play an important role in providing the structure and continuity for teachers to use results from classroom observations to make changes to their instructional practice. Strieker, Logan, and Kuhel (2012) discussed when professional development techniques support job-embedded learning; teachers can easily and readily translate those techniques into practice in the classroom setting.

Small-Group Collaboration

Education tends to promote a constructivist approach to learning. Even the teachers learn more by collaborating with peers. Professional development researchers (Cochran-Smith & Power, 2010; Leko & Brownell, 2009) emphasized more collaboration and different ways of learning through study groups. One common form of teacher collaboration or peer-to-peer learning is participating in a small, focused group. Small-group settings provide opportunities for teachers to share successes and obstacles regarding implementation of new practice techniques. These small group settings help to

build capacity among the teachers to facilitate input from colleagues (Penuel, Fishman, Yamaguchi, & Gallagher, 2007; Roberts & Pruitt, 2008).

The small group format of learning new information, practicing skills and trying out new ideas is becoming a widely accepted practice among educators. These small groups go by a variety of names: a learning community (Skerret, 2010), community of practice (Wenger, 2006), or professional learning community (PLC) (Jacobson, 2010). In communities of practice, individual and group learning includes observing and then participating in the practices at the core of the community (Levine & Marcus, 2010). Collaboration allows teachers to grow in learning communities with support from each other to develop their individual skills. Collaboration requires reflection and accountability for student achievement (Avalos, 2011). Collaboration needs to be ongoing with a commitment to growth and continuous improvement of teaching and learning. Abilock, Harada, and Fontichiaro (2013) indicated that when designing professional development, it is important to foster and support critical inquiry in all participants.

The best way to get someone excited about new learning is to celebrate successful first steps. This validates the information and shows how it is relevant to the teacher and their classroom. Effective professional development starts within the school and exemplifies teachers' successes within their own classrooms (Blanton, & Perez, 2011). Rather than focusing attention on what the teachers lack in instruction, the idea is to model what successful strategies are working for other teachers. Prytula (2012) and Frost

(2012) indicated that the purpose of a PLC is not to dwell on the negatives and weaknesses of individual teachers but to identify the strengths within the group and build capacity for teachers to learn from and support each other. Hyslop-Margison and Sears (2010) stated, “Professional autonomy enhances rather than undermines teacher responsibility by situating educators as the primary authors of their own success or failure” (p. 2).

In the PLC model, modeling occurs among teachers and community members. Participants can construct meanings about the practice of teaching, enabling them collaboratively to examine and reflect on their own contexts and teaching practices (Blanton, & Perez, 2011). By collaborating and sharing their challenges, teachers can learn to reflect on their own practices and draw new innovative ideas from each other (Guskey & Yoon, 2009; Little, 2012). Lead teachers and coaches can model lessons, write new courses of study, and mentor and coach new teachers (Hobson, Ashby, Malderez, & Tomlinson, 2009; McLaughlin, & Talbert, 2001).

Coaching

Comprehensive professional development should start with large groups, as an effective way to introduce new information. Next, provide small group opportunities to explore the information and finally individual time to make it your own. Scholars (Batt, 2010; Knight, 2007; Slinger, 2004) have shown a coaching model with individual teachers is highly successful at getting teachers to implement new, research-based practices into their classrooms. Cantrell and Hughes, (2008); Stephens et al., (2007);

Bethune and Wood, (2013) have gone even further and have shown coaching is effective at changing teacher practice and student achievement by including individual follow up observations and feedback. A widely used collective approach to professional development is peer coaching, which provides ongoing classroom support for teachers as they implement innovations (Jewett, & MacPhee, 2012). Coaching allows outside coaches or mentors to tailor training to the needs of the individual teacher (Joyce & Showers, 2002). DeSantis (2012) stated, "Many teachers are left without support while they attempt to incorporate new skills or content into their classroom instruction" (p. 52).In theory, the ideas presented in a professional development activity are useful; however, transitioning from a presentation to actual practice remains a challenge for teachers (Fogarty, & Pete, 2006).

To effectively change a school culture, professional development need multiple formats for information dissemination and multiple opportunities for teachers to use the new strategies, this includes individual practice and support. Joyce and Showers (2002) revealed that when selected teachers participated in just the traditional workshop with no follow-up activities, the level of implementation of trained practices was about 5% to 10%. Joyce and Showers went on to say when teachers received training and follow-up with study groups and coaching, implementation was 75% to 90%. Finally, when districts provided whole-school training with study groups and peer-coaching teams as follow-up, the implementation was 90% to 100%. Rush and Shelden (2011) and Cornett and Knight (2009) clearly supported prior research and found coached teachers transferred the newly

learned teaching practices to classroom, but teachers who only participated in the workshop quickly lost interest in the skill and did not continue to use it in their classrooms. Without continued support for implementation of new information into their curriculum, teachers become discouraged in making a shift in their teaching practice (Schrum & Levin, 2013). Coaches assess individual teachers' strengths and identify areas where the teacher may need greater support (Neumann & Cunningham, 2009; Stover, Kissel, Haag, & Shoniker, 2011) and then generate a collaborative plan to move toward mastery of these areas of deficit.

The goal of a comprehensive professional development plan that includes coaching should go beyond improving content instruction. Coaching gives teachers' purposeful support to assist them in raising the level of their practice and helps to break the isolation that teachers often experience when left to their own devices (Helmer, Bartlett, Wolgemuth, & Lea, 2011).

Individual time with the teacher, allows the coach to tailor the support to the level of expertise of the teacher. Mastery of instructional practices is a process that evolves over time according to the professional stage of the teacher (Fessler, & Christensen, 1992). Desimone (2009) argued that effective professional development must consider where individual teachers are along the professional continuum between the new graduate teacher and the advanced practitioner.

Coaching cannot change outdated practices but it can assist in translating large-group workshops with generalizable instruction to classroom implementation. An

effective professional development plan is one that includes workshops, coaching, and small groups along with accountability at each step.

Implementation

Resources, Supports, and Barriers

School officials need to identify resources and supports prior to implementation of my professional development plan. Implementation of this professional development plan will require both physical plans, like reservations of rooms, and scheduling considerations and the buy-in of all stakeholders. Parents, teachers, administrators, and the school board must be willing to make a commitment to improve instruction for students with special needs.

Existing supports are the pieces already in place for implementation to occur. Schools across the district either have a minimum day or are willing to create minimum days to dedicate to staff development. Communities of practice and staff meetings will occur during the afternoon of the minimum days. Schools could also use half-day sessions for workshops.

Some potential barriers will be the number of student-free days allocated for professional development through the year. If workshops happen during the school day, the availability of substitute teachers across the district becomes a challenge. Best practice for students would be to have substitute teachers cover the minimum day. There may not be enough total substitutes to cover the number of teachers needed to participate in the trainings. Another option is to offer Saturday training where teachers would receive

a stipend for the day. This would save the cost of paying for substitutes and teachers. The board of education may also address this barrier by increasing the number of student-free days.

Proposal for Implementation

After the final approval of this project, I will schedule a meeting with administrators to discuss the findings of the study before I present it to the school board and the other stakeholders as a formal presentation. I will hold a follow-up meeting just before the start of school to work out details and ensure there is a commitment to the project. During this meeting with the administrators, I will discuss monthly workshop titles and review agendas along with topics for community of practice sessions.

Workshops should begin in September to set the tone for the year, followed by one workshop per month with the exception of December and June, giving eight workshops for the year. Workshops will take place on a monthly basis during the first week of the month. I selected the first week of the month for the workshop to correspond to staff meetings or minimum days for teachers. Often, administrators have used these days to do 90-min to 120-min professional development sessions. Due to the short amount of time, workshops will cover each topic in a series with at least 2 months for each area. Every 2 to 3 months, workshops will cover a different general category, with a specific topic each month. Administrators will set aside the second and third weeks of the month for teacher coaching. The coaching sessions will be 1 hour in length. The sessions will not require substitutes for the teachers. The coaching sessions will take place during

the day, and include a 20-minute observation followed by a 40-minute debriefing between coach and teacher. This debriefing may occur during a teacher preparation period or during a time when it is convenient for the paraeducators to practice the lesson with the students while the teacher steps out. Each teacher will receive one coaching session per month. The fourth week of the month will be the community of practice session. The communities of practice will be 60-90 minutes and will include an opportunity for teachers to share successes and challenges about skill implementation. A 90-minute session will occur with the administrators to review progress or developments at the end of the 2-month series. This will set the stage to develop an observation sheet for the administrators based on the topics presented during this two-month period.

The focus of this professional development plan is to use existing structures to accommodate indicated needs of the district. Commitment to cultural change and improving instructional practices must come from the principal (Lutrick, & Szabo, 2012) as the instructional leader in the school. In the past, due process hearings or lawsuits have been the impetus for action (Umpstead, Decker, Brady, Schimmel, & Militello, 2015). This plan will help the district take the initiative to make changes on its own.

Roles and Responsibilities

All stakeholders will have a responsibility in the instructional and cultural change expected from this professional development plan. The premise of this plan is a systematic shift in the way teachers deliver standards-based instruction for students with multiple disabilities who have cognitive functioning levels below 2 years of age. Just as

grade-level teachers in general education meet regularly to analyze test results and instructional practice, administrators will ask all district teachers working with students who are cognitively below 2 years of age to participate in their own team meetings and trainings. These teachers will attend the monthly workshops, set up coaching sessions and observations, and participate in communities of practice. Administrators will attend an overview session and hold informal and formal observations for teachers. It is important that support for change come from the administrators as the instructional leaders. Informal observations, when administrators stop by the classroom, help to show the importance of implementing new strategies. These informal sessions also build a sense of connectedness instead of evaluation between teacher and administrator. Formal observations are linked to evaluations for teachers.

Administrators will invite parents to monthly meetings to build the home to school connection and discuss how parents can support generalization of academic skills at home in natural environments. All staff will be involved in changing the culture of instruction for students with cognitive disabilities. The district has nurses and other service providers assigned to each site and classroom. Administrators will ask these service providers to help brainstorm ways to support academic skill acquisition during the students' individual and small-group sessions. Nurses will brainstorm ways to incorporate teachable moments during health-care-related activities. Psychologists and other related service providers, such as speech and language pathologists, adapted

physical education teachers, and so forth, design schedules and activities to support skill acquisition across environments.

Project Evaluation

Type of Evaluation

This project will involve goal-based evaluation. The first meeting with administrators and staff will establish goals for programs based on determined needs concluded from the study. Expected outcomes include physical changes in learning environment and in delivery of instruction. During the coaching sessions, each teacher will identify two to three goals that they plan to achieve based on topics of the workshops. At the end of each workshop, the presenter will give teachers an evaluation form in which they will identify three concepts or ideas they are taking away from the workshop and how they are going to use the information.

I will train administrators every other month on the elements that teachers have been trained on and practiced in coaching sessions and the discussed in PLC so the administrators can follow up with informal and formal observations. Administrators will also be able to review the achievement of individual goals set by teachers during their coaching sessions. The checklist of workshop elements introduced each month and the individual teacher goals, will give administrators the opportunity to see concrete changes in standards-based instruction for students with multiple disabilities who have cognitive functioning levels below 2 years of age.

Justification for Evaluation

The selected type of evaluation to provide the best outcome is the goal-based evaluation. Goal-based evaluations assess the extent to which programs meet goals and how they could progress in the future. The primary purpose of the goal-based evaluation is to promote continuous, self-directed professional development. The goal-based system of evaluation mirrors process of evaluation used in the development of an IEP. Just as they monitor the growth and progress of their students, teachers and administrators have an opportunity to measure their communal growth and progress toward achieving total standards-based instructional practices throughout the school district. The goal-based evaluation process will allow the experienced, successful educators to stretch themselves professionally by engaging in meaningful learning experiences and by seeking to make significant contributions to the profession.

Goals of the Project

I derived goals for this project from needs participants identified in the study during the data collection process. The study provided data as a means of looking at the present levels of performance of the teachers. Through the analysis, I concluded that educators needed a new philosophy of service delivery. Teachers must change their instructional practices to encompass standards-based instruction at the appropriate grade level of their students. Concrete instructional goals will include the following:

- Grade-level content-based schedules posted in every classroom.

- Lesson plans that identify grade-level standards submitted on a weekly basis for each content period.
- Increased student engagement around content-based activities.
- Establishment and continuation of weekly communities of practices.
- Building a collaborative relationship among teachers in general education and special education.
- Inclusion of more students with multiple disabilities who have cognitive functioning levels below 2 years of age in general education classrooms.
- Increased accessibility for all students to grade-level content
- More effective use of instructional time

Evaluation Goals

Meaningful change is more likely to occur when people are enlisted in the process and there is accountability and transparency, when all stakeholders have ownership. Making a systematic change requires that all stakeholders have the opportunity for active participation (Waligo, Clarke, & Hawkins, 2013; HanleyBrown, Kania, & KraMer, 2012). Evaluation goals will need to ensure that all stakeholders have input and ownership. These goals include the following:

1. All stakeholders will have the opportunity to provide and receive feedback.
2. The evaluation process is transparent.

3. All stakeholders will participate in the final review of the achievement of evaluation goals.

Making the evaluation goals clear from the beginning will establish a process to ensure that everyone is included in redesigning the educational climate and culture of the district (Waligo, Clarke, & Hawkin).

Key Stakeholders

Systematic cultural change requires input and support from all stakeholders. Most people involved in special education are willing to commit to the success of students, but in the case of philosophical and methodological institutional change, everyone must commit to the implementation of a proposed plan of improvement (HanleyBrown, Kania, & KraMer, 2012). In order for this transformation to be, successful, key stakeholders must include caregivers, teachers, paraeducators, other staff, administrators, and even custodial and clerical staff. This revolution will affect all members of the educational community.

Implications for Social Change

In this study and the companion project, I am looking at influencing a social change that will alter the way teachers provide instruction to students with multiple disabilities and cognitive levels below 2 years of age. Social constructivism looks at society as a web of social relationships, and hence, social change means change in the system of social relationships (Phillips, 1995). Sociologists use the term social change as a way to indicate the changes that take place in human interactions and interrelations

(Shor, 2012). Barkan (2014) took a deeper look at social relationships and extended the concept of social change to the transformation of culture, behavior, social institutions, and social structure over time. When examining these social relationships closer, social change also affects cultural symbols, rules of behavior, social organizations, or value systems.

In this project study I hope to increased awareness and understanding, to create attitudinal change, to increased civic participation, and to begin policy changes that will effect change across our cultural rules and social constructs through the instructional delivery methods for students with multiple disabilities who have cognitive functioning levels below 2 years of age. Our cultural symbols and rules of behavior are in the process of change as it applies to people with disabilities. The United States has made legislative changes regarding environmental access for people with disabilities (Rothstein, 20140) and our spoken language has changed when referring to people with disabilities (Darrow, 2014). When looking at the education of students with multiple disabilities who have cognitive functioning levels below 2 years of age through a societal lens, all students are included in the discussion of inclusive education and increased rigor and expectations. There is a shift in acknowledging all students and their individual capacity to learn. As defined by Barkan (2014) and Phillips (1995), this shift in our educational landscape may indicate a transformation in cultural acceptance and value toward students and, by extension, people with disabilities in our nation.

Educators have seen increased attention on students with multiple disabilities who have cognitive functioning levels below 2 years of age due to the new assessment system. There is a shift in the entire institution of education to address educational opportunities and rights for all students occurring throughout this nation (Pazey, & Cole, 2013). Since the U.S. Congress codified access to public education into federal law with the passage of the Education for All Handicapped Children Act (1975), later renamed as IDEIA, there has been a growing body of documents indicating that students with significant disabilities can receive instruction with nondisabled peers in neighborhood schools. Hardman and Dawson (2008) and Osgood (2005) pointed out the impact that federal legislation had in the 20th century on students with disabilities. The 1997 and 2004 amendments to IDEIA represented a significant shift in federal policy in the education of students with disabilities, expanding the focus beyond access to education to expecting schools to improve results within the context of general education and moving to the discussion of full inclusion. Villa and Thousand (2005) documented the three foundational beliefs of inclusive education as:

> (a) all children can learn, (b) all children have a right to receive education with their peers in age-appropriate heterogeneous classrooms within their neighborhood schools, and (c) it is the responsibility of the local school community to meet the diverse educational needs of all its students regardless of their ability levels, national origin, and linguistic, cultural, and family background. (p. 59)

The promise that every student will have the opportunity to learn is within educational reform at the federal level. Several scholars (Alquraini & Gut, 2012; Downing & Peckham-Hardin, 2007b; Janney & Snell, 2006) have further supported inclusive educational practices. This study contributes to the field of education and the greater society by providing a method for educators to gain the skill necessary to include these students in the education system and acknowledge these students as members of the educational community.

Importance of the Project to Local Stakeholders and in a Larger Context

Teachers administer the state assessments during the spring of each school year. During the months of April and May of the 2014-201 school year, districts piloted new standardized assessments. Teacher feedback expressed discouragement and frustration at the expectation for students with multiple disabilities who have cognitive functioning levels below 2 years of age to participate in a standardized state assessment. According to the teachers, the assessment did not measure growth or achievement for these students and students could not complete due to the format of the assessment. This project study takes the focus away from assessments and places the focus on instruction. This study has the potential to shape a new course of instructional programming and educational benefit for this student population. When teachers get tools for the education of students with multiple disabilities who have cognitive functioning levels below 2 years of age, then administrators may see added benefits of classroom inclusion and improved assessment scores. Teachers will change their beliefs about the success of students with disabilities to

work on standards and gain independent skills while improving the delivery of instruction for all students.

Conclusion

The results from this study are applicable across all district and state boundaries. Teachers who work with this student population across our nation face the same challenges when delivering classroom instruction. Practitioners can generalize the results of this study to the experiences of other teachers outside of the study district. The potential for social change can extend across the state and across the nation. Bringing awareness to the issues identified in this study will assist teachers to change their model of service delivery and perhaps reevaluate what they are doing for the educational benefit of these students.

In this project study, I have constructed a comprehensive professional development plan for implementing standards-based instruction by addressing the areas of deficit identified in the data collection. This proposed professional development plan includes a timeline for events, suggestions for professional development activities, and workshop handouts.

In Section 4, I provide a reflection on the study itself including the strengths, limitations, and directions for future research. The section also includes an analysis of what I have learned about being a scholar, practitioner, and project developer. I conclude Section 4 with a reflection on the importance of the study and what I learned while conducting it.

Section 4: Reflections and Conclusions

In the final section of this study, I provide a reflection on the overall study and the accompanying project. This section includes a discussion of the strengths and weaknesses of the project and my personal reflections. The reflections include an outline of my growth as a scholar, practitioner, and project developer. I address suggestions for potential social change that could result from this project study and conclude this section with implications, applications, and suggestions for future research.

Project Strengths

Strength of the Study

The primary strength of the overall study was the timeliness of this topic. A recent shift in educational ideology has drawn attention to standards-based instruction for all students. Common standardized assessments have brought the question of educational service delivery and accountability to the forefront of public opinion. Teachers who are working with this student population are struggling to figure out how to provide standards-based instruction in preparation for the requirements of the new assessment system. In this study, I revealed a method by which to assess what teachers are currently doing to meet the legislative mandates of standards-based instruction and recommendations to support teachers in the transition to the accountability of standards.

I determined the professional development project by the structure of the data collection methodology of the study itself. Semistructured interviews and observations were both assets because they allowed the interviewees to speak freely, and these

methods provided a flexible conduit to obtaining data. The interviewees appeared to be comfortable and trusting as they honestly answered the questions.

A strength of the study was the population. The targeted population was a subgroup of special education students who have moderate to severe disabilities. The focus of this study was on the 1% of the moderate to severe subgroup—in other words, the 1% of 1% of the total student population across special education. The teachers who work with these students address the same issues whether in Kentucky or California. Scholars (Browder et al., 2006; Copland & Keefe, 2007; Downing, 2010; D. D. Smith et al., 2009) have supported the perspective that students with severe multiple disabilities can learn and that educators should expose them to everything their nondisabled peers receive.

Strength of the Project

A strength of the accompanying project is the capacity to create a cultural shift in instructional practices across the district. A new shift in educational expectations for teachers is to be able to provide appropriate instruction for all students. This study will assist teachers in presuming competence in their students with multiple disabilities who have cognitive functioning levels below 2 years of age and give them a form of systematic instruction for these students. Delano, Keefe, and Perner (2008) discussed this change in teacher perspective on systematic instruction and its benefit to all students. In line with systematic instruction, researchers (Chung, Carter, & Sisco, 2012; Heron, Villareal, Yao, Christianson, & Heron, 2006; Jameson, McDonnell, Polychronis, &

Riesen, 2008) have looked at incorporating peer-delivered instruction to provide access to general education curriculum. Snell and Brown (2011) supported the idea of greater access to academic content for students with multiple disabilities who have cognitive functioning levels below 2 years of age and agreed that peer-delivered instruction also provides practice in communication and social skills in addition to basic academic content. Researchers (Browder & Spooner, 2011; Kennedy & Horn, 2004; Snell & Brown, 2011; Westling & Fox, 2008) have suggested that students with multiple disabilities who have cognitive functioning levels below 2 years of age can make strides in learning when presented with systematic instruction. As the brain develops, it recognizes patterns and when content instruction is presented in a systematic fashion with repetition and context, there is a better chance of learning to occur (Sousa, 2014a; Sousa, 2014b). Often teachers who work with students with disabilities teach skills in isolation instead of in a progression of scope and sequence (Ahlgrim-Delzell, Browder, & Wood, 2014). Students who are cognitively below 2 years of age continue to learn and grow at a slower rate than there non-disabled peers.

Project Limitations

Limitations in the Study

A limitation of this study was the lack of prior research about standards-based instruction for students with multiple disabilities who have cognitive functioning levels below 2 years of age related to actual academic content instruction. This made it more challenging to find current research, but it was also a strength in what this study adds to

the body of literature. Researchers (Browder & Cooper-Duffy, 2003; Browder, Wood, Thompson, & Ribuffo, 2014; Spooner, & Browder, 2014) have supported this lack of research on grade-level academic instruction for this student population. Researchers agree that additional studies are needed for students with more profound challenges and needs, including multiple disabilities. Another limitation of this study was timing. With so much attention on this issue, more research and information is coming out every day. I have found it interesting and exciting but sometimes complicated trying to stay on top of the latest information.

Limitations in the Project

The literature supports the limitations of the project. Three main obstacles were responsible for the greatest limitations to the project: district leadership and buy-in, cost, and teachers' belief in the project.

Unless the district leadership is behind the commitment to change instructional culture, teachers will not embrace the professional development plan. Leadership must support the need to change current practice and then transfer that perspective to the field. Teachers must have a reason to make a change. It must be systemic, not just in a few pockets.

I found that cost was the biggest factor when discussing professional development with administrators. If the district has recently experienced a lawsuit regarding the type of instruction and activities happening in programs, then the benefit to making the changes in teacher practice outweighs the cost.

Another limitation is the amount of buy-in from the teachers themselves. When discussing professional development, the history in the district has not been a positive one for providing meaningful professional development specifically for teachers who work with students with multiple disabilities who have cognitive functioning levels below 2 years of age. Many teachers do not believe that there will be follow through and support if they take a chance on this project.

Scholarship

The process of developing a scholarly work has been an exercise in discovery. It has been an effort to fashion a study that has a foundation in reliable and valid sources and resources applicable to the questions. Boyer (as cited in Chalmers, 2011) stated that scholarship deals with teaching, integration, application of knowledge, and discovery. Ramaley (2007) defined scholarship further as including discovery, integration, interpretation, and application. I have focused on increasing and sharing new knowledge while building on existing knowledge. I worked to integrate information new to me and applied it to the research questions. Shulman (2012) suggested that scholarship requires reflective and thoughtful attention to the selection and amalgamation of ideas and examples, and well-designed strategies of design, development, transmission, interaction, and assessment. Acquiring skills to compose content within the restrictions of scholarly writing was challenging but rewarding. I learned to start with my own ideas and then to search out building blocks of others to make a solid argument.

Project Development and Evaluation

This project study provided a clear approach to addressing the problem and working through the process to achieve a suitable and acceptable solution that meets the needs of the stakeholders involved. By using a funnel approach to the problem, I drilled down to outline a clear question that led to a well-developed study. I learned how to develop the project as the study unfolded. Having worked in the field as a teacher with this student population, I knew what was lacking in my knowledge of how to provide standards-based instruction for my own students. This spark began the inquiry to find out what other teachers were doing. As I talked to teachers who worked with these students, it became clear that they were struggling with the same things I was with mandates to meet grade-level standards. I began to see patterns developing and was able to look at possible ways to meet the identified needs. During the course of the interviews, it was clear these teachers had no support or a culture of support that would come from effective professional development. Some teachers might get together with one or two other colleagues to brainstorm ideas or discuss informally their struggles and challenges, but overall, teachers were isolated in their own classrooms and were floundering with the same questions. The project became a solution to the study questions with a method of monitoring the implementation and acquisition of skills by teachers and staff. Inherent in the professional development-training plan is an ongoing system of evaluation.

Leadership and Change

Leadership certainly took on a completely new meaning during the process of my project study. I never expected to be involved with political policy until this journey. Each time friends or acquaintances asked me to share my ideas for this study; I found that I was really examining the current policy toward this group of individuals. I realized that through this study I was leading a movement toward awareness and change. I discovered the difference between management and leadership. Leadership inspires people to want to follow the mission and vision (Bârgau, 2015). It inspires people, through passion, to make a difference in the community for both individuals and the collective group (Bârgau). I realize that it takes leadership and management to change the world.

Analysis of Self as Scholar

Scholarship turned out to be far more than simply putting words together in a logical format. It became so much more as the story unfolded. The journey began with a question and evolved into a mystery for which I sought a resolution. My advisor suggested I begin by finding something that had meaning for me and that I could commit to for a lengthy period. This study had personal and professional meaning for me and provided a way to create opportunities for change that might deliver a better way to teach students with multiple disabilities and cognitive levels below 2 years of age. In the process, I learned to shed light on the problem and research multiple perspectives on that problem. I learned to build a persuasive argument from a different perspective to resolve

the problem. I learned to clarify all points for those who may not have the background in the field but are stakeholders.

Scholarship is the method that is used to assign merit to my study and my work. Boyer (1990) defined scholarship as being "at the heart of what the profession of teaching is all about. Boyer went on to say that scholars must continue to learn and be seriously and continuously engaged in the expanding intellectual world" (p. 36). Scholarship is research that contributes to the theories of a particular field, builds application opportunities for disciplinary knowledge, or stands as the creation of a work of art (Nicholls, 2004). This project was certainly a significant, creative, and original engagement with an idea. This entire journey proved to be an adventure into a different kind of study. This journey was one of personal growth and reflection. It was a study in perseverance and patience. I practiced patience in the discipline of trust. I learned to trust the process and those involved in the process. I experienced the journey as a scholar, as a practitioner, and as a project developer, each facet with its own brand of discovery.

Analysis of Self as Practitioner

Self-reflection is a tool to for personal and professional growth and can be a powerful key to moving forward and knowing your professional worth. The key to good teaching is the ability to reflect on one's practice (Tripp, & Rich, 2012). This study was connected to my daily practice and professional responsibilities. I was able to consider not just words on the paper but the people and students those words impacted. I was able to assess how I answered the research questions myself in the classroom. In this study, I

gained a richer understanding of the common challenges facing all teachers who have a passion for working with students who have multiple disabilities who have cognitive functioning levels below 2 years of age. I believe that teachers are doing the best they can with the tools they have been given.

Analysis of Self as Project Developer

When developing a plan that will require implementation by others, it is important to have those individuals take ownership. This project reinforced my practice of reaching out to others for input and inspiration. If teachers do not take part in the creation of the plans they must execute, then they cannot argue when the creators of the plans do not consider their desires (Waligo, Clarke, & Hawkins, 2013). I had the consensus of others within each step of the process. I was able to gauge growth in my ability to build a project of this magnitude and still maintain the individual and personal connections to those whom the outcome affected.

The Project's Potential Impact on Social Change

In this study and the companion project, I am looking at influencing a social change that will alter the way teachers provide instruction to students with multiple disabilities and cognitive levels below 2 years of age. This professional development plan will give teachers the tools they need to improve service delivery and holds all students to higher expectations. By strengthening the abilities of the teachers to work with these students beyond functional skills and exposing students to academics in a way that builds self-determination, respect, and quality of life, a positive future will ensue for all

members of the community. From a focus on students who have cognitive levels below 2 years of age to students with other exceptionalities, this study will give teachers in all areas of education resources that will help meet the needs of all students. As the educational expectations across the nation changes, administrators will have a template for professional development that will support a school cultural shift that will focus on building an inclusive learning environment of all students.

Reflection

Upon reflection of this journey, I believe it has been worth the effort. I have enhanced my personal scholarship and composed a strong piece of research. I have also strengthened my professional repertoire of evidence-based practices. I think the professional development-training plan is one that will build the capacity of schools and teachers. I feel confident to share this project with other districts to create model special education programs that will meet the legislative mandates and be legally defensible. This study has been instrumental in creating the next step in the evolution of programs for students who do not fit the mainstream idea of *all* students.

Implications, Applications, and Suggestions for Future Research

This study is the first step in addressing the current rhetoric in education. The implications of this study are supported in the work of others scholars (Collins, 2012; Downing, 2010; Westling & Fox, 2008). Key ideas advocated in these previous studies include a belief that students with multiple disabilities who have cognitive functioning levels below 2 years of age can learn academic content and that educators should expose

them to the general education curriculum. My research project will assist teachers in following through with this belief system. The federal government has language that says all students, yet has provided no direction on how to include all students in the expectations (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). This study provides the tools to make the success of all students become a reality. The professional development-training plan can provide a strong application of new strategies to include students who may have challenges beyond academic delays. Suggestions for future research would include creating new and practical strategies for full inclusion in general education classes. Researchers could derive research questions from general education teachers on working with students who have special needs. This is a rich perspective that is coming into the forefront of the educational landscape. Teachers must enhance their skills to reach all students regardless of disability, severity of disability, or other unique needs those students might bring with them.

Conclusion

As I conclude this study, I look forward to working to help education officials apply this professional development-training plan. This study has become larger than I originally intended. In the beginning, this study was about a single district and how to meet its needs to move teachers into compliance with changing mandates; now the question is how to assist all teachers with this changing paradigm. Educators must look beyond custodial care and sensory activities to a new world of teaching, learning and

accountability for students with cognitive levels below 2 years of age. This study has provided a method of giving teachers new hope in their passion for these students. The study itself justifies the needs of teachers and provides answers to the question of how. This journey is only beginning and I look forward to the path ahead.

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Appendix A: The Project

Professional Development Training Plan

Fall 2014

“If We Teach Today as We Taught Yesterday,

We Rob Our Children of Tomorrow”

—John Dewey

Table of Contents

Introduction

The professional development implementation plan is designed to address the three primary areas of deficit identified by the data collected in this study. The plan is a guide for administrators and teachers to engage in activities in order to promote a better understanding of how to provide standards-based instruction and determine instructional strategies that will work best for each student. This project will lay out an overview of a yearlong plan of professional development for teachers using ongoing trainings with practical applications in classroom with observations and collaboration. This plan lays the groundwork for capacity building by structuring communities of practice and individual coaching.

Purpose

The purpose of the plan is to change the service delivery of the teachers who work with students who have multiple disabilities who have cognitive functioning levels below 2 years of age. It will increase the knowledge base and skills of the teachers in grade-level content-based instruction. The professional development plan will be based on research-based strategies and best practices in the field. It will provide resources and supports to teachers through the monthly communities of practice sessions.

Ongoing professional development will occur on a monthly basis with weekly individual observations and goal-setting sessions. Each week the teachers will meet in grade-level teams with colleagues to discuss specific topics. At the end of each 2-month rotation, administrators will do informal observations to provide feedback. Through this

system of ongoing professional development, there will be opportunities for teachers to set personal goals, observe other teachers, share successes, and brainstorm solutions for classroom challenges and accountability.

Training Goals and Learning Outcomes

Each month professional development workshops will address specific topic areas related to one of the primary areas of deficit identified by the data collected in this study. The training goal for each workshop will be to increase the knowledge base and introduce specific skills around that topic area. Learning outcomes will include application in classroom instruction.

The workshop will be followed by individual coaching sessions with teachers. The administrator will set up coaching sessions so each teacher will have at least one opportunity for coaching during the 2-month rotation. At this individual session, teachers will be asked to create goals for themselves based on the topic area from the workshop. The training goals will be to generate new practices or develop discussion around topics. Learning outcomes will include improved service delivery in standards-based instructional practices.

The monthly community of practice will be a place to discuss attempts, challenges, and successes with topical strategies. This will be a collaborative session to share where teachers are in the process of changing instructional practices as well as to brainstorm other ways of approaching challenges. Training goals are focused on

accountability of effort in classroom instruction. Learning outcomes include building capacity for change.

Intended Audience

The intended audience for this systematic shift in methodological practice will be all stakeholders. All district teachers working with students who are cognitively below 2 years of age will attend the monthly workshops, set up coaching sessions and observations, and participate in communities of practice. Paraeducators will attend selected workshops and provide input and feedback as necessary. Administrators will be required to attend an overview session and be expected to hold informal observations for teachers. Parents will be invited to monthly meetings to learn how to support instruction and help students generalize skills introduced by teachers in natural environments.

Timeline

After the final approval of this project, a meeting will be set with the administrators to discuss the findings of the study before it is presented to the school board and the other stakeholders as a formal presentation. A follow-up meeting will be held just before the start of school to work out practical details and ensure that there is a commitment to the project. During this meeting with the administrators, monthly workshop titles will be discussed and agendas reviewed along with topics for community of practice.

Workshops should begin in September to set the tone for the year and follow with one workshop per month with the exception of December and June giving a total of eight

workshops for the year. Workshops will take place on a monthly basis during the first week of the month. This will typically be on the first Wednesday of the month since is it a minimum day for students. Due to the short amount of time, each topic will be in a series with at least 2 months for each area. Every 2 to 3 months, a different general category will be covered, with a specific topic each month. The second and third weeks of the month will be set aside for teacher coaching. The fourth week of the month on the Wednesday will be the community of practice session. A 90-minute session will occur with the administrators to review progress or developments at the end of the 2-month series. This will set the stage and help to develop an observation sheet for the administrators based on the topics presented during this period.

Scope and Sequence

Monthly workshops will be presented in at least two sessions. Each month the topics will correspond to the legislative mandates of standards-based instruction. September and October will set the platform for change by examining the date from the study. The first area to be addressed is the methodological beliefs of teachers about the capabilities of their students. The presentation will include the reality of instructional expectations in federal and state legislation currently in place. The concepts of educational equity will be introduced in Part A and Part B will introduce concrete examples of application in the educational environment around educational benefit.

During the first 2 months of the year, coaching sessions will be focused on individual practices and beliefs of teachers. Teachers will review the educational benefit

environmental checklists that will be given out at the workshops to develop individual goals improve educational benefit and standards-based instruction for their classrooms. The first two communities of practice will focus on sharing goals and expected challenges in the process. This will be an informal way for teachers to collaborate on practices.

November, January, and February are months that will be spent on developing content knowledge for teachers. This topic area will be addressed over 3 months with a different content each month. The instructional support provided in these workshops will be related to the national Common Core Standards and the instructional supports available. The focus will be on strategies for teaching accessible literacy in language arts, accessible mathematics, and accessible science instruction. Teachers will learn the basics of reading instruction, math concepts, and basics in scientific inquiry. These workshops will be presented in practical hands-on format.

The coaching sessions for these 2 months will be used to observe these strategies in practice and provide feedback to teachers. The community-of-practice session will be an opportunity for teachers to share their present level of competency in the application of the strategies. They will share successes and challenges with the strategies.

March and April will address the specific characteristics of student disabilities. This area will be given 2 months to explore the severity and range of multiple disabilities. These workshops will examine the specific characteristics of disabilities while looking at the elements of the Common Core college and career readiness skills of communication,

content knowledge, independent work skills, social skills, and independent living skills. Topics will delve into how students with multiple disabilities who have cognitive functioning levels below 2 years of age learn, positioning for learning, medical challenges, communication needs (building intentional communication skills), and providing access opportunities.

The month of May will be considered the evaluation month. This month will be devoted to examining the purpose and direction of the professional development plan. It will summarize the efforts of the teachers and staff over the past year and determine the direction needed for following year.

September

Workshop Title: Educational Equity for All

Time: 3 hours

Summary: This workshop will explore the principles of educational equity for all students including those with multiple disabilities who have cognitive functioning levels below 2 years of age.

Learning Objectives:

1. Participants will look at the historical perspectives of the exclusion of students with disabilities
2. Participants will learn the dimensions of educational equity
3. Participants will identify what college and career readiness means for these students
4. Participants will explore the pathways for equity
    a. Universal design for learning
    b. Inclusion
    c. Expectations
5. Participants will practice person first thought and language
6. Participants will recognize that perspective is everything

Materials:

Video: Don't Limit Me by Everyone Matters

Video: Animal School by Raising Small Souls

Video: Nicholas James Vujicic—Look at yourself after watching this.

Handout 1: Self-Assessment

Handout 2: Beatitudes for friends of special needs kids

Handout 3: Welcome to Holland

Handout 4: How Are Your Person First Skills? A Self-Assessment by Carol L. Russell

Handout 5: Workshop Evaluation

Websites:

http://educationnorthwest.org/equity-program/educational

CAST: Center for Applied Special Technology www.cast.org

http://mommylife.net/archives/2009/10/beatitudes_for.html

Procedure for Workshop:

A. Participants are greeted and introductions made.

1. As participants sign in, PowerPoints and handouts are available for them to pick up.
2. Teachers will be arranged in table groups to facilitate sharing and group interaction
3. Set group norms
4. Housekeeping business: breaks
5. Show video of “Don’t Limit Me, by Everyone Matters”
6. Goal today is to do one of three things for each person: (a) validate what you are doing, (b) inspire you to investigate further, and (c) see things in a different way.
7. Participants will fill out a self-assessment questionnaire based on the research questions as a baseline evaluation to direct the professional development for the year. Handout #1

B. The first topic of discussion will be the historical perspectives of the exclusion of students with disabilities

1. Everyone stands and reads slide as a pledge.

"I believe all students can learn.
I believe we can teach all students.
I believe all students have a right to a free and
appropriate public education."

In our nation, not everyone has always believed that statement.

2. Activity: Select participant to read presenter provided notes about history of special education students. (See handout on student excluded). During the reading photos of different students with multiple disabilities who have cognitive functioning levels below 2 years of age are shown and then each one disappears.

3. Discussion around belief about students with special needs and education

4. Pass out Handout 2: Beatitudes for friends of special needs kids

X. The dimensions of educational equity

1. Show video of "Memory Keeper's daughter- everyone has right to a public education"

2. Define educational equity within the context of students with special needs. Tie back to pledge and federal legislation. Ask table groups to answer worksheet on educational equity and how students with profound needs fit into that belief system.

Ainscow, M. (2012). Moving knowledge around: strategies for fostering equity within educational systems. *Journal of educational change*, *13*(3), 289-310.

3. Show the video "Animal School"

4. Have elbow partners discuss the video

Δ. College and career readiness means for these students pathways for equity. Discuss the elements of college and career readiness for typically developing students and do a crosswalk to the work by Kearns et al. (2010).

Kearns, J., Kleinert, H., Harrison, B., Sheppard-Jones, K., Hall, M., & Jones, M. (2010). What does “college and career ready” mean for students with significant cognitive disabilities? Lexington, KY: University of Kentucky.

E. Universal design for learning

1. Show slides and pull up website. Go through website to show features that can be used in PLCs or staff meetings.

   CAST: Center for Applied Special Technology www.cast.org

   Rose, D. (2001). Universal design for learning. *Journal of Special Education Technology*, *16*(2), 66-67.

Ф. Inclusion

1. Pass out Handout 3 “Welcome to Holland”

2. Discussion inclusion of students with special needs.

Г. Expectations

1. Write the question “What do you think of when you think of elephants?” on the board.

2. Have participants give you a list of characteristics.

3. Show video of elephants painting. Then discuss the expectations we have for our students.

H. Person First Thought and Language

1. Handout 4 “How are your Person First Language Skills?”

2. Have discussion about survey

I. Perspective Is Everything

Show video of Nicholas James Vujicic—Look at yourself after watching this

Θ. Goal Setting and Wrap Up

1. Teachers will fill out evaluation form (Handout 5) to set three goals they want to accomplish for themselves from the workshop today.

2. Teachers will share out three things they are taking away from the day base on the goals from the beginning of session: (a) validate what you are doing, (b) inspire you to investigate further, and (c) see things in a different way.

Handout 1

A Self-Assessment for Providing Standards-Based Instruction for Students With Multiple disabilities who have cognitive functioning levels below 2 years of age

Rate yourself according to the following scale. How often do you . . . . . ?

1 = always 2 = often 3 = sometimes 4 = almost never 5 = never

A. ***Methodological Belief System About Abilities of Students***

1. _____ Believe that your students are able to do the grade-level content provided by the general education curriculum with modifications to their functioning level?
2. _____ Create lessons based on academic content equivalent to grade level of students?
3. _____ Know the standards that your activities are addressing?
4. _____ Use the excuse of the disabilities to hold lower expectations for your students?
5. _____ Say that the disabilities are too severe for students to be able to meet academic standards?

B. ***Professional Development***

6. _____ Received professional development that addressed the content areas for the students you work with?
7. _____ Get time to collaborate with colleagues to plan instruction?
8. _____ Get resources to teach grade-level content?
9. _____ Receive support with instruction for your students?
10. _____ Receive strategies to modify content for your students?

C. ***Characteristics of Students***

11. _____ Study the characteristics of the disabilities in your students?
12. _____ Adjusted your instruction to accommodate specific characteristics of disabilities in your class?
13. _____ Identify why a student is doing something based on the specific disability?
14. _____ Ask another professional about the specific characteristics of the disabilities in your class?
15. _____ End up realizing that the behavior of a given student is a typical characteristic of the disability?

Handout 2

Beatitudes for Friends of Special Needs Kids

Blessed are you who take time to listen to difficult speech:
For you help us to know that if we persevere,
We can be understood.
Blessed are you who walk with us in public places,
And ignore the stares of strangers,
For in your companionship,
We find havens of peace.
Blessed are you who never bid us to “hurry up,”
And more blessed are you
Who do not snatch tasks from our hands to do them for us,
For often we need time rather than help.
Blessed are you who stand beside us
As we enter new and untried ventures,
For our failures will be outweighed
By the times we surprise ourselves and you.
Blessed are you who ask for our help,
For our greatest need is to be needed.
Blessed are you when you assure us,
That the one thing that makes us individuals
Is not in our peculiar muscles,
Nor in our wounded nervous systems,
Nor in our difficulties in learning,
Nor any exterior difference.
But is in our inner, personal, individual self
Which no infirmity can diminish or erase.

—Author Unknown

Handout 3
WELCOME TO HOLLAND

I am often asked to describe the experience of raising a child with a disability—to try to help people who have not shared that unique experience to understand it, to imagine how it would feel. It's like this. . . .

When you're going to have a baby, it's like planning a fabulous vacation trip—to Italy. You buy a bunch of guidebooks and make your wonderful plans. The Coliseum. The Michelangelo David. The gondolas in Venice. You may learn some handy phrases in Italian. It's all very exciting.

After months of eager anticipation, the day finally arrives. You pack your bags and off you go. Several hours later, the plane lands. The stewardess comes in and says, "Welcome to Holland."

"Holland?!?" you say. "What do you mean Holland?? I signed up for Italy! I'm supposed to be in Italy. All my life I've dreamed of going to Italy."

But there's been a change in the flight plan. They've landed in Holland and there you must stay.

The important thing is that they haven't taken you to a horrible, disgusting, filthy place, full of pestilence, famine, and disease. It's just a different place.

So you must go out and buy new guidebooks. And you must learn a whole new language. And you will meet a whole new group of people you would never have met.

It's just a different place. It's slower-paced than Italy, less flashy than Italy. But after you've been there for a while and you catch your breath, you look around . . . and you begin to notice that Holland has windmills . . . and Holland has tulips. Holland even has Rembrandts.

But everyone you know is busy coming and going from Italy . . . and they're all bragging about what a wonderful time they had there. And for the rest of your life, you will say "Yes, that's where I was supposed to go. That's what I had planned."

And the pain of that will never, ever, ever, ever go away . . . because the loss of that dream is a very very significant loss.

But . . . if you spend your life mourning the fact that you didn't get to Italy, you may never be free to enjoy the very special, the very lovely things . . . about Holland.

Source. http://www.our-kids.org/archives/Holland.html

Handout 4

A Self-Assessment for Using Person First

Rate yourself according to the following scale. How often do you do the following?

1 = always 2 = often 3 = sometimes 4 = almost never 5 = never

1._____ Push a person's wheelchair without asking first.

2._____ Use the terms disabled or disabled person rather than person with a disability.

3._____ Say disabled or disabled person rather than person with a disability.

4._____ Use the terms handicapped, person with a handicap, handicapped bathroom, or handicapped parking.

5._____ Refer to a person who uses a wheelchair as confined to a wheelchair or wheelchair bound.

6._____ Use the term normal person versus person without a disability.

7._____ Use terms such as victim (e.g., stroke victim), stricken with XYZ, suffers from XYZ, crippled or mute.

8._____ Use the term birth defect when referring to a person who has had a disability/from birth.

9._____ Remain standing when talking to a person who uses a wheelchair.

10._____ Ignore a person with a speech delay if you cannot understand what that person is saying.

11._____ Use the term autistic child or autistic student.

12._____ Use the term arthritic or cerebral palsied.

13._____ Use the term paraplegic or quadriplegic.

14._____ Use terms such as retarded or idiot.

15._____ Ignore non-person-first language when others use it in conversation.

16._____ Ignore non-person-first language when you read it.

_____ total

With your total score, use this informal key to determine your level of expertise regarding person first.

0-15	=	You need improvement
16-30	=	You're learning!
31-45	=	You're on your way!
46-60	=	You're a conscientious user!
61-75	=	You're an expert!

Person first is a philosophy reflected through language and actions by putting the person first and the disability second. This helps focus on the individual rather than the disability. Someone is not a disability who happens to be a person but rather a person who happens to have a disability. Calling someone a disabled person focuses on that person's differences because of that disability. Some examples of the person-first philosophy include

- ✓ Refer to the person first and then the disability.
- ✓ Emphasize abilities not disabilities or limitations.
- ✓ Use the term people with disabilities rather than label people as part of a disability group such as the disabled.
- ✓ Do not patronize or give excessive praise or attention to a person with a disability.
- ✓ Give people with a disability choice and independence (e.g., having as many options as appropriate including what to eat, hear, and do) and allow individuals to speak for themselves rather than have someone speak for them.

Disability Versus Handicap

The term *disability* refers to functional limitation that interferes with a person's ability such as walking, hearing, talking, and learning. The term *handicap* refers to a situation or barrier that society and the environment imposes by not making environments accessible. . . . According to Snow (2005),

> "Handicapped" is an archaic term—it is no longer used in any federal legislation—because it evokes negative images (pity, fear, and more). The word originates from an Old English bartering game in which the loser was left with his "hand in his cap," which was thought to be a disadvantage. A legendary origin of the "H-.word" refers to a person with a disability begging with his "cap" in his hand. This antiquated, derogatory term perpetuates the stereotypical perception

> that people with disability diagnoses make up one homogenous group of pitiful, needy people!

Why Use Person First?

Person-first philosophy, displayed through language and actions, is a way of showing respect for a person with special needs. A person's attitude and respect for others is reflected in what he or she does and says through the person-first philosophy. . . . According to Snow (2005),

> Words are powerful. Old and inaccurate descriptors, and the inappropriate use of these descriptors, perpetuate negative stereotypes and reinforce an incredibly powerful attitudinal barrier. And this invisible, but potent, attitudinal barrier is the greatest obstacle facing individuals who have disability diagnoses. When people describe other people by their medical diagnosis, they devalue and disrespect them as individuals.

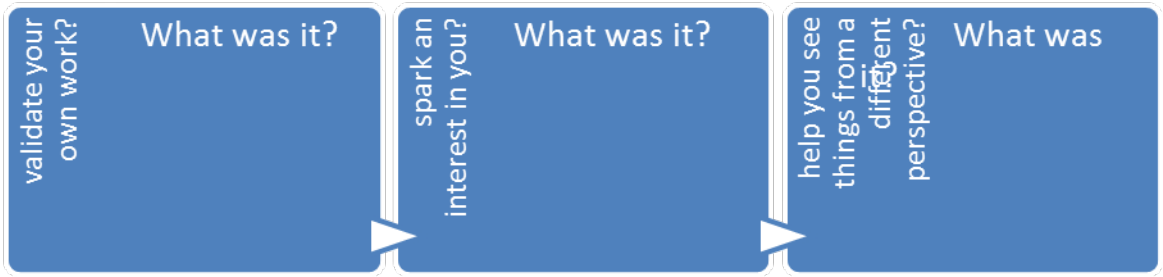
Note. This handout consists of excerpts from "How Are Your Person First Skills," by C. Russell, 2008, *Teaching Exceptional Children, 40,* 40-43. Copyright 2008 by the Council for Exceptional Children. Available from http://edua2800.pbworks.com/w/file/fetch/62397461/People%20First%20Language.pdf

Evaluation Form

Name:_____Date_____ Topic _____

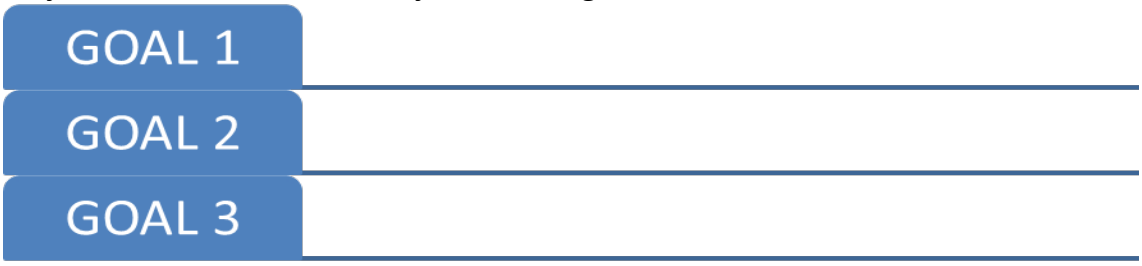
Identify Three Main Concepts or Ideas you are taking away from the workshop:

Did anything mentioned today. . .



What is one way you are going to use the information from the workshop today in your instructional practice?

List three goals you are going to make for yourself based on the topic of the workshop today. These will be reviewed at your coaching session.



October

Workshop Title: Educational Benefit for Students With Significant Disabilities

Time: 3 hours

Summary: This workshop will explore the fundamentals of programming with students who have multiple disabilities who have cognitive functioning levels below 2 years of age. It will look at all aspects of programming including learning environment, curriculum and instruction, and IEP goals. This workshop provides a justification to teachers about why and how all the aspects of general education curriculum methodology impact and apply to our students who have multiple disabilities who have cognitive functioning levels below 2 years of age. The basics of standards-based instruction are introduced such as content-based schedules and lesson planning, instruction and curriculum expectations.

Learning Objectives:

1. Participants will review educational benefit for students have multiple disabilities who have cognitive functioning levels below 2 years of age.

2. Participants will explore the paradigm shift from babysitter to teacher

3. Participants will look at ways to engage all students in an environment for learning that is inspirational and challenging.

Materials:

Handout 1: Fill-in-the-blank notes page

Handout 2: Access to the General Education Curriculum for Students With Significant Cognitive Disabilities. The Access Center: Improving Outcomes for All Students K-8 website: www.k8accesscenter.org

Handout 3: An Overview of Piaget's Stages of Cognitive Development

Handout 4: Evaluation Form

Websites:

http://quizlet.com/17338483/characteristics-of-students-with-severe-disabilities-final-flash-cards/

Resource: Students with Severe Disabilities, 2009, The McGraw-Hill Companies, Inc. academic.udayton.edu/stephenrichards/Ch_12.ppt ©

Resource: Common Characteristics of Multiple Disabilities: http://spedinsights.weebly.com/citationsreferences.html

Resource: Educational Implications of students with severe or multiple disabilities http://www.v-excel.org/topics/tp_smd.shtml

Procedure for Workshop:

A. Participants are greeted and introductions made

1. As participants sign in, PowerPoints and Handout 1 are available for them to pick up.

2. Teachers will be arranged in table groups to facilitate sharing and group interaction.

3 Set group norms.

4 Housekeeping business: breaks.

5 Goal is today is to do one of three things for each person: (a) validate what you are doing, (b) inspire you to investigate further, and (c) see things in a different way.

B. Participants will review educational benefit for students have multiple disabilities who have cognitive functioning levels below 2 years of age.

1. Activity preparation: Four sheets of poster paper are on wall around room. One says “classroom,” one says “students,” one says “curriculum,” and one says “schedule.”

   Each participant will get a marker and write a comment on each of the posters regarding their own classroom.

2. Discussion around the 4 Ps of educational benefit: Placement, Program, Participation, and Partnerships.

    a. Placement. Discussion of least restrictive environment (access to general education curriculum and access to nondisabled peers), custodial care, and restrictions on placement, skills of teacher, and continuum of settings. We refer to chart about students and discuss mainstreaming and inclusion. Participants will explore the paradigm shift from babysitter to teacher.

    b. Program

        i. Environment. Discussion about access: Assistive technology to control environment, focus on skill acquisition, schedules (refer to poster in discussion), routines, lesson plans (discuss what belongs on lesson plans), independence, peer interaction, and age-respectful.

        ii. Curriculum. Discuss different methodologies in education of students with special needs. Handout 2, read and discuss. Discuss poster about what teachers are using for curriculum in classrooms now. Handout 3, Discussion on developmental needs.

        iii. Staff attitude and behavior. Discussion around how staff attitude and behavior impacts student learning. Discuss how staff beliefs affect expectations for students.

        iv. IEP. Discussion of IDEA questions on IEP about educational benefit.

    c. Participation: Discussion on engaging all students in an environment for learning that is inspirational and challenging.

        i. Activity: Review UDL. Have participants line up into two lines facing each other and share with partner directly across from them one way that they are proud of how they engage students. Have line rotate to new partners and share again. Then discuss any new ideas that teachers can take away to engage their own students.

        ii. Demonstrate assistive technology pieces to provide access. Stations for participants to rotate through to practice with different AT devices and alternate and augmentative communication devices. Focus on fostering independence.

d. Partnerships. Discussion around interacting with other adults and building partnerships. Discussion of parent perspective and strategies to develop positive relationships with parents.

C. Review notes in fill in blank and have time for Q & A.

D. Goal setting and wrap up

1. Teachers will fill out evaluation form (Handout 4) to set three goals they want to accomplish for themselves from the workshop today.

2. Teachers will share three things they are taking away from the day based on the goals from the beginning of session: (a) validate what you are doing, (b) inspire you to investigate further, (c) see things in a different way.

Handout 1

Educational Benefit for Students With Significant Disabilities

Focus of this workshop

Get teachers to go beyond the daily routine of diapering and feeding to see a classroom with educational benefit for all students.

Presentation Objectives:

- ✓ Participants will explore the paradigm shift from providing babysitting services to educational services
- ✓ Participants will review educational benefit for all students across the entire program.

Educational Benefit

Educational Benefit = 3 Ps:

_____,_____,_____

Program. Everything happening in classroom

- ✓ If we can make the room _____ like a classroom, And if, the instructional team can begin to _____ as a classroom, Then it will _____ as a classroom

Program includes:

_____,_____,_____,_____

Environment

- Engages all students:
  - ✓ Wheelchairs and other seating systems, AT and ACC to access environment
  - ✓ Clean and orderly
  - ✓ _____ instructional setting

- ✓ Physical environment compliant with the Williams Act

Fostering Independence

Structure the environmental setting to encourage independence.

(Example: label classroom materials so that the students can access the materials independently)

Schedules: School = _____

Curriculum

- ✓ Age appropriate
- ✓ Standards based
- ✓ Lesson plans
- ✓ Differentiated instruction
- ✓ Access to community-based instruction

Standards-based instruction

School means teaching: *All students can learn regardless of severity of disability.*

- ✓ Grade-level content at functioning level of students
- ✓ Differentiated instruction

"Teaching"

- ✓ Standards-based instruction
- ✓ Standardized testing
- ✓ Creating an environment for students to "learn" that is _____

Staff

- ✓ Attitude and behavior

- ✓ Engage all students

Individualized Education Plan

- ✓ Identifies the areas of deficit for each student
- ✓ Develops plan to teach skills
- ✓ A written plan of action
- ✓ An ongoing record that ensures continuity in programming
- ✓ A plan developed, implemented and monitored

Participation: Ways to engage all students

Teachers are committed to students and their learning.

Instructional Technology

- ✓ Choose the technology that helps the individual perform the desired skills in the most effective and efficient manner.

Where do I start?

How old is student? What skills does the student have? What skills does he/she need?

Let's find a standard that will help teach that skill, Let's write a goal to work on that skill based on the standard.

Developing Standards-Based Activities

- ✓ Think about the skill in a functional context
- ✓ Task analyze the task/skill
- ✓ Work on one step at a time, build in success

A Professional Educator

The teacher's influence is, in fact, _____

Handout 2

Access to the General Education Curriculum for Students With Significant Cognitive Disabilities

Over the last few decades the curricular philosophy toward educating students with significant cognitive disabilities has evolved considerably. Browder et al. (2004) have described the various curricular trends as the developmental model, the functional curriculum philosophy, the social inclusion movement, the self-determination model, and general curriculum access.

In the 1970s the developmental model emerged and was based upon the philosophy that students with significant cognitive disabilities aged 6 to 21 should be educated with adaptations to infant and preschool curriculum (Browder et al., 2004). In essence, the student's "mental age" was used to plan the educational program, regardless of his or her chronological age. As a response to the development model, the functional curriculum philosophy emerged, promoting functional, age-appropriate skills to help develop independent living capabilities, and access to the community (Browder et al., 2004). The major life domains (vocational, home, community, and leisure) served as the foundation of the functional curriculum.

During the mid-1980s and 1990s, the social inclusion movement emerged. This movement emphasized the importance of students with significant cognitive disabilities becoming full members of their school by developing opportunities to form friendships with nondisabled peers (Browder et al., 2004). This movement tended to focus on those social skills, such as communication and turn taking, that provided opportunities for interactions with nondisabled peers, rather than learning academic skills. The self-determination model emerged during the 1990s and centered on the principle that students with significant cognitive disabilities have the right to make choices about their daily lives. This model advocated for classroom instruction in choice making and goal setting (Browder et al., 2004).

During the late 1990s, the emphasis on general curriculum access emerged, based on the principle that all students, including those with significant cognitive disabilities, should have the opportunity to learn the general curriculum in the areas of reading, math, science, and social studies (Browder et al., 2004). This philosophy stresses the use of different academic performance levels and the importance of linking functional curriculum to academic skills, regardless of placement. Therefore, all students with significant cognitive disabilities must be taught grade-level academic content that is

based upon alternate achievement standards and must be assessed on their progress via state alternate assessments. Alternate achievement standards set substantially different expectations for student mastery of grade-level content because the content is more restricted in scope or complexity and may take the form of introductory or prerequisite skills (U.S. Department of Education, 2005). However, the content must be clearly related to grade-level content (U.S. Department of Education, 2005).

The mandates of IDEA '97 and IDEA '04 have been a major impetus of general curriculum access, since these laws require that every child with a disability has

- A statement describing how the child's disability affects the child's involvement with and progress in the general curriculum
- A statement of measurable goals to enable the child to be involved with and progress in the general curriculum; and
- A statement of the services, program modifications, and supports necessary for the child to be involved in and progress in the general curriculum.

In addition, the No Child Left Behind Act of 2001 (NCLB) is designed to ensure that schools are held accountable for educational results so that each and every student can achieve to high standards (U.S. Department of Education, 2005). This legislation has emphasized a more academic curriculum for students with significant cognitive disabilities; however, the important lessons that have been learned from each of the previous curriculum trends should still guide people's thinking in relation to access to the general curriculum. These important lessons include the following:

- Developmentally appropriate practices that utilize age-appropriate materials and activities while addressing students' current characteristics and emerging skills still play a part in the education of students with disabilities.
- Opportunities to learn functional skills remain a high priority for this population of students, but functional skills can, in reality, be taught most effectively within the context of natural routines using appropriate cues and consequences; there is functionality in academic skills.
- Self-determination (choice making, goal setting) focused attention on teaching students to make choices about learning, participate in goal setting, and evaluate themselves. These skills appear to make a difference in their post-school life.
- Continued efforts to refine our perception of curriculum for students with moderate, severe, and profound disabilities to include those skills, including academic, that make students more successful in current and future social, community, and work environments (National Alternate Assessment Center, 2005).

Therefore, teachers should retain the important lessons and characteristics from the previous curriculum trends and integrate these useful components within general curriculum access so that there are higher academic skill expectations for students with significant cognitive disabilities. This next section of the brief explores the linkage between alternate state standards, alternate assessment, the IEP, and classroom instruction and assessment as the process of providing access to the general education curriculum for students with significant cognitive disabilities. Figure 1 illustrates the relationship among alternate content standards, curriculum and instructional activities, IEP objectives, and classroom and alternate assessment.

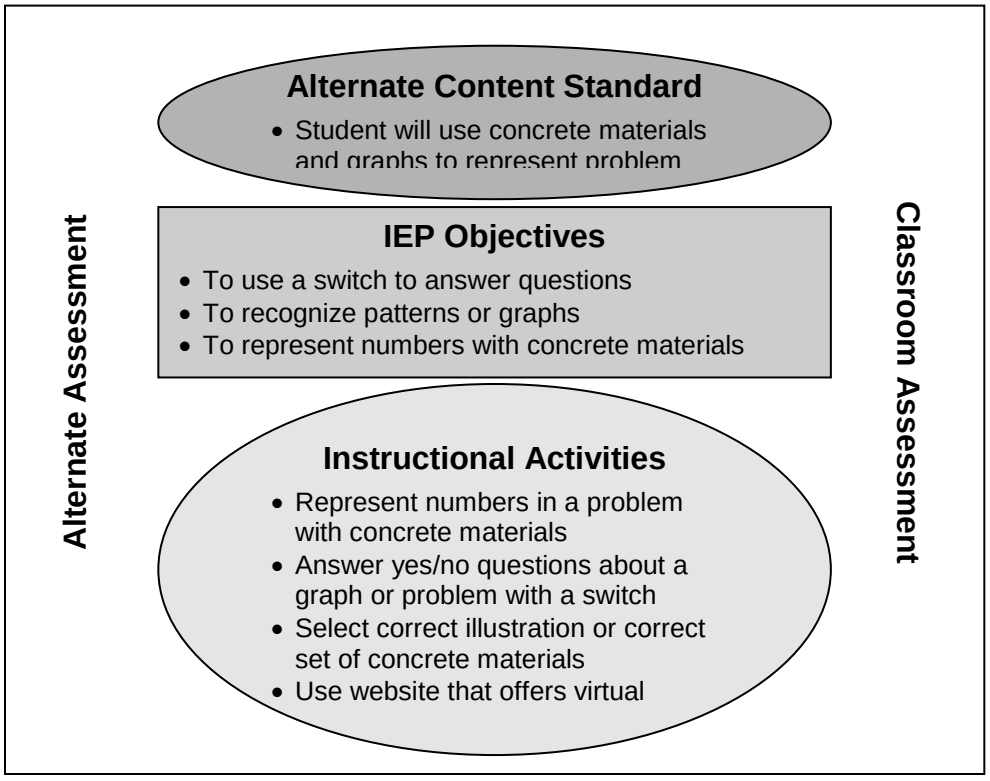


Figure 1. Access to general education curriculum for students with significant cognitive disabilities.

As Figure 1 depicts, access to the general education curriculum for students with significant cognitive disabilities begins with the state alternate content standards. Some states have extended the regular standards to the essence of each grade-level standard in math and reading and include descriptors for each level. These alternate content standards should be used to develop challenging IEP objectives and curriculum and instructional activities for students with significant cognitive disabilities. Classroom assessment and

the statewide alternate assessment use work samples and teacher ratings to determine the proficiency level of each student to measure how well the student has learned each standard. Therefore, the IEP and curriculum instructional activities for students with significant cognitive disabilities should be aligned with the alternate content standards, since this is what the alternate assessment measures.

Let's begin by examining the link between alternate content standards, the IEP, and curriculum and instructional activities in more detail using a sixth-grade math standard from one state (Students are able to use concrete materials, graphs, and algebraic statements to represent problem situations) to see how to provide access for students with significant cognitive disabilities. This state extended this standard for students with severe disabilities to Students will use concrete materials and graphs to represent problem situations. Some of the descriptors for this alternate content standard include the following:

- Students are able to select the correct illustration or set of concrete materials,
- Students are able to count the items used to make a ratio,
- Students are able to use concrete materials or select a graph that represents the problem situation,
- Students are able to write simple algebraic expressions involving addition or multiplication using whole numbers, and
- Students are able to solve simple algebraic expressions involving addition or multiplication using whole numbers.

The content of the IEP for students with significant cognitive disabilities should be based upon access to the general education curriculum and not based exclusively on a functional curriculum (U.S. Department of Education, 2005). In other words, students with significant cognitive disabilities can reach higher levels of achievement by linking their learning, which is documented in the IEP, to the standards our society expects of all students (Thompson, Quenemoen, Thurlow, & Ysseldyke, 2000). Given the importance the IEP has in determining what students with significant cognitive disabilities should learn, it is essential that the IEP process merges with the development of standards-based curricula and assessment (Kleinert & Farmer-Kearns, 2001).

To merge the IEP process with the development of standards-based curriculum, a curriculum decision-making model which promotes access to and progress in the general curriculum, will be utilized. The model that will be described was developed by Wehmeyer, Lattin, and Agran (2001). This curriculum decision-making model begins with the general curriculum, taking into account individual student needs, and emphasizes three levels of curricular modifications:

- **Curriculum adaptation:** modification to the presentation and representation of and the ways in which students engage in and with the curriculum (e.g.,

changing font size in a text, changing large amounts of text to an outline or pictures, using concrete objectives to represent numbers)

- **Curriculum augmentation**: enhancing or expanding the curriculum to teach students strategies or methods to impact and improve their capacity to succeed within the curriculum (e.g., adding lessons teaching students to self-instruct)
- **Curriculum alteration**: changing the general curriculum in some way so as to address unique or more functional knowledge and skill content areas. (Wehmeyer et al., 2001)

The model assumes that students will vary according to the degree to which curriculum modifications are necessary. However, for students with severe disabilities, augmenting the general curriculum by adding content to enable learners to succeed within the curriculum, is a necessary bridge between adaptations and altered curricula (Wehmeyer et al., 2001). When making decisions about adaptations, augmentation, and alteration, both the content and curricular demands, as well as the needs and strengths of the student, must be considered. Figure 2 depicts the decision-making process.

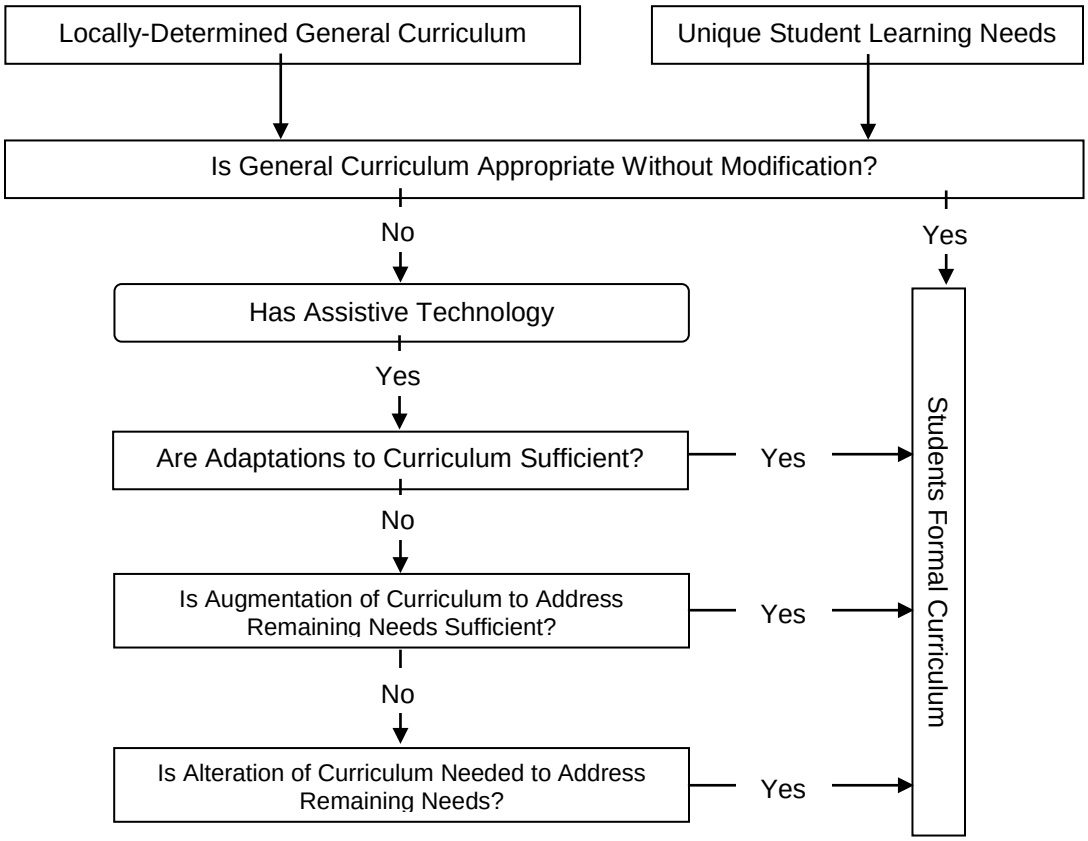


Figure 2. Model to gain access to the general curriculum. From "Achieving Access to the General Curriculum for Students With Mental Retardation: A Curriculum Decision-Making Model," by M. Wehmeyer, D. Lattin, and M. Agran, 2001, *Education and Training in Mental Retardation and Developmental Disabilities, 36*(4), 327.

The process begins by asking the question, "Is the general curriculum, which includes the state alternate content standards, adequate to meet the student's instructional needs?" For most students with significant cognitive disabilities, the response will most likely be either "no" or a qualified "yes," with some components of the general education curriculum adequate while others are inadequate to meet the student's unique needs. If there are any aspects of the general curriculum identified as appropriate without modifications, these should be identified as a portion of the student's curriculum and reflected within the IEP's content.

The next decision to consider is whether the use of assistive technology may help to make the curriculum and alternate content standards more appropriate. Those aspects of the general education curriculum that become appropriate through the use of assistive technology then become part of the student's formal curriculum. Then, consider how the general curriculum can be adapted. Curriculum adaptations are changes in how the material is represented (e.g., pictures instead of large text, summaries of the main ideas), presented (e.g., audiotape for nonreaders, web-based information that can be read through text-reader programs), or how a student is engaged with the curriculum (e.g., expresses ideas through artwork instead of written format). Some form of curriculum adaptations will enable most learners to gain access to components of the general education curriculum that may not have been accessible to them before. These components become part of the student's curriculum, and the IEP should contain content to reflect this.

The next step is to consider the degree to which the curriculum can be augmented to provide access. The augmentation process does not change the curriculum, but rather adds to or expands the curriculum to teach or provide students with strategies to succeed in the curriculum. Some examples of how the curriculum can be augmented for students with significant cognitive disabilities include self-regulation strategies, self-management strategies, and self-determination. Self-regulation strategies enable individuals to examine their environments and their repertoires of responses for coping with those environments to make decisions about how to act. These strategies also help students evaluate the desirability of outcomes of their actions, and revise their plans as necessary (Wehmeyer et al., 2001).

Self-management strategies are designed to teach students with significant disabilities how to manage their own behavior. Self-determination focuses upon student control or direction over the learning process. A focus upon self-determination will include efforts to enhance goal-setting, problem-solving and decision-making skills, as well as self-awareness, self-advocacy, and leadership skills. Content within the IEP should reflect any augmentation in the curriculum.

The final step in this decision-making process is to consider if the student's educational program is complete with the previous steps, or whether there is need to add content to the student's curriculum that is not found in the general curriculum. This step provides the means to address the unique needs of the student, which may be more functional, and these should also be documented within the IEP.

Once an IEP has been developed based on the alternate content standards and access to the general education curriculum, the teacher can use the IEP objectives to develop challenging curriculum and instructional activities. In the example presented in Figure 3, the following IEP objectives are relevant to the alternate content standard (Students will use concrete materials and graphs to represent problem situations):

- To use a switch to answer questions
- To recognize patterns or graphs
- To represent numbers with concrete materials.

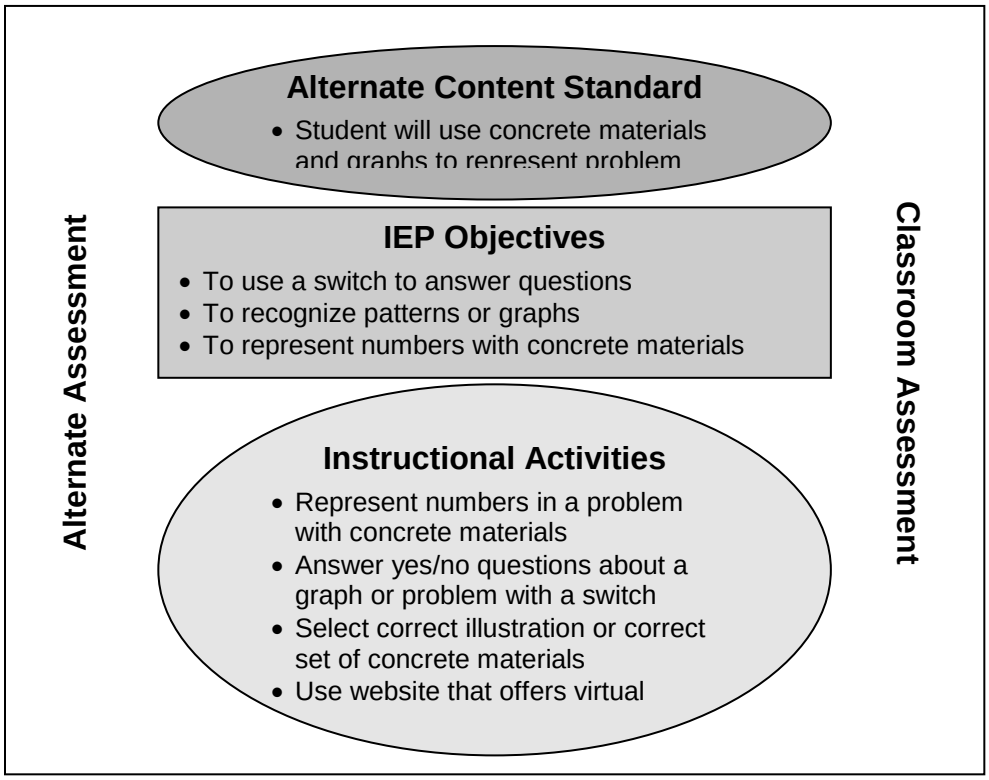


Figure 3. Access to general curriculum for students with significant cognitive disabilities, algebra Grade 6.

To develop the curriculum and instructional activities, the teacher identifies the concepts, skills, and specific knowledge all students are meant to acquire within an instructional unit that relate to each standard. Then, a prioritized subset for students with significant cognitive disabilities can be selected. During the instructional planning process, the teacher considers the typical supports identified on the student's IEP (e.g., assistive technology) and the IEP objectives. The key to accessing general curriculum standards

for students with disabilities is designing instructional activities that require students to demonstrate authentic or real-life performances (Kleinert & Kearns, 2001).

Students with significant cognitive disabilities can gain access to general curriculum standards in four ways (Kleinert & Kearns, 2001). First, some students with significant cognitive disabilities may demonstrate a particular standard exactly as written. Second, students with significant cognitive disabilities may gain access to the standards through an alternate form (e.g., same level of cognition but a different response format). Third, some students with significant disabilities may demonstrate a particular standard by completing the critical function of the standard but at a lower complexity level. Fourth, some students with significant disabilities may gain access to the standard through access skills. This means that students work on very basic skills that are embedded in standards-based activities. A resource that highlights many examples of activities that articulate standards and critical or access skills is called TASKS: Teaching All Students in Kentucky Schools (1998), developed by Dyer and Kearns. It can be accessed at http://www.ihdi.uky.edu/ksc%2Dtasks/.

In the example presented in Figure 3, a teacher may have students do any of the following activities to represent problem situations:

- Represent numbers in a problem with concrete materials.
- Answer yes/no questions about a graph or problem with a switch.
- Select correct illustration or correct set of concrete materials.
- Use website that offers virtual manipulatives (see appendix) and software that supports virtual manipulatives (e.g., IntelliMathics, IntelliTools) to manipulate the tools and/or illustrate graphs or patterns.

To minimize the time this planning process takes, teachers may find it helpful to create a menu of support ideas to be utilized across instructional activities. For example, when a class is completing a worksheet, the student with a significant cognitive disability could match picture symbols to vocabulary words. For a list of other ideas to develop a menu of support ideas, see Denham (2004), which can be downloaded from http://www.ihdi.uky.edu/IEI/.

There is evidence that students with significant cognitive disabilities can learn academics (Browder & Flowers, 2004). Teachers who have incorporated learning standards into their instruction cite unanticipated gains in students' performance and understanding levels. Furthermore, some individualized social, communication, motor, and self-help skills can be practiced during activities based on the learning standards (Massachusetts Department of Education, 2005).

The final component of access to the general education curriculum for students with severe disabilities is assessment. As Figures 3 illustrates, classroom assessment and statewide alternate assessment measure the state alternate content standards, IEPs, and curriculum and instructional activities. What is taught should align with what is assessed. Instruction represents the process by which students learn the standards, while assessment (alternate and classroom) is the process for measuring how well the student has learned what has been taught (e.g., alternate content standards). Thus, this forms an integrated system of standards and assessment, as shown in Figure 4.

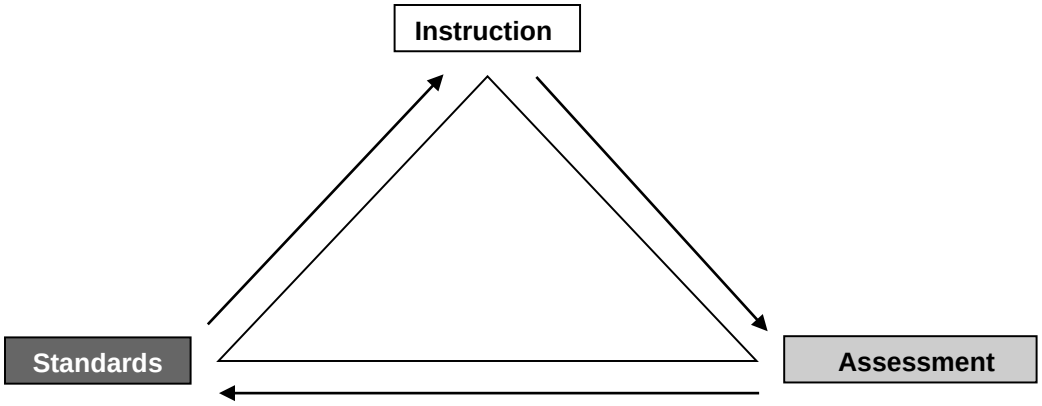


Figure 4.

Classroom assessment (e.g., instructional data, work samples, and videotapes) provides rich data sources from which to document skill acquisition and access to the general curriculum for students with significant cognitive disabilities. Organizing these data in a portfolio allows the student, his or her family, and the teacher to see tangible evidence of progress and performance, which should be used to guide instructional decisions. Moreover, these data can also be used for the alternate assessment. It has been found that there is a significant positive correlation between alternate assessment scores and students' growth on their IEP skills (Browder, Karvonen, Davis, Fallin, & Courtade-Little, 2005). This means that if teachers collect data that can be used for alternate assessment and instructional decision making, the time spent on the assessment has the potential to enhance the instructional effectiveness (Browder et al., 2005). The data collected for alternate assessment can bring instructional focus and clarity to a student's program (Kleinert & Kearns, 2001). Thus, alternate assessment can become an instructional organizer for the student's overall program as well as a way of showcasing the student's important learning outcomes (Kleinert & Kearns, 2001).

In sum, this brief has defined access to the general education curriculum for students with significant cognitive disabilities through the alignment of alternate content standards, IEP objectives, curriculum and instructional activities, and classroom and alternate assessment. Educational programs for students with significant cognitive disabilities must be based on academic content and should not be solely based upon a functional curriculum. Thus, alternate content standards should be used when developing IEPs and instructional activities for students with significant cognitive disabilities.

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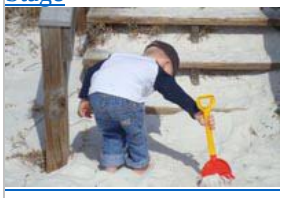
Note. This handout was adapted from "Access to the General Education Curriculum for Students With Significant Cognitive Disabilities," by J. Hauser, project officer, The Access Center, Improving Education for All Students K-8 (U.S. Department of Education Grant #H326K020003). Washington, DC: The Access Center.

Handout 3

An Overview of Piaget's Stages of Cognitive Development

Jean Piaget's theory of cognitive development suggests that children move through four different stages of mental development. His theory focuses not only on understanding how children acquire knowledge but also on understanding the nature of intelligence.

Stage	Age	Characteristics	Developmental Changes
Sensorimotor Stage 	Birth to 2 Years	The infant knows the world through their movements and sensations.	Infants learn that things continue to exist even though they cannot be seen (object permanence). They are separate beings from the people and objects around them. They realize that their actions can cause things to happen in the world around them. Learning occurs through assimilation and accommodation.
Preoperational Stage 	2 to 7 Years	Children begin to think symbolically and learn to use words and pictures to represent objects. They also tend to be very egocentric, and see things only from their point of view.	Children at this stage tend to be egocentric and struggle to see things from the perspective of others. While they are getting better with language and thinking, they still tend to think about things in very concrete terms.
Concrete Operational Stage 	7 to 11 Years	During this stage, children begin to thinking logically about concrete events.	They begin to understand the concept of conservation; the amount of liquid in a short, wide cup is equal to that in a tall, skinny glass. Thinking becomes more logical and organized, but still very concrete. Begin using inductive logic, or reasoning from specific information to a general principle.
Formal Operational Stage 	12 and Up	At this stage, the adolescent or young adult begins to think abstractly and reason about hypothetical problems.	Abstract thought emerges. Teens begin to think more about moral, philosophical, ethical, social, and political issues that require theoretical and abstract reasoning. Begin to use deductive logic, or reasoning from a general principle to specific information.

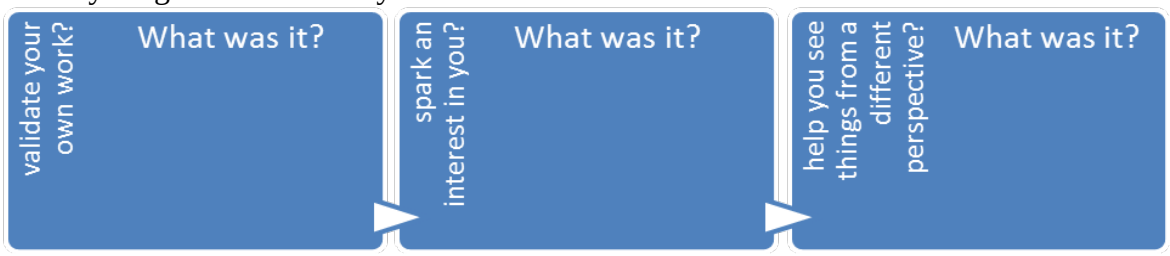
Note. From http://psychology.about.com/od/behavioralpsychology/l/bl-piaget-stages.htm

Evaluation Form

Name:_____ Date_____ Topic_____

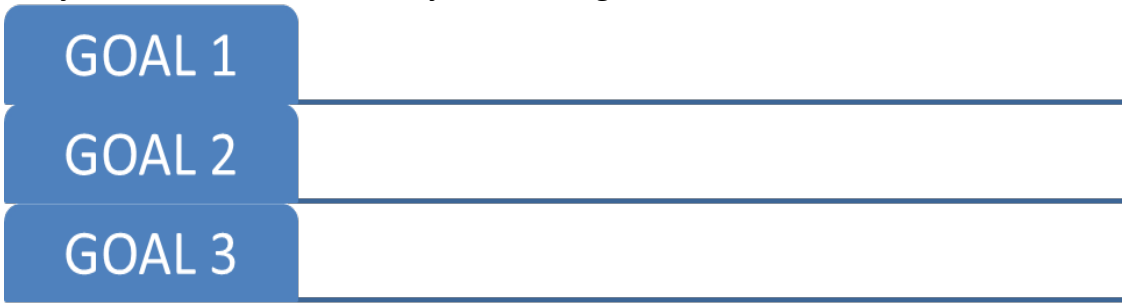
Identify Three Main Concepts or Ideas you are taking away from the workshop:

Did anything mentioned today. . .



What is one way you are going to use the information from the workshop today in your instructional practice?

List three goals you are going to make for yourself based on the topic of the workshop today. These will be reviewed at your coaching session.



November

Workshop Title: Making Common Core Literacy Accessible for Students With Significant Cognitive Disabilities

Time: 3 hours

Summary: This workshop will introduce the components of accessible literacy for students with significant cognitive disabilities. It will review the importance of using assistive technology for students who have limited motor skills.

Learning Objectives:

1. Participants will learn how to create a learning environment that enhances learning opportunities for all students through assistive technology.

2. Participants will learn how to make grade-level-appropriate materials for students.

3. Participants will learn how to apply skills to lessons in the classroom with academic content

4. Participants will gain knowledge of available devices to support literacy for students with limited motor movement.

Materials:

Handout 1: Literacy Experiences Summary

Handout 2: Literacy and Significant Disabilities—Websites, Blogs, Wikis, and Nings

Handout 3: Evaluation Form

Resources:

Research-Based Practices for Creating Access to the General Curriculum in Reading and Literacy for Students with Significant Intellectual Disabilities, http://www.ccsso.org/Documents/2009/Research_Based_Practices_Reading_2009.pdf

Core vocabulary words—Karen Erickson: http://www.med.unc.edu/ahs/clds/files/corevocab.pdf; http://www.med.unc.edu/ahs/clds/resources/core-vocabulary

Switch Accessible Software

Laureate Learning Systems: http://www.laureatelearning.com
MarbleSoft: http://www.marblesoft.com
Inclusive Technology: http://www.inclusive.co.uk/
Priory Woods – FREE: http://www.priorywoods.middlesbrough.sch.uk/
TarHeel Reader–FREE: http://tarheelreader.org/
http://www.sillybooks.net/

The Center for Literacy and Disability Studies: http://www.med.unc.edu/ahs/clds/about-1

Websites:

Louisiana Assistive Technology Initiative
(http://www.louisianaschools.net/divisions/specialp/assistive_technology.html)

The Communication Matrix (http://www.communicationmatrix.org/)

Louisiana Assistive Technology Access Network (http://www.latan.org/)

AAC Institute (http://www.aacinstitute.org/)

International Society for Augmentative and Alternative Communication
(http://www.isaac-online.org/english/home)

AAC Intervention (http://www.aacintervention.com/)

National Consortium on Deaf-Blindness (http://nationaldb.org/index.php)

Communication Bill of Rights (http://www.asha.org/NJC/bill_of_rights.htm)

Procedure for Workshop:

A. Participants are greeted and introductions made.

1. As participants sign in, PowerPoints and handouts are available for them to pick up.

2. Teachers will be arranged in table groups to facilitate sharing and group interaction.

3 Set group norms.

4 Housekeeping business: breaks.

5 Goal is today is to do one of three things for each person: (a) validate what you are doing, (b) inspire you to investigate further, and (c) see things in a different way.

B. Participants will learn how to create a learning environment that enhances learning opportunities for all students through assistive technology.

1. Discussion about assistive technology—go through types of technology.

2. Participants will gain knowledge of available devices to support literacy for students with limited motor movement.

   a. Single message and multiple message devices

   b. Curriculum tools like All-Turn-It Spinner

C. Participants will learn how to apply skills to lessons in the classroom with academic content

1. Sample literacy lesson using assistive technology to encourage access and participation of students.

2. Participants will learn how to make grade-level-appropriate materials for students.

   a. Grade-level-appropriate standards-based lesson for teachers to make and adapt for use in classroom next day.

   b. Give teachers grade-level-appropriate story. Participants will learn how to create adapted books.

D. Resources and websites

1. Go through Literacy Summary Form. How to fill it in and use it for planning literacy activities.

2. Go through resources handout.

E. Goal setting and wrap up

1. Teachers will fill out evaluation form (Handout 3) to set three goals they want to accomplish for themselves from the workshop today.

2. Teachers will share three things they are taking away from the day based on the goals from the beginning of session: (a) validate what you are doing, (b) inspire you to investigate further, and (c) see things in a different way.

Handout 1

Literacy Experiences Summary

This document is intended to provide a snapshot of the student's literacy experiences through the school year. Several blocks are purposely left blank, so that the team can summarize information that will provide additional support for the next team working with this student.

Topic	Student Information
Interests Related to Literacy (Indicate student interests that can be tapped to support reading and writing. Note that sensitivity to age-appropriateness is important.)	
Literacy Programs (List literacy programs in which the student has been instructed, and describe success. Since the next team may not know this program, provide a website link, address, etc.)	
Literacy Partners Each Week (List the # of literacy partners the student has for reading and writing in a typical week, and list the type of partners, peers, para, etc.)	
Self-Selected Reading (Indicate the types of books the student selects, how long s/he stays engaged, etc.)	
Listening to Books (Describe level of engagement, types of books that sustain interest, ways in which the student accesses audio books, etc.)	
Writing: Topic Selection (Describe how this student selects topics for writing/how student is prompted; see 1-Minute Writing Checklist for ideas)	
Assistive Technology for Literacy (Describe AT that has been successful for this student; ex.: Neo, Step-by-Step for sharing stories; Big Mac for saying "that's the one" when selecting topics; light tech boards)	
Alternative Pencils Tried (Describe alternative pencils that have been tried with this student, and document success; for more info, see Access Guide website)	
Other (specify) (examples might include opportunities for oral expression such as presentations)	

Note. From Caroline Musselwhite (2010) for L.A. Department of Education, revised July 2012. http://sda.doe.louisiana.gov/Site%20Pages/LiteracyView.aspx

Handout 2

Literacy and Significant Disabilities: Websites, Blogs, Wikis, and Nings

AAC Intervention: www.aacintervention

This website is developed and maintained by Julie Maro and Caroline Musselwhite. The most important feature is the Tip of the Month. Many tips feature ideas for supporting literacy learning for students with significant disabilities (e.g., Accessible Book Launcher, Phoneme Isolation, 12 Texts a Day).

AllTogether: http://alltogether.wordpress.com/

Sam Sennott's blog is a fantastic source for information about Augmentative and Alternative Communication, Assistive Technology, Inclusion, Literacy Instruction, Specialized Instruction, and Universal Design for Learning. His posts are always succinct, innovative, and thought-provoking. For example . . . a talking word wall with Apple OS . . . a very fun Hannah Montana book to download . . . and the power of connecting video to reading and writing.

Assistive Tech Social Networking Site: http://assistivetech.ning.com

This "ning" (social networking site) is host to several groups in the area of assistive technology, including Literacy in AAC. This is a great place to post a question about literacy and disabilities, and get some amazing and insightful ideas.

Center for Literacy and Disability Studies: www.med.unc.edu/ahs/clds/

This site is home to up-to-date research on the area of literacy for students with significant disabilities. The "Projects" link leads to videos and downloads for exemplary projects such as Demonstration Classrooms for Students with Deaf-Blindness, Route 66, and Project Converge. Be sure to check out the resources for white papers and additional materials.

First 1,000 Words: http://www.duboislc.org/EducationWatch/First100Words.html

Presents the first 1,000 words in reading, 100 at a time.

Free Resources from the Net for (Special) Education: http://paulhami.edublogs.org

This blog by Paul Hamilton offers great nuggets for supporting literacy. For example, recent posts include: *MyClusta*, a start page that allows the teacher to set icon-based links to frequently visited software; and *Pic-Lits*, a site that offers great photos and a place for an instant word bank (or freewriting). And those are just December ideas!

Maryland Assistive Technology Network Online: http://matnonline.pbwiki.com/

The goal of this wiki is to provide educators in Maryland (and beyond!) with resources to support the education of all students in a Universally Designed for Learning Classroom and to support students with disabilities with the use of Assistive Technology.

Maximizing the Literacy Skills of Individuals who Require AAC: Maximizing the Literacy

This link will take you directly to a webcast by Dr. Janice Light. From this page, you can also link to a number of other research projects, all part of the AAC RERC, collaborative research group supporting people who use AAC.

Paul V. Sherlock Center on Disabilities: http://www.ric.edu/sherlockcenter/wwslist.html

This website provides a list of Adapted Literature available through the Sherlock Center Resource Library. These resources are provided for teachers to help students with severe disabilities participate in the general curriculum.

Tar Heel Reader: http://tarheelreader.org/

This site presents an ever-growing list of books that have been written for (and sometimes with or by) students with significant disabilities. Books are free and can be accessed online (with speech enabled), or downloaded as slide shows in PowerPoint, Impress, or Flash format. Books can be searched by topic (alphabet, history, sports), audience rating, or type (conventional, transitional, other).

Teaching All Students: http://teachingall.blogspot.com/

This blog by Patrick Black provides a nice synthesis of blogs and websites, some techie references, as well as Patrick's insights. The blog also inspires some spirited and interesting conversations between bloggers.

Teaching Every Student: http://teachingeverystudent.blogspot.com

This blog by Karen Janowski is a lovely combination of theoretical discussions and resource listings, with smart ideas of WHY we would take the time to download and use high tech supports. While the blog favorite is "Free Technology Toolkit for UDL in All Classrooms," my personal favorite is "What Did You Do Over the Weekend," with innovative ways to support students in journaling.

Teaching Learners with Multiple Needs: http://teachinglearnerswithmultipleneeds.blogspot.com/

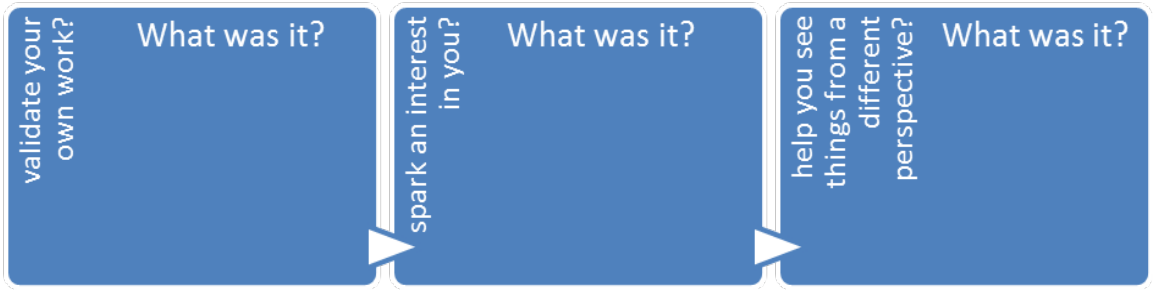
While this blog isn't dedicated to literacy needs, it IS dedicated to the needs of students with "severe, profound, intensive, significant, complex or multiple special needs." Kate Ahern does a fantastic job of sharing information about no tech, light tech, and high tech supports for students. Many of these supports will scaffold literacy learning. She also provides links to scores of other sites, so her blog becomes a great "jumping-off point."

Evaluation Form

Name:_____ Date_____ Topic_____

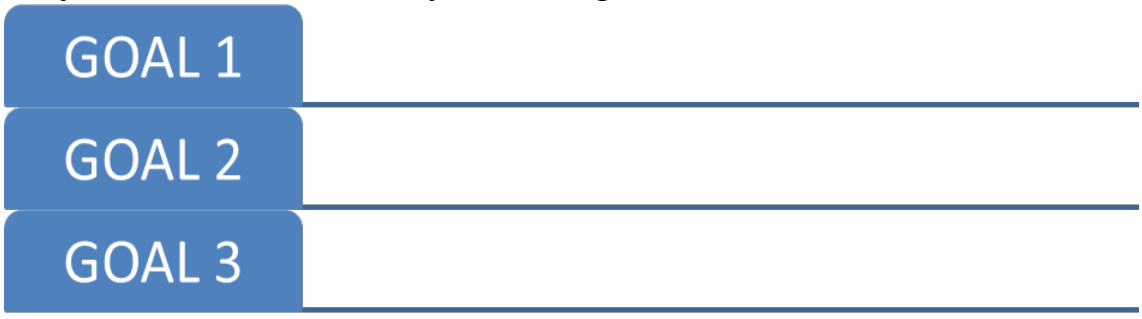
Identify Three Main Concepts or Ideas you are taking away from the workshop:

Did anything mentioned today. . .



What is one way you are going to use the information from the workshop today in your instructional practice?

List three goals you are going to make for yourself based on the topic of the workshop today. These will be reviewed at your coaching session.



January

Workshop Title: Making Common Core Mathematics Accessible for Students with Significant Cognitive Disabilities

Time: 3 hours

Summary: This workshop will introduce the components of accessible mathematics for students with significant cognitive disabilities. It will review the importance of using assistive technology for students who have limited motor skills.

Learning Objectives:

1. Participants will learn how to create a learning environment that enhances learning opportunities for all students through assistive technology.

2. Participants will learn how to take grade-level-appropriate materials and adapt the abstract math concept to a concrete manipulative activity for students.

3. Participants will learn how to differentiate the math concept to multiple levels of understanding.

Materials:

Handout 1: Concrete-Representational-Abstract Instructional Approach

Handout 2: Evaluation Form

Resources:

Hofmeister, A. (2009). Counting objects 1-10 A program for teaching one-to-one correspondence and counting objects in random order. Retrieved from http://www.updc.org/assets/files/resources_by_topic/sig_disabilities/counting_objects/UPDC_Counting_Objects_Book.pdf

Myers, C. (2008, December 2). *Math 4 students with significant cognitive disabilities.* Presentation to Utah State Office of Education's Significant Disabilities Focus Group, Utah State University. The presentation is a thought provoking discussion on math instruction for students with significant cognitive disabilities. Retrieved from http://updc.org/math-4-students/

Obukowicz, M. (2009). Chapter 8: Assistive technology for mathematics. In *Assessing students' needs for assistive technology.* Retrieved from http://www.wati.org/content/supports/free/pdf/Ch8-Mathematics.pdf

Palm Beach County School District. (n.d.). *Teaching strategies for students with disabilities.* Department of Exceptional Student Education. Retrieved from http://www.palmbeachschools.org/ese/documents/teachingstrategiesandrespondingtodiverselearnerneeds.docx

Ross-Brown, K., & Satterfield, B. (2013). Standards-based math instruction for students with intellectual disabilities. Retrieved from http://www.gatfl.gatech.edu/tflwiki/images/4/48/TFL_CREATE_Standards_Math_Webinar_Jan_2013_FINAL_2.pdf

Sarathy, P. (2012, April). Access and attain: Active learning for students with severe and multiple disabilities. Presentation at the CEC International Conference, Denver. Retrieved from http://web.utk.edu/~dphmd/sarathy_accessattain_2012

Procedure for Workshop:

A. Participants are greeted and introductions made.

    1. As participants sign in PowerPoints and handouts are available for them to pick up.

    2. Teachers will be arranged in table groups to facilitate sharing and group interaction.

    3 Set group norms.

    4 Housekeeping business: breaks.

    5 Goal is today is to do one of three things for each person: (a) validate what you are doing, (b) inspire you to investigate further, and (c) see things in a different way.

B. Participants will learn how to create a learning environment that enhances learning opportunities for all students through assistive technology.

    1. Discussion about Assistive Technology—go through types of technology.

    2. Participants will gain knowledge of available devices to support mathematics for students with limited motor movement.

a. Single message and multiple message devices

b. Curriculum tools like All-Turn-It Spinner

C. Participants will learn how to apply skills to lessons in the classroom with academic content.

1. Discussion of Handout 1: Concrete-Representational-Abstract Instructional Approach, and application to students with multiple disabilities who have cognitive functioning levels below 2 years of age.

2. Sample mathematics lesson using Assistive Technology to encourage access and participation of students.

3. Participants will learn how to make grade-level-appropriate materials for students.

a. Grade-level-appropriate standards-based lesson for teachers to make and adapt for use in classroom next day.

D. Resources and websites.

Go through resources.

E. Goal setting and wrap up.

1. Teachers will fill out evaluation Form (Handout 2) to set three goals they want to accomplish for themselves from the workshop today.

2. Teachers will share three things they are taking away from the day based on the goals from the beginning of session: (a) validate what you are doing, (b) inspire you to investigate further, and (c) see things in a different way.

Handout 1

Concrete-Representational-Abstract Instructional Approach

What Is the Concrete-Representational-Abstract (CRA) Instructional Approach?

CRA is an intervention for mathematics instruction that research suggests can enhance the mathematics performance of students with learning disabilities. It is a three-part instructional strategy, with each part building on the previous instruction to promote student learning and retention and to address conceptual knowledge. The CRA instructional sequence consists of three stages: concrete, representation, and abstract:

- *Concrete.* In the concrete stage, the teacher begins instruction by modeling each mathematical concept with concrete materials (e.g., red and yellow chips, cubes, base-ten blocks, pattern blocks, fraction bars, and geometric figures).
- *Representational.* In this stage, the teacher transforms the concrete model into a representational (semiconcrete) level, which may involve drawing pictures; using circles, dots, and tallies; or using stamps to imprint pictures for counting.
- *Abstract.* At this stage, the teacher models the mathematics concept at a symbolic level, using only numbers, notation, and mathematical symbols to represent the number of circles or groups of circles. The teacher uses operation symbols (+, –, ×, ÷) to indicate addition, multiplication, or division.

Concrete. The "doing" stage using concrete objects to model problems

Representational. The "seeing" stage using representations of the objects to model problems

Abstract. The "symbolic" stage using abstract symbols to model problems

CRA supports understanding underlying mathematical concepts before learning "rules," that is, moving from a concrete model of chips or blocks for multiplication to an abstract representation such as 4 x 3 = 12.

Research-based studies show that students who use concrete materials develop more precise and more comprehensive mental representations, often show more motivation and on-task behavior, understand mathematical ideas, and better apply these ideas to life situations (Harrison & Harrison, 1986; Suydam & Higgins, 1977). Some mathematical concepts for which structured concrete materials work well as a foundation to develop understanding of concepts are early number relations, place value, computation, fractions, decimals, measurement, geometry, money, percentage, number bases, word problems, probability, and statistics.

What Does CRA Look Like?

The CRA sequence of instruction provides a graduated and conceptually supported framework for students to create a meaningful connection among concrete, representational, and abstract levels

of understanding. Beginning with visual, tactile, and kinesthetic experiences to establish understanding, students expand their understanding through pictorial representations of concrete objects and move to the abstract level of understanding.

Reading and Writing Fractions

Once fraction concepts are understood as "part of a whole," students can practice the steps involved in reading and writing fractions. A variety of physical materials can be used to show the meaning of a fraction as "part of a whole." For example, fraction cubes, counters, fraction bars, or geometric shapes can indicate a fraction (e.g., 3 red cubes [part] out of the 5 cubes [whole], the total number of cubes). Representations and numeric symbols of the fraction can develop the skills of reading and writing fractions. The abstract stage is developed by writing a numeric symbol of the number of squares or parts of the whole in correct fraction form. This step involves the order in which digits should be read or written. For a fraction, which number is (represented) written on the top? Which number is (represented) written on the bottom?

A teacher should repeat the process as illustrated above with different numbers until the child independently can read and write the numbers for a fraction.

Reading and Writing Decimals

Children also may have difficulty interpreting written decimals and correctly attaching tenth, hundredth, and other decimal names. A meaningful way to help the student become functionally independent with writing decimals is to present decimals with visual aids and relate them to the familiar fractional notation.

The following example illustrates a technique for helping students with learning disabilities read and write decimals by relating them to fractions. Children should have a firm understanding of fraction as part of a whole and be able to read and write fractions. In addition, children should have previous experience working with blocks and graph paper.

***Goal*:** To read and write decimals (initial understanding of decimal place value)

***Materials*:** Three blocks representing 1 whole (hundreds block), 1 tenth (tens block), 1 hundredth (ones block), and paper to write on.

***Teacher*:** "Today we will be working with blocks to read and write decimals." (Place the three blocks in front of student. Help student say and write the correct symbol for each. You may refer to the color cueing in the previous example to help student write the correct notation.)

"Here is the hundreds block. It is one whole block divided into 100 parts. Please write a 1 under this block."

"Here is another block. Does this match one side of the whole block? (Yes) How many parts is this block divided into? (10) We call this block 'one-tenth.' Can you say 'one-tenth'? Now write

$\frac{1}{10}$ under this block as a fraction." (Teacher should write the words under the fractions for children with auditory discrimination deficits to distinguish the difference between ten and tenths. Color cueing the "this" may also help student visually note the difference.)

***Concrete*:** Practice with several blocks, saying the meaning and writing the fractions. Example: Show 1 hundreds block, 2 tens blocks and 3 ones blocks. Child should say and write the correct fraction. The child shows the model that represents the fraction. Example: write: $\frac{4}{10}$ and $\frac{5}{100}$. The child should say and show you the correct number of blocks.

"The last block looks like a cube. Is it part of the whole block also? (Yes) How many parts was the whole divided into? (100) So we call this one part of a hundred 'one hundredth.' Can you say 'one-hundredth'? Now write $\frac{1}{100}$ under the cube as a fraction."

How many parts was the whole divided into? (100) So we call this one part of a hundred 'one hundredth.' Can you say 'one-hundredth'? Now write $\frac{1}{100}$ under the cube as a fraction."

***Representation*:** Teacher can introduce a hundreds grid. Have the student color one tenth and one hundredth. (Teachers may skip this level if they are confident the child sees the connection between the concrete and the fraction notation.)

Abstract: Teacher shows the one-tenth block again and points to the one zero. "One-tenth has one zero. Let's write a decimal for this block and this fraction." Teacher cues the child and writes "One zero, one decimal place .1." Teacher shows the one-hundredth block and points to two zeros. Teacher cues the child and writes "One hundredth has two zeros. Two zeros, count two decimal places and write a one, .01." Teacher should continue practicing with several examples until the child connects the concrete blocks, the number of zeros in the fraction, and the number of decimal places.

Teachers should continue to reinforce the decimals with models of the blocks (concrete level) until children can read and write the decimals (abstract level) for various examples. Children have difficulty understanding when a zero appears in the tenths place (Ex: 1.05). Omit using decimal examples like this at first, until children gain more understanding of place value.

How Is CRA Implemented?

CRA may be implemented at all grade levels individually, in small groups, or for the entire class. It can be used with children at the elementary or secondary level. When using CRA, the teacher should provide multiple opportunities for practice and demonstration to help students achieve mastery of the mathematical concept. The following guidelines are suggested when using manipulatives for accessibility to the mathematics concepts.

Guidelines for Using Manipulatives With Students With Disabilities

- Select manipulatives that are connected to the concept and to students' developmental level.
- Incorporate a variety of manipulatives for concept exploration and attainment.
- Provide verbal explanations and questions with demonstrations.
- Provide opportunities for student interaction and explanation.
- Encourage the use of manipulatives and strategies across settings.
- Program for transition from concrete to symbolic representation. (Maccini & Gagnon, 2000, p. 11)

A teacher can prompt students with questions at each stage of the process. If a student is solving a word problem, the teacher can read the problem aloud and summarize what the student completed as the student moves sequentially through the stages, using models, verbalization, drawings, and numerical representations to indicate each step in order. When implementing this strategy, a teacher practices good instruction by referring to concepts or activities in the different states. To reinforce concepts, instruction may be cyclic, not just a linear sequence of instructional tasks.

For further information, go to http://coe.jmu.edu/mathvidsr/disabilities.htm. This Web site provides instructional strategies in three categories: Teacher Instruction, Student Practice, and Evaluation. These strategies were chosen on the basis of learning research on students who are at risk of academic failure and students who are identified with learning problems, research on effective mathematics instruction for students with and without learning problems, and suggestions from an advisory committee made up of elementary and special education teachers

References

Harrison, M., & Harrison, B. (1986). Developing numeration concepts and skills. *Arithmetic Teacher, 33,* 1–21.

Maccini, P., & Gagnon, J. C. (2000). Best practices for teaching mathematics to secondary students with special needs. *Focus on Exceptional Children, 32,* 1–22.

Suydam, M. N., & Higgins, J. L. (1977). *Activity-based learning in elementary school mathematics: Recommendations from research.* Columbus, OH: ERIC Center for Science, Mathematics, and Environmental Education.

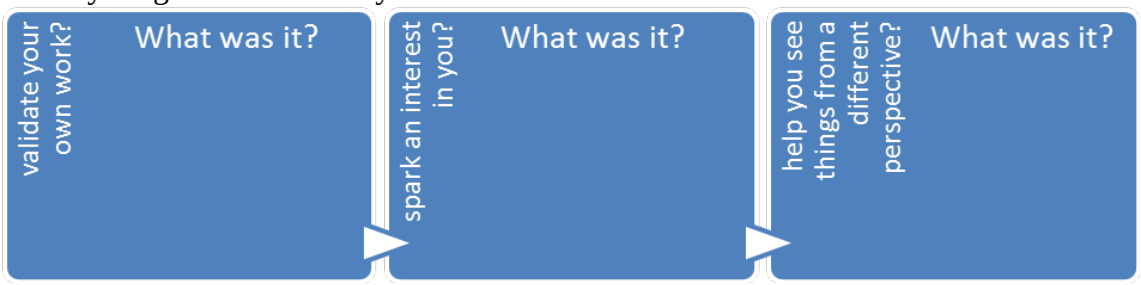
Note. This handout was adapted from "The Concrete-Representational-Abstract Instructional Approach," by J. Hauser, project officer, The Access Center, Improving Education for All Students K-8 (U.S. Department of Education Grant #H326K020003). Washington, DC: The Access Center.

Evaluation Form

Name:_____ Date_____ Topic_____

Identify Three Main Concepts or Ideas you are taking away from the workshop:

Did anything mentioned today. . .



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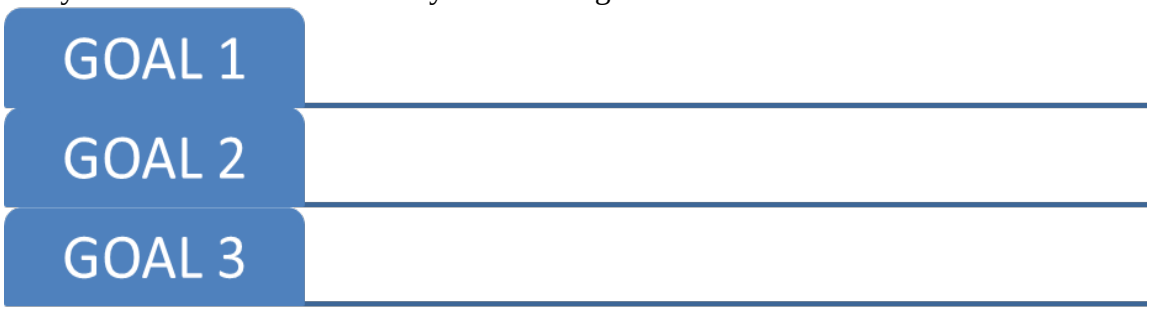
List three goals you are going to make for yourself based on the topic of the workshop today. These will be reviewed at your coaching session.



February

Workshop Title: Making Common Core Science Accessible for Students with Significant Cognitive Disabilities

Time: 3 hours

Summary: This workshop will introduce the components of accessible science for students with significant cognitive disabilities. It will review the importance of using assistive technology for students who have limited motor skills.

Learning Objectives:

1. Participants will learn how to create a learning environment that enhances learning opportunities for all students through assistive technology.

2. Participants will learn how to take grade-level-appropriate materials and adapt the science concept to a concrete manipulative activity for students.

3. Participants will learn how to differentiate the science concept to multiple levels of understanding.

Materials:

http://www.topscience.org/collections/books_by_grade.html#

http://www.billnye.com/

http://www.sciencekids.co.nz/experiments.html

http://www.stevespanglerscience.com/lab/experiments

http://www.funology.com/science-experiments/

Handout 1: Special Education in the Science Classroom: Strategies for Success

Handout 2: Resources for Teaching Science

Handout 3: Evaluation Form

Procedure for Workshop:

A. Participants are greeted and introductions made.

1. As participants sign in, PowerPoints and handouts are available for them to pick up.

2. Teachers will be arranged in table groups to facilitate sharing and group interaction.

3 Set group norms.

4 Housekeeping business: breaks.

5 Goal is today is to do one of three things for each person: (a) validate what you are doing, (b) inspire you to investigate further, and (c) see things in a different way

B. Participants will learn how to create a learning environment that enhances learning opportunities for all students through assistive technology.

1. Discussion about assistive technology—go through types of technology.

2. Participants will gain knowledge of available devices to support science for students with limited motor movement.

   a. Single message and multiple message devices

   b. Curriculum tools like All-Turn-It Spinner

C. Participants will learn how to apply skills to lessons in the classroom with academic content

1. Discussion of Handout 1: Special Education in the Science Classroom: Strategies for Success.

2. Instructional approach, and application to students with multiple disabilities who have cognitive functioning levels below 2 years of age.

3. Sample science lesson using assistive technology to encourage access and participation of students.

4. Participants will learn how to make grade-level-appropriate materials for students.

Grade-level-appropriate standards-based lesson for teachers to make and adapt for use in classroom next day.

D. Resources and websites.

Go through resources handout and materials

E. Goal setting and wrap up.

1. Teachers will fill out evaluation form (Handout 3) to set three goals they want to accomplish for themselves from the workshop today.

2. Teachers will share three things they are taking away from the day based on the goals from the beginning of session: (a) validate what you are doing, (b) inspire you to investigate further, and (c) see things in a different way.

Handout 1

Special Education in the Science Classroom: Strategies for Success

Science Is for All Students

Science classrooms are places of excitement, interest, and inquiry. Students who occupy them are as diverse in needs, characteristics, and abilities as the myriad science topics they study. To overlook this diversity limits and weakens science instruction. Recognizing and adapting to this diversity multiplies the power of well-planned laboratory experiences and other activities.

The National Education Science Standards is the landmark resource for science education in the United States. The first principle underlying this road map to scientific literacy is that science is for *all* students. Disabilities must not become barriers to the acquisition of skills and understanding. Throughout their lives, students will call upon this knowledge to make sound choices, solve problems, and participate in public discussion about issues relating to science.

Overcoming Obstacles to Success in the Science Classroom

Students with identified disabilities are found in science classrooms in every school in the nation. What specific techniques benefit special education students in the science classroom? Strategies designed to increase classroom success for special education students are based on sound instructional methodology, and thus have potential benefits for all students.

When integrating the strategies suggested, teachers must remember that the term "special education" is applied to students having a wide range of disabilities existing on a continuum from moderate to extreme. Instructors should consider individual needs and learning preferences when implementing strategies.

Dealing With Issues Related to Attention

- Break large chunks of instruction, particularly experimental procedures, into small parts. Have students repeat directions in their own words.
- Integrate hands-on instruction with traditional methods. Switching to a different instructional modality can refocus wandering attention.
- Use laboratory time for one-on-one instruction. Speaking with a student individually is a powerful tool for focusing attention.

- Take advantage of the high interest level inherent in science subject matter. Find ways to integrate topics interesting to students. Encourage expression of opinion and discussion.

- Experiment with music during lab exercises. Students may find that quiet, classical background music aids concentration.

- Consider seating arrangements. There is no “right” seat for a student with a given disability. An attention-craving student seated in front might prove a serious distraction to himself and the rest of the class. A student with difficulty focusing may experience increased success if seated away from high-traffic areas.

- Incorporate body posture changes. Sitting straight up in a chair might not prove the most effective learning posture, particularly for students with attention deficit disorder.

Dealing With Issues Related to Information Processing and Communication

- Communicate information in multiple formats. Students may process information more effectively in an oral, visual, or kinesthetic framework.

- Write lab procedures in large, legible print. The blackboard or other communication medium should not be cluttered with irrelevant information.

- Coincide verbal directions with demonstration whenever possible. Procedures like lighting a burner and using a balance must be demonstrated and practiced for mastery.

- Clearly label laboratory equipment. Color coding materials may enhance identification.

- Develop cue cards which outline, in written or pictorial form, major procedural steps. Prominently display cards in sequential order.

- Utilize multiple assessment tools. Students with disabilities may communicate understanding effectively through presentations, demonstrations, lab work, and the creation of portfolios.

Dealing With Issues Related to Organization

- Maintain a clean, organized laboratory. Clutter is an additional obstacle for students already struggling with organization.

- Maintain consistent places in the lab for supplies and equipment. Clearly label these stations.

- Establish and constantly reinforce techniques for often-used procedures like cleaning and returning lab materials, using goggles, and using specific lab equipment.

Dealing With Issues Related to Social Interaction

- Create a climate of acceptance by modeling patience and tolerance. Students must feel comfortable asking questions and expressing opinions in the science classroom.

- Build laboratory and cooperative learning groups carefully. Students with disabilities must be grouped with students who will allow them to participate and use their strengths, but who are also willing to cooperate with their areas of difficulty.

Dealing With Issues Related to Time and Making Transitions

- Provide an initial orientation to laboratory organization, equipment, and procedures. Make this instruction ongoing throughout the year, ensuring understanding of existing structures, and incorporating new techniques and equipment as needed.

- Make students aware of time limits before and during laboratory exercises and small group work.

- Warn students a few minutes before the scheduled ending of an activity. This eases transition from one activity to another, and forces the group to come to closure.

Learning Science Is an Active Process

The second principle underlying the National Science Education Standards is that learning science is an active process. In the inquiry-based science classroom, students make observations, form hypotheses, ask questions, perform experiments, construct explanations, and communicate ideas. Mastering the critical thinking skills embodied in

these processes can help students with learning disabilities excel in multiple areas of study and in life.

From “Special Education in the Science Classroom: Strategies for Success,” 2005, *Teaching Today*. Available from http://www.glencoe.com/sec/teachingtoday/subject/special_ed.phtml

Handout 2

Resources for Teaching Science

National Science Foundation (NSF; http://www.nsf.gov/) is an independent federal agency created by Congress in 1950 "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense . . . " (about).

The National Center for Science Education (NCSE; http://ncse.com/) is a not-for-profit, membership organization providing information and resources for schools, parents, and concerned citizens working to keep evolution in public school science education.

The National Science Digital Library (http://nsdl.org/) is the nation's online library for education and research in science, technology, engineering, and mathematics. It provides free math lessons and activities aligned with the math Common Core Standards, as well as STEM-related blogs and other free teacher resources and lesson plan ideas. Targeted for K-12 teachers, higher education professionals, and librarians, NSDL also provides science literary maps and iTunes multimedia files.

National Science Resources Center (http://www.ssec.si.edu/). Provided by the Smithsonian Institution and the National Academies to improve the learning and teaching of science for all students throughout the world.

Science Netlinks (http://sciencenetlinks.com/). Internet-based free learning activities, tools, reviewed websites to support K-12 standards-based teaching and learning. Affiliated Organization: American Association for the Advancement of Science.

NOAA Educational Ocean Service (http://oceanservice.noaa.gov/education/). NOAA joins hundreds of organizations and agencies in a celebration of science to make science more accessible, personally meaningful, and locally relevant. Be sure to check their lesson plan library. Students will be thrilled to engage in activities and games in the Planet Arcade .

Science Education Resource Center (http://serc.carleton.edu/index.html). An office of Carleton College, works to improve education through projects that support educators. The office has special expertise in effective pedagogies, geoscience education, community organization, workshop leadership, digital libraries, website development and program and website evaluation.

National Science Teacher Association (http://www.nsta.org/) is dedicated for science teacher's needs, online free resources include interactives and freebies. The learning center is NSTA's e-professional development (PD) portal to help you address your classroom needs and busy schedule. You can gain access to more than 6,500 different resources, of which over 2,000 are free. SciLinks is a partnership between progressive U.S. textbook publishers and NSTA. Web pages selected here are among the best found on the Internet.

U.S. Geological Survey (http://www.usgs.gov/). USGS, an unbiased, multidisciplinary science organization that focuses on biology, geography, geology, geospatial information, and water, our natural resources, and the natural hazards that threaten us.

Xpeditions (http://education.nationalgeographic.com/education/?ar_a=1) is home to the U.S. National Geography Standards, and to thousands of ideas, lesson plans, activities, and interactive adventures that bring them to life.

National Geographic (http://www.nationalgeographic.com/) has been inspiring people to care about the planet since 1888, the education resources and games are the sites teachers and parents must visit. There is an education channel full of resources for teaching, programs, multimedia and mapmaker for you to customize your own map.

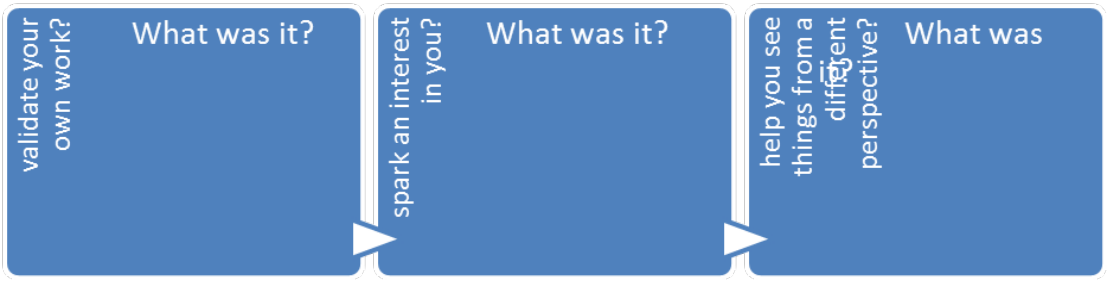
Discovery Education (http://www.discoveryeducation.com/teachers/) is also a massive site full of free lesson plans, featured contents in many fields, not only science. Home resources and teacher professional development are also included.

Evaluation Form

Name:_____ Date_____ Topic _____

Identify Three Main Concepts or Ideas you are taking away from the workshop:

Did anything mentioned today. . .



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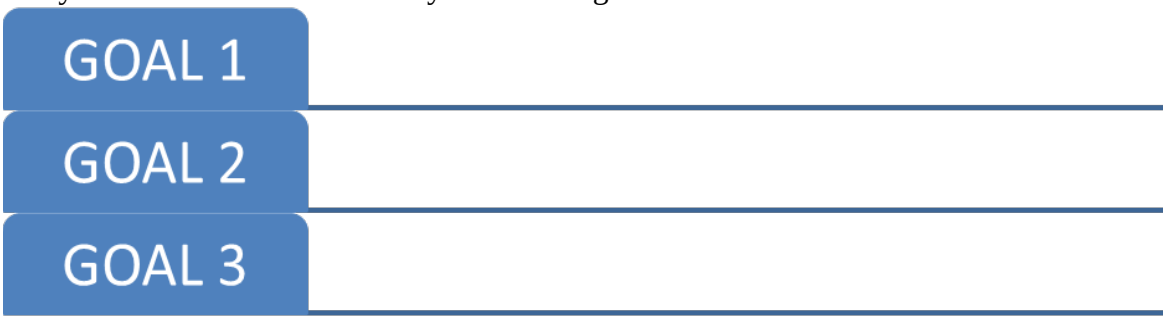


March

Workshop Title: Characteristics of Syndromes, Disabilities and Disorders

Time: 3 hours

Summary: The emphasis of this workshop special education categories that are considered “multiple disabilities.” It will focus on the developmental profiles of students with “multiple disabilities.” The impact on instruction and planning, and the relationship between developmentally and age appropriate materials will be included.

Learning Objectives:

1. Review the criteria for special education identification under the categories of mental retardation, autistic-like behavior, and multiple handicaps.

2. Be familiar with developmental profiles and identifying factors related to syndromes and medical conditions regularly encountered in these programs.

3. Discuss the educational implications of developmental and other conditions,

4. Relate developmental levels to age appropriate materials and activities.

Materials:

Resources: 2006b LRP Publications Lifelines: Module Two

Handout 1: General Information about Severe and/or Multiple Disabilities

Handout 2: Severe and Multiple Disabilities

Handout 3: Resource List for Multiple Disabilities

Handout 4: Evaluation Form

Website Resources:

http://education.stateuniversity.com/pages/2415/Severe-Multiple-Disabilities-Education-individuals-With.html

Procedure for Workshop:

A. Participants are greeted and introductions made.

    1. As participants sign in, PowerPoints and handouts are available for them to pick up.

    2. Teachers will be arranged in table groups to facilitate sharing and group interaction.

    3 Set group norms.

    4 Housekeeping business: breaks.

B. Defining syndromes, disabilities, and disorders.

    Define syndrome, define disability and define disorder. Discuss the difference between each.

C. Review special education qualifying disabilities.

    1. Discuss the 13 legal categories that qualify for special education services.

    2. Special education activity: Match disability to description.

D. Discuss educational implications of syndromes, disabilities and disorders.

    1. Handouts 1 and 2.

    2. Main characteristics of major disabilities seen in special education classrooms that usually include multiple disabilities who have cognitive functioning levels below 2 years of age: Autism, Intellectual Disabilities, Cerberal Palsy, Down's Syndrome.

    3. Discussion sensory disabilities that tend to be included as part of "multiple" disabilities: Blind/visually impaired, deaf/deaf and hard of hearing.

E. Review person first language.

F. Understanding students with disabilities.

    1. Characteristics of students with disabilities are different, even when they have the same type of disability.

    2. Knowledge of student's abilities will ultimately be more valuable than knowledge of their disabilities.

3. Students with disabilities have more in common with their nondisabled peers than they have differences.

4. Students with and without disabilities have the same rights.

G. Resources and websites.

Go through resources handout and materials

H. Goal setting and wrap up

1. Teachers will fill out evaluation form (Handout 4) to set three goals they want to accomplish for themselves from the workshop today.

2. Teachers will share three things they are taking away from the day based on the goals from the beginning of session: (a) validate what you are doing, (b) inspire you to investigate further, and (c) see things in a different way.

Handout 1

General Information About Severe and/or Multiple Disabilities

Fact Sheet Number 10 (FS10), 1997

Definition

People with severe disabilities are those who traditionally have been labeled as having severe or profound mental retardation. These people require ongoing extensive support in more than one major life activity in order to participate in integrated community settings and enjoy the quality of life available to people with fewer or no disabilities; they frequently have additional disabilities, including movement difficulties, sensory losses, and behavior problems.

Incidence

In the 1994-95 school year, the states reported to the U.S. Department of Education that they provided services to 89,646 students with multiple disabilities (Eighteenth Annual Report to Congress, 1996.)

Characteristics

People with severe or multiple disabilities may exhibit a wide range of characteristics, depending on the combination and severity of disabilities, and the person's age. There are, however, some traits they may share, including:

- Limited speech or communication;
- Difficulty in basic physical mobility;
- Tendency to forget skills through disuse;
- Trouble generalizing skills from one situation to another; and
- A need for support in major life activities, e.g., domestic, leisure, community use, vocational.

Medical Implications

A variety of medical problems may accompany severe disabilities. Examples include seizures, sensory loss, hydrocephalus, and scoliosis. These conditions should be considered when establishing school services. A multi-disciplinary team consisting of the student's parents, educational specialists, and medical specialists in the areas in which the individual demonstrates problems should work together to plan and coordinate necessary services.

Educational Implications

Early intervention programs, preschool and educational programs with the appropriate support services are important to children with severe disabilities. Educators, physical therapists, occupational therapists, and speech-language pathologists are all members of the team that may provide services, along with others, as needed for each individual. Assistive technology, such as computers and augmentative/alternative communication devices and techniques, may provide valuable instructional assistance in the educational programs for students with severe/multiple disabilities.

In order to effectively address the considerable needs of individuals with severe and/or multiple disabilities, educational programs need to incorporate a variety of components, including language development, social skill development, functional skill development (i.e., self-help skills), and vocational skill development. Related services are of great importance, and the appropriate therapists (such as speech and language, occupational, physical, behavioral and recreational therapists) need to work closely with classroom teachers and parents. Best practices indicate that related services are best offered during the natural routine of the school and community, rather than by removing the student from class for isolated therapy.

Classroom arrangements must take into consideration students' needs for medications, special diets, or special equipment. Adaptive aids and equipment enable students to increase their range of functioning. The use of computers, augmentative/ alternative communication systems, communication boards, head sticks, and adaptive switches are some of the technological advances which enable students with severe disabilities to participate more fully in integrated settings.

Integration/inclusion with nondisabled peers is another important component of the educational setting. Research is showing that attending the same school and participating in the same activities as their nondisabled peers is crucial to the development of social skills and friendships for children and youth with severe disabilities. Traditionally, children with severe disabilities have been educated in center-based, segregated schools. However, recently many schools are effectively and successfully educating children with severe disabilities in their neighborhood school within the regular classroom, making sure that appropriate support services and curriculum modifications are available. The benefits to inclusion are being seen to benefit not only those with disabilities but also their nondisabled peers and the professionals who work with them.

Schools are addressing the needs of students in several ways, generally involving a team approach. Modifications to the regular curriculum require collaboration on the part of the special educator, the regular educator, and other specialists involved in the student's program. Community-based instruction is also an important characteristic of educational

programming, particularly as students grow older and where increasing time is spent in the community. School to work transition planning and working toward job placement in integrated, competitive settings are important to a student's success and the long-range quality of his or her life.

In light of the current Vocational Rehabilitation Act and the practice of supported employment, schools are now using school-to-work transition planning and working toward job placement in integrated, competitive settings rather than sheltered employment and day activity centers.

Note. From General Information about Severe and/or Multiple Disabilities. Fact Sheet Number 10 (FS10; 1997). Retrieved from http://www.kidsource.com/NICHCY/ severe_disable.html

Handout 2

Severe and Multiple Disabilities

Definitions: Multiple disabilities**.** "Concomitant impairments (such as intellectual impairment—blindness, intellectual impairment—orthopedic impairment, etc.), the combination of which causes such severe educational need that they cannot be accommodated in special education programs solely for one of the impairments. The term does not include deaf-blindness." (Friend, 2011)

Deaf-Blindness: "deaf-blindness means concomitant heating and visual impairments, the combination of which causes such sever communication and other developmental and educational needs that they cannot be accommodated in special education programs solely for children with deafness or children with blindness." (Friend, 2011)

T.A.S.H. Definition**:** "Individuals with disabilities of all age, races, creeds, national origins, genders and sexual orientation who require ongoing support in one or more major life activities in order to participate in an integrated community and enjoy a quality of life similar to that available to all citizens. Support may be required for life activities such as mobility, communication, self-care and learning as necessary for community living, employment and self-sufficiency."(Friend, 2011)

Subgroups: Students with severe and profound intellectual disabilities.
Students who are both deaf and blind.
Students that have multiple disabilities

Characteristics:

Cognitive**:**

Educational Implications: Students with multiple and severe disabilities need more time to learn and grasp concepts. This means they need many opportunities to practice and practice again. In the past, people did not believe that students with severe and multiple disabilities could learn. Today it is more clearly understood that they are smart students but need to be taught at a slower pace and more continuously. These students also struggle with generalization. This means it is hard for them to connect what they learn in one setting to another topic or even the same topic but in a different setting. The student's academics must be presented in concrete ways. It is also important for the teacher to select meaningful ways to teach these students with disabilities. An average I.Q. falls between 85 and 115. Student's I.Q. with severe intellectual disabilities tends to fall between 25 and 40, and students I.Q. with a profound level of intellectual disabilities is typically between 0 and 25.

Academic:

Literacy: This is a skill that most people believe is not necessary or possible for students with multiple and severe disabilities, but it is just the opposite. It is very important these students learn those skills. It is done in different ways though. When they are being taught a lesson, they can use pictures to help comprehend and identify or objects for those with hearing and vision impairments. Motivation plays a vital role in helping these students learn.

Oral language: Students with multiple and severe disabilities do not communicate verbally very much because of the mental and/or physical impairments. They use *nonverbal communication,* meaning they communicate through their body language and facial expressions. "The use of multiple modes of communication is a positive approach for these students." They struggle with *receptive language,* meaning it is hard for them to comprehend what others are saying to them. There are other ways to communicate with the students such as pictures and technology.

Mathematics: Students with multiple and severe disabilities tend to stick with learning the most basic forms of math. It is a struggle for them to learn one way; what is tremendously helpful is applying what they are learning to everyday skills. This not only helps them in math but being able to generalize what they are learning. Relating the math to items of their interest is also very helpful in teaching them.

Social and Emotional: These students are typically much further behind in social and emotional skills in comparison to other students. Much of these roots go back to the fact that they do not attain their oral language skills, which causes them to not understand how to behave socially. This is because when students learn the importance of oral language they then begin to understand how to behave and become more social. Students with multiple and severe disabilities are given more direct instruction and cannot get to that level of comprehension for oral language. It is important though that these students still obtain friends and receive social interaction.

Behavior**:** Students with multiple and severe disabilities develop the same behavioral problems as other students do, for example, being shy. But they also have less common behavioral problems. "Students with multiple and severe disabilities can engage in behaviors that are disruptive to others, destructive to property, or harmful to themselves or others. These behaviors range from minor off-task or loud crying/screaming or hitting others or themselves." The teachers working with these students need to understand the reason or purpose behind the challenges to be able to prevent it for the future.

Recommended Educational Practices (Teaching strategies)

Meaningful and Individualized Curriculum: Students with multiple and severe disabilities cannot be put into a pre-existing curriculum classroom. They must receive specific instruction and personal goals to help them specifically. *Meaningful curriculum* "is relevant curriculum provided for each student according to interests, personal goals, and limitations in reaching those goals." It is important to make this

curriculum age appropriate and to keep high expectations for them. Teachers will need to make advanced preparations for the students and be flexible and creative in their teaching. It is also important to be sure to *make the core curriculum meaningful.* Students with multiple and severe disabilities need to receive academic educations just as much as their peers do, but it needs to be related to them to help them stay motivated.

Collaborative approaches for Education: *Active Family Involvement* is very crucial for students with multiple and severe disabilities to learn consistently and continuously. Family members are the most familiar with the child and how they communicate, what they do and do not like and what works and what does not. It is very important that not just one person works with the student and is the only person thinking of how to help a particular student. There needs to be *collaboration on a Team.* Family members will be on this team, educators who are general education teachers at that student's grade level, and professionals who work with the student's needs such as a speech pathologist etc.

Positive Behavior Support: Students with multiple and severe disabilities truly struggle with communicating and will become frustrated that they cannot express themselves. It is very important that the professionals that are working with these students remain patient and understanding. It is necessary that a *functional behavioral analysis* is completed and a *behavioral intervention plan* designed specifically for the students to help meet their needs. Students with multiple and severe disabilities communicate in different forms when they cannot do so verbally. For example, they use pictures, gestures, objects, and augmentative devices.

Inclusive Education: It is important for students with multiple and severe disabilities to be included in general education classrooms. They need "systematic instruction, numerous support services, curricular adaptations and differentiated outcomes." When students with multiple and severe disabilities are involved in mainstream classrooms, there are benefits for more than just that student. The teachers learn to work together to individualize curriculum; the special education teacher can help the other students in the classroom, and the students in the general education classroom and their families learn to better accept and understand the students with multiple and severe disabilities.

Additional Resources

www.projectideal.org

www.palaestra.com/featurestory.html

www.nsnet.org/start/severe.pdf

www.nationaldb.org/aboutDeafBlindness.php

Note. Retrieved from http://amandabowers.weebly.com/uploads/6/9/8/4/6984200/multiple_and_severe_disabilities_resource_file.pdf

Handout 3

Resource List for Multiple Disabilities
Family & Community Resource Center 5/1/14

Aligning IEPs to Academic Standards—For Students with Moderate and Severe Disabilities. Ginevra Courtade-Little, M.Ed. (2005). Book & CD.

Guide to construct students IEPs with goals aligned to each state's academic content standards for each student's assigned grade and ability level.

The Basics: Supporting Learners With Intellectual Challenge in Regular Classrooms: A Resource for Teachers. Gary Bunch (2006).

Provides adjustments that may be required to provide the best possible learning opportunities for all students in regular classrooms.

Communication Supports Checklist: For Programs Serving Individuals With Severe Disabilities. Romski and Yoder (1998) provides explicit guidelines for meeting the communication needs of people with severe disabilities such as mental retardation and autism, and other disorders.

The Early Literacy Engagement Progress Monitoring Checklist: For Students Who Have Severe Disabilities. Pati King De-Baun (2006). Checklist identifies very small changes in behavior and the adaptations and considerations that teachers are making. It can help educators determine new goals and modifications that may be necessary in terms of activities, materials, and cueing strategies.

Educating Children with Multiple Disabilities: A Trans-disciplinary Approach. Fred P. Orelove (1996). Educators and service providers will find a clear, practical explanation of how they can integrate their specialized skills to improve education for learners with severe cognitive and physical disabilities.

Educating Students Who Have Visual Impairments With Other Disabilities. Sharon Z. Sacks, Ph.D. & Rosanne K. Silberman (1998). This introductory text provides techniques for facilitating functional learning in students with a wide range of visual impairments and multiple disabilities.

Effective Literacy Instruction for Students With Moderate or Severe Disabilities. Susan Copeland, PhD (2007). Guidebook for helping students with disabilities meet NCLB's academic standards for literacy.

Ideas for Inclusion: The Classroom Teacher's Guide to Integrating Students With Severe Disabilities. Anne Beninghof (1993). Provides classroom teachers with 50 practical, easy-to-implement strategies for successfully integrating students with moderate and severe disabilities.

Including Students With Severe and Multiple Disabilities in Typical Classrooms: Practical Strategies for Teachers. June E. Downing (1996). Jargon-free resource gives instructors the guidance needed to educate learners who have one or more sensory impairments in addition to cognitive and physical disabilities.

The Job Developer's Handbook: Practical Tactics for Customized Employment, Gary Griffin (2007). A practical employment book that guides employment specialists through customized job development for people with disabilities.

Joyful Learning: Active and Collaborative Learning in Inclusive Classrooms. Alice Udvari-Solner and Paula Kluth. Promoting the concept that learners with differing abilities can learn side by side, this book illustrates how to use a practical, differentiated approach to help develop every student's abilities.

Literacy Beyond Picture Books: Teaching Secondary Students With Moderate to Severe Disabilities. Dorothy Dendy Smith, Jill Fisher DeMarco, and Martha Worley (2009). Featuring sample lessons, information on finding age-appropriate materials, and more, this guide helps teachers create thematic units that build literacy skills in students with significant disabilities.

Make the Day Matter! Promoting Typical Lifestyles for Adults with Significant Disabilities. Pamela Walker et al. Adults with disabilities enjoying active, rewarding, and meaningful daytimes in their communities—that's the reality when service providers and programs tap into innovative support strategies that really work. That's just what they'll do with this invaluable book, the first to compile all the best, most current knowledge on helping adults "make the day matter."

Making a Difference: A Guidebook for Person-Centered Direct Support. John O'Brien and Beth Mount (2005). Strategies for various support systems for individuals with special needs.

OT: For Children with Autism, Special Needs & Typical. Britt Collins. (video) (2007). (45 minutes). Combines traditional occupational therapy exercises with applied behavior analysis to teach parents and caregivers various skills with can assist in desensitizing a child and help them on the path to reprogramming their brain functions (DVD).

Perkins Activity and Resource Guide: A Handbook for Teachers and Parents of Students with Visual and Multiple Disabilities (1992). Hundreds of pages of practical suggestions for instructional activities for young children who have a visual and multiple disabilities.

Personalized Learning for Young People With Profound and Multiple Learning Difficulties. Andrew Colley (2013). Focusing on students with PMLD aged 14 and over, this book presents an innovative model for creating learning opportunities to suit the needs and abilities of each individual student, within the constraints for formal curricula and even in large class settings.

Power to Spring Up: Postsecondary Education Opportunities for Students with Significant Disabilities. Diana Katovitch (2009). Guide profiles the many different types of postsecondary options available, ranging from a modified academic program on a university campus, to a vocational residential program designed specifically for students with special needs.

Seeing the Charade: What We Need to Do and Undo to Make Friendship Happen. Carol Tashie et al. (2006). This book is aimed at overcoming friendship barriers and the facilitation of friendships in inclusive environments.

The Source for Syndromes. Gail Richard and Debra Reichert Hoge (1999). Organized information on a variety of syndromes.

The Source for Syndromes 2. Gail Richard and Debra Reichert Hoge (2000). The sequel to *The Source for Syndromes,* with defining characteristics, behavior, communication, and intervention issues

The Syracuse Community—References Curriculum Guide for Students With Moderate and Severe Disabilities (1989). Community curriculum for special education students that includes the community in the education of such students

Teaching Communication Skills to Students With Severe Disabilities. June Downing, PhD (2005). Guide has the comprehensive, research-based information professionals need to support students from preschool to high school as they learn and use communication skills.

Teaching Language Arts, Math and Science to Students with Significant Cognitive Disabilities. Diane Browder et al. (2006). Shows educators how to make the general curriculum accessible to students of all ages with significant cognitive disabilities.

Teaching Literacy to Students with Significant Disabilities: Strategies for the K-12 Inclusive Classroom. June Downing (2006). Offers tangible support for obliterating the obstacles to effective literacy instruction, including: effective strategies for tailoring literacy materials to students with disabilities, tactics for adapting state standards and meeting No Child Left Behind (NCLB) and Individuals with Disabilities Education Act (IDEA) requirements, straightforward chapter summaries, frequently asked questions, Web sites, and other resources that reinforce key points, easy-to-implement planning and assessment guidelines.

Teaching Students With Medical, Physical, and Multiple Disabilities: A Practical Guide for Every Teacher. Bob Algozzine and Jim Ysseldyke (2006). This guide discusses the issues educators and school nurses need to be aware of in order to effectively support students with medical, physical and multiple disabilities.

When You Have a Visually Impaired Student With Multiple Disabilities in Your Classroom: A Guide for Teachers. Jane Erin (2004). Guide offers essential information for teachers who are working with students who are not only visually impaired, but have additional disabilities.

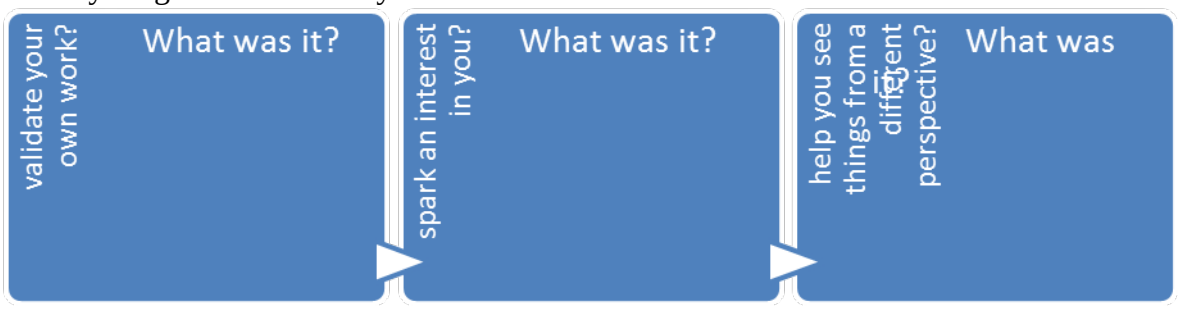
Note. Adapted from Special School District of St. Louis County, May 1, 2014. Retrieved from https://www.ssdmo.org/cool_tools/fcrc_books/ Multiple_disabilities.pdf

Evaluation Form

Name:_____ Date_____Topic_____

Identify Three Main Concepts or Ideas you are taking away from the workshop:

Did anything mentioned today. . .



What is one way you are going to use the information from the workshop today in your instructional practice?

List three goals you are going to make for yourself based on the topic of the workshop today. These will be reviewed at your coaching session.

April

Workshop Title: Educational Implications of Students With Severe Physical and Multiple Disabilities

Time: 3 hours

Summary: This workshop will explore instructional strategies used with students who have multiple disabilities. We will discuss classroom management strategies including managing medical procedures, sensory accommodations, custodial care procedures, and instructional accommodations like "wait time." Assistive technology will be explored to provide access to instruction.

Learning Objectives:

1. Participants will understand how the characteristics of the disabilities determine instructional strategies.
2. Participants will be able to identify teachable moments.
3. Participants will be able to configure classroom environment to maximize learning
4. Participants will be able to articulate how instruction is tied to standards

Materials:

Handout 1: Characteristics of Girls with Rett Syndrome

Handout 2: Considerations for Children Who Have Cortical Visual Impairment in Addition to Significant Motor Challenges

Handout 3: Ohio Coalition for the Education

Handout 4: What You Should Know About the Characteristics of Down

Syndrome Children

Handout 5: Evaluation Form

Procedure for Workshop:

A. Participants are greeted and introductions made

1. As participants sign in, PowerPoints and handouts are available for them to pick up.

2. Teachers will be arranged in table groups to facilitate sharing and group interaction.

3 Set group norms.

4 Housekeeping business: breaks.

5 Goal is today is to do one of three things for each person: (a) validate what you are doing, (b) inspire you to investigate further, and (c) see things in a different way.

B. Characteristics of girls with Rett Syndrome

Discussion of Apraxia

C. Considerations for children who have Cortical Visual Impairment in addition to significant motor challenges.

1. Discussion of challenges of VI with other disabilities and motor challenges

2. Discussion of characteristics of VI and CVI.

3. Discussion of implications for instruction including use of AT.

D. Ohio Coalition for the Education

1. Discussion of multiple disabilities.

2. Discussion of educational implications of multiple disabilities for instruction including use of AT.

E. What you should know about the characteristics of Down Syndrome children.

1. Discussion of Down Syndrome

2. Discussion of educational implications of Down Syndrome for instruction including use of AT.

F. Resources and websites

Go through resources handout and materials.

G. Goal setting and wrap up.

1. Teachers will fill out evaluation form (Handout 5) to set three goals they want to accomplish for themselves from the workshop today.

2. Teachers will share three things they are taking away from the day based on the goals from the beginning of session: (a) validate what you are doing, (b) inspire you to investigate further, and (c) see things in a different way.

Handout 1

Characteristics of Girls With Rett Syndrome

Apraxia

- Girls with Rett Syndrome's most profound disability is apraxia or dyspraxia.
- Apraxia is the inability to carry out a cognitive intent. The child intends to move a particular way, but the neurological signal does not reliably get to the right muscles to move them consistently.
- Some motor skills remain intact, but only when triggered with an automatic event that does not require forethought or cortical intent. This can be confusing and may be interpreted by others as stubbornness, because it seems that the child can perform a task some of the time. However, the harder the child tries, the harder it is for her to perform it on demand.
- Sometimes the child seems to need to move away before moving toward what she intends. If you do not wait for the child to finish the intent, it may appear that she is rejecting or responding incorrectly, when in reality she hasn't finished her movement yet.
- Delayed processing from intent to movement is typical for these girls.
- Apraxia also affects muscles that control speech.
- Apraxia affects other communication skills—including ability to use some nonverbal social signals and sustained eye contact.
- May make it difficult to maintain eye gaze and move eyes between a desired object and a person who might be able to retrieve the object.
- Waiting for a response with patient anticipation is critical to success. The child learns which people will likely take the time to wait for her, so she can decide if it is worth her effort.
- Sometimes talking the girl through the motor movements and/or modeling them can be helpful.

Note. From Lecture notes from a conference SF Special Education Conference, "Developing Communication and Access Skills for Children Who Face Severe Physical and Multiple Challenges," by Linda J. Burkhart, BS, Special Education, Technology Integration Specialist, May 2014. Available from linda@Lindaburkhart.com

Handout 2

Considerations for Children Who Have Cortical Visual Impairment in Addition to Significant Motor Challenges

Vision Challenges:

- Types of visual issues—ocular vs. CVI (cortical or cerebral visual impairment).
- CVI can be a hidden component of other ocular problems and may not be easily diagnosed—Consult vision specialists for functional visual evaluation.
- If the child only has an ocular visual issues, then it is appropriate to figure out the specific accommodations required to enable the child to maximally use his or her vision. For example,
  - A child who has a visual field loss may require materials always presented in a certain field.
  - A child who has an acuity problem will need attention paid to contrast, size, distance of viewing, and corrective glasses.
- If CVI is the main problem with a child's vision, then accommodations to the environment and materials will be made to systematically increase the child's use of vision and develop the neurological the connections to help the child make sense of what she sees.

Cortical Visual Impairment:

- Visual challenges caused by damage to the brain.
- Vision skills fluctuate, are often inconsistent and changeable.
- May or may not occur with ocular visual disabilities.
- Ocular vision impairment that occurs with CVI should be addressed immediately, in addition to dealing with CVI.
- Possibly normal eye report.
- Vision often differs from what is found in an eye exam unless done by an Ophthalmologist with specialized training in CVI.
- CVI frequently occurs with other neurological damage.
- CVI may be a hidden component and may not be easily diagnosed.
- The key is, if the child's functional vision disabilities cannot be explained by the ocular condition, then CVI should be suspected.
- A vision specialist in conjunction with a specially trained pediatric ophthalmologist and the family, should work together to determine the presence of CVI.
- CVI Screening Tool (Roman-Lantzy).
- Functional Vision Assessment.

- CVI is not a static condition.
- Functional vision can change with visual learning, meaningful use, fatigue, environmental conditions, and material design.
- CVI is a continuum (range) of characteristic that must be evaluated individually for each child.
- CVI occurs within a wide range of cognitive abilities and cognitive potential.
- It is easy to make the wrong assumptions about cognitive and language potential for children with complex sensory and motor challenges.
- Sometimes, the neural pathways can be "rewired" around damaged areas of the brain to make new neurological connections.
- The younger the child, the better chance of improvement and the increased importance of working to increase visual skills—but still possible with older children.
- Effective intervention strategies typically focus on customized environmental adaptations to the child's natural routine and modifications to presentation of materials in every day environments to support the best visual functioning—not isolated visual training exercises.
- The goal is create/find materials that the child will look at and then present them in a way that is meaningful to the child.

Characteristics of Cortical Vision Impairment With Suggested Strategies:
Note. Characteristics adapted from Dr. Christine Roman-Lantzy's (2007) Screening tool. (Roman-Lantzy, C. A. (2007). Cortical Visual Impairment: An Approach to Assessment and Intervention. New York: AFB Press); www.afb.org/store)

Light gazing, nonpurposeful gaze or light sensitivity.

- Some children stare at lights and lit objects.
- Others drop their heads, close eyes, or turn away from lights.
- Adjust lighting conditions as needed, attend to child's position in relation to light from a window or other sources.
- Use matte lamination instead of glossy for picture symbols to avoid glare.
- Use lit objects or a lit computer monitor / iPad to attract attention.
- Flashlight highlighting on objects or pictures to help focus attention.
- Light box or background illumination.

Reduced visual reflexive responses.

- With severe CVI, visual reflexes may be absent.
- Blink and visual threat reflexes.
- As vision is resolving, reflexes may become present but delayed at first.

Color preference.

- Many children with CVI show a color preference.
- Often red or yellow.
- May be any color, especially a familiar color.
- Use preferred color to facilitate looking and then add moderate differences to expand interest.

Movement attracts and assists vision.

- Vision for movement travels a neurological pathway to the primitive, subconscious part of the brain before going to the cortex. This area is deeper in the brain and may or may not be damaged.
- Rapid movement often attracts vision—may trigger a primitive "fight or flight" response.
- Shake materials peripherally and move toward center—hold still for inspection if possible according to child's response.
- Infants develop the ability to see an object as separate from the background as it moves in front of a background (Big Bird Infant Study).
- Some children may see better when they are moving, rocking, or in a powered wheelchair.
- Utilize movement on the computer screen.
- Consider magnification scanning for visual display (see below—visual/motor).

Difficulty with distance viewing.

- Child notices things close up, but not things at a distance.
- Child may view items at close distance to reduce complexity—item fills up more of the child's visual field and reduces amount of background clutter.
- Child may have difficulty coordinating eyes for depth perception.
- Bring pictures close and then move back to clear focus distance.
- Use pull-off symbols.
- Place pull-off symbols on black backgrounds that can be moved to a good viewing location.

The issue of complexity is one of the hardest characteristics to resolve, but one that can be dealt with by type and presentation of materials.

Complexity of Visual Plus Auditory—Looking and Listening.

- Neurologically, it may be difficult for some children to coordinate attention to listening and attention to vision at the same time. Because vision takes a great deal of conscious effort and focus for these children, they may not be able to continue looking when they are focusing on listening.

- Background noise—environmental considerations.
- Some children drop their heads, avert gaze, close eyes or roll eyes up to block vision when listening intently.
- Separate looking and listening and reward looking with sound (e.g., using a PODD).
- Sequential presentation: visual then auditory. Present visual items silently or with attention getting sound or movement and then silence to allow the child time to process the visual. Speak the label only after the child has processed the information, visually.
- Attract attention (sound, light, movement) and then wait quietly with anticipation.
- Use switch toys and activities that don't make sounds.
- Encourage looking toward faces by movement without sound at first.

Complexity of Visual Plus Motor

- Difficulty coordinating reach and/or grasp with visual gaze.
- Difficult for some children to attend to looking and moving at the same time, because both require conscious effort and attention—neither is automatic. This varies according to the degree of CVI and resolution of vision challenges and complexity of physical challenges with position and movement.
- May be affected by motor reflexes as well.
- Provide opportunities for the child to explore visual contingencies to their movements.
- Reducing complexity can assist with motor targeting—some children who would not be able to directly point to symbol on a typical display, may be able to directly select symbols if the symbols and layout of the display are optimized to reduce complexity.
- Consider visual complexity of switch placement.
- Try a black towel or fabric draped over other nonrelevant, distracting elements to help the child focus on the target
- Often, a child will look, then move. For example, glance, then reach. This is a vital piece of information to share with all communication partners—include in the PODD communication book instructions—as we typically look for the combination of visual regard with pointing as a mark of intentional pointing.
- We need to allow the child to do look and move sequentially without adding distractions during this process.
- Realize that child may need to recover from a movement that is used to indicate yes or no, before being able to visually focus and attend again.

- Work with occupational and physical therapists to adapt seating systems and adjust the child's position for the best possible use and coordination of vision and motor skills.
- Also need to plan for how the child can communicate/will be able to access the PODD, or other communication system, when they are not in a an ideal position that maximizes their use of vision (i.e., communication happens all the time)—may rely more on visual strategies, such as in some positions and auditory alone in other positions—the bath tub or lying on the floor.
- Following a visual scan may be difficult unless it is perceived as movement.
- Provide activities where the child uses one switch to move something across the screen and a second switch to activate it once it reaches the other side (Two Switches to Success—Burkhart 06).
- Try scanning magnification when it is an option.
- Two-switch step scanning allows child to pace his own processing time.

Environmental Visual Complexity

- Background environment—clothing, clutter, surface color, and pattern.
- Amount of detail and clutter on a page of a book.
- Black fabric can be placed over the surface.
- Black screens can be used to reduce environmental clutter.
- Lighting, windows, glare, (reflection simulates movement).
  - Matte vs. glossy
  - Light box or flashlight illumination (maybe use some of time due to practicality)

Visual Presentation of AAC Systems Such as a PODD

- Consider presentation of one symbol at a time: One per page PODD.
- Limit the number of symbols to be viewed at one time.
- Spacing of symbols can effect complexity.
- Highlight pictures/objects with a flashlight.
- Cover some symbols to draw focus to others.
- Presentation of a column of symbols at a time.
- Folding the grid of symbols to show just one at a time.
- Pull off symbols that can be moved into the child's visual field.
- Using a one symbol per page—flip book.
- Consider how these adaptations will be managed by the partner and make compromises to ensure that the system will be used (ideal vs. practical, but understand the ramifications of your decision).
- Decide if some items will just be presented auditorally in a list format.
- Repetition of viewing in favorable conditions promotes familiarity.

- Create familiarity with location, color, and natural context.
- Communication displays should make use of familiar vocabulary location, pattern and sequence.
- Consistency—look and placement of symbols on a display or device.
- PODDs (see below) provide consistency of presentation.
- Do not give up on vision too soon. Try a combination visual/auditory scan instead of going to just auditory scan if the child has potential for developing more vision.

Visual Complexity of Symbols

- Take your cues from the child. Different visuals work better for different children. The key is to find what the child will be mostly likely to look at—do some exploring to see what the child will look at.
- The number of colors on a symbol increases the complexity. Use of a single color on a contrasting background may be needed.
- Black background.
- Highlighting white symbols with colored backgrounds (Goossens, Crain, & Elder).
- Amount of detail increases complexity—shape is simpler.
- Size—larger is not always better as these children may have limited visual fields and not be able to take in the whole image if it is too large. Start with 3-, 4-, or 5-inch symbols.
- Problems with photographs (maybe a box with this or somehow highlight this in the final document).
- Complexity
  - Busy backgrounds—cut around object or person.
  - Difficult to identify action from person who is performing the action (verbs).
  - Difficult to use photos to represent a wide variety of communicative functions—such as more, done, different, uh oh, help, wait, great! Don't like, hurt, silly, etc.

Words/text on symbols—this presents a problem and must be considered by the team to make the best decision for a child. Issues to be considered:

- Text is needed so that the partner to know what to speak consistently when the symbol is presented.
- Text may add complexity—write text in a smaller font with less contrast for partner.

- Text might be easier for some children to interpret than the symbol - if so, use large clear text.
- It is not necessary for children to learn the label for each picture, before using then for communication
- Meaning does not have to be in the symbol. The meaning is in its use as is for speech.
- More important for symbols to be different from each other.
- Symbols are effectively learned within the context of receptive language development—as people talk to the child with the symbols in daily routines and natural contexts.

Attention and Working Memory Issues—Gaining Attention and Facilitating Looking:

- Use the concept of a dynamic assessment to constantly observe and evaluate the best position and location to present materials.
- Attend to the child's position. Some children use vision better in certain positions; sitting, standing, moving (rocking, swinging, moving head). (This may be a reason why the child rejects a static positioning system—stillness may reduce his ability to see).
- Some children will have to hold their head at an odd angle for best vision—work in combination with occupational and physical therapists and the vision specialist, to determine how the child is actually best able to interpret her visual environment.
- Be aware that some children do not use central vision well for looking and may actually see better through peripherally.
- The child's best visual field may vary and may appear to the child as "swiss cheese" with some blind spots. Since this may not be static, it is important to always attend to where symbols are presented, and observe the child to see where she seems to look best at that time and make appropriate adjustments.
- Child may take some time to adjust and use vision when being moved or after being moved to a new position.
- Use sound, light and movement to attract attention and then hold still.
- Cue the child's attention and then wait quietly with anticipation for a response.

Note. From Lecture notes from a conference SF Special Education Conference, "Developing Communication and Access Skills for Children Who Face Severe Physical and Multiple Challenges," by Linda J. Burkhart, BS, Special Education, Technology Integration Specialist, May 2014. Available from linda@Lindaburkhart.com

Handout 3

Ohio Coalition for the Education

Multiple Disabilities Resources

Adapted from NICHCY

The Individual with Disabilities Education Act defines multiple disabilities as: concomitant impairments (such as mental retardation-blindness, mental retardation-orthopedic impairment, etc.), the combination of which causes such severe educational needs that they cannot be accommodated in special education programs solely for one of the impairments. The term does not include deaf-blindness.

People with severe disabilities are those who traditionally have been labeled as having severe to profound mental retardation. These people require ongoing, extensive support in more than one major life activity in order to participate in integrated community settings and enjoy the quality of life available to people with fewer or no disabilities. They frequently have additional disabilities, including movement difficulties, sensory losses, and behavior problems.

What is the Incidence of Multiple Disabilities?

In the 2000-2001 school year, the states reported to the U.S. Department of Education that they were providing services to 112,559 students with multiple disabilities (U.S. Department of Education, Twenty-fourth Annual Report to Congress, 2002).

What are the Characteristics?

People with severe or multiple disabilities may exhibit a wide range of characteristics, depending on the combination and severity of disabilities, and the person's age. There are, however, some traits they may share, including:

- Limited speech or communication,
- Difficulty in basic physical mobility,
- Tendency to forget skills through disuse,
- Trouble generalizing skills from one situation to another, and/or
- A need for support in major life activities (e.g., domestic, leisure, community use, vocational).

Medical Implications of Multiple Disabilities

A variety of medical problems may accompany severe disabilities. Examples include seizures, sensory loss, hydrocephalus, and scoliosis. These conditions should be considered when establishing school services. A multi-disciplinary team consisting of the student's parents, educational specialists, and medical specialists in the areas in which the individual demonstrates problems should work together to plan and coordinate necessary services.

Educational Implications of Multiple Disabilities

In the past, students with severe and/or multiple disabilities were routinely excluded from public schools. Since the implementation of Public Law 94-142 (the Education of the Handicapped Act, now called the Individuals with Disabilities Education Act, or IDEA), public schools now serve large numbers of students with severe and/or multiple disabilities. Educational programming is likely to begin as early as infancy. At that time, as well as later on, the primary focus is upon increasing the child's independence.

In order to be effective, educational programs need to incorporate a variety of components to meet the considerable needs of individuals with severe and/or multiple disabilities. Programs should assess needs in four major areas: domestic, leisure/ recreational, community, and vocational. These assessments enable the identification of functional objectives (objectives which will result in the learner's increased skill and independence in dealing with the routine activities of his/her life). Instruction should include: expression of choice, communication, functional skill development, and age-appropriate social skills training.

Related services are of great importance, and the multidisciplinary approach is crucial. Appropriate people, such as speech and language therapists, physical and occupational therapists, and medical specialists, need to work closely with classroom teachers and parents. Because of problems with skill generalization, related services are best offered during the natural routine in the school and community rather than removing a student from class for isolated therapy.

Frequently, classroom arrangements must take into consideration students' needs for medications, special diets, or special equipment. Adaptive aids and equipment enable students to increase their range of functioning. For example, in recent years computers have become effective communication devices. Other aids include: wheelchairs, typewriters, headsticks (head gear), clamps, modified handles on cups and silverware, and communication boards. Computerized communication equipment and specially built vocational equipment also play important roles in adapting working environments for people with serious movement limitations.

Integration with nondisabled peers is another important component of the educational setting. Attending the same school and participating in the same activities as their nondisabled peers are crucial to the development of social skills and friendships for people with severe disabilities. Integration also benefits nondisabled peers and professionals through positive attitude change. People with severe disabilities are those who traditionally have been labeled as having severe-to-profound mental retardation. These people require ongoing, extensive support in more than one major life activity in order to participate in integrated community settings and enjoy the quality of life available to people with fewer or no disabilities. They frequently have additional disabilities, including movement difficulties, sensory losses, and behavior problems.

Note. From Multiple Disabilities Resources, by Ohio Coalition for the Education of Children with Disabilities. Available from http://www.ocecd.org/multipleDis.php

Handout 4

What You Should Know About the Characteristics of Down Syndrome Children

You may be wondering, "What are the characteristics of children with Down syndrome?" If you have a child who has just been diagnosed with Down syndrome, or you are a new teacher who works with children who have Down syndrome, you may be feeling a little overwhelmed by the challenge. There are so many things to learn, so many different things you need to know. But don't worry; after a while, it will all become second nature to you.

If you are new to the world of Down syndrome, here are a few things you should know about the characteristics of Down syndrome children.

Physical Characteristics of Down Syndrome Children

Down syndrome children share many characteristics. The most prominent characteristics of Down syndrome children are physical ones. Most of these are in the face…

- The eyelids are often slanted.
- The back of the head may be flattened.
- The ears and mouth are a bit smaller.
- The tongue may be slightly bigger than usual.
- The face [is] a bit rounder.

The physical features of Down syndrome [children] do not cause any impairments by themselves; they are just a very distinctive feature of people with Down syndrome. Not everyone has every one of these characteristics. Some have a lot, and some have less.

Mental Retardation is a Characteristic of Down Syndrome Children

Another prominent characteristic of Down syndrome children is mental retardation. Some children with Down syndrome have very severe mental retardation, while others may be affected only very mildly, or even be borderline average. Most often, though, children with Down syndrome have mild to moderate mental retardation.

They can also have slow motor development. It can take them much longer to learn how to walk than the average child and also much longer to talk and learn how to use language.

Having a Down syndrome child can be difficult, but a lot of people report that Down syndrome children bring joy into their lives. They are often very sweet, caring, and loving. They may be slow to catch on in a lot of areas, but they work hard to do what they are able to do.

Medical Characteristics of Down Syndrome Children

Besides their physical features and frequent mental retardation, what are some other things you should expect with your Down syndrome child? Unfortunately, most kids with DS [Down

syndrome] have a lot of accompanying medical issues. While DS [Down syndrome] itself is not treatable, a lot of the medical conditions that go along with DS [Down syndrome] are. Therefore, treatment focuses mostly on managing these medical conditions as well as providing an appropriate environment for children with Down syndrome to grow and learn.

These are some medical issues that children with Down syndrome may be more likely to have:

- **Hearing issues**. The majority of children with Down syndrome, perhaps up to 80%, have some sort of hearing impairment. Ear, nose, and throat specialists should be seen, and assessments should be done. Some kids could need hearing aids or other measures to help with their difficulties in this area.
- **Congenital heart problems** are a big issue with Down syndrome children. Roughly half of children with Down syndrome will have some kind of heart disease. Cardiac surgery is sometimes needed to fix these issues.
- **Intestinal issues**. There may be intestinal issues, especially with infants.
- **Eye problems** are more common in children with Down Syndrome. Some babies are even born with cataracts. Fortunately, these can be removed with surgery. You will often see children with Down syndrome wearing glasses, due to the high occurrence of both far and near sightedness in Down syndrome children, as well as having problems with being cross-eyed.
- **Weight problems.** Nutritional help is sometimes necessary. Some babies with Down syndrome will have failure to thrive in infancy. In teenagers and young adults, though, obesity can sometimes be a problem. Nutritional counseling and helping the person with Down syndrome plan their meals can help with this.
- **Thyroid problems** are also more common in children with Down syndrome. About 20% of kids will have hypothyroidism, which should be identified as early as possible to prevent more problems later on.
- **Seizures, sleep apnea, and skin disorders**: Children with Down syndrome are also at a higher risk for seizures, sleep apnea, and skin disorders, as well as for Alzheimer's later in life.

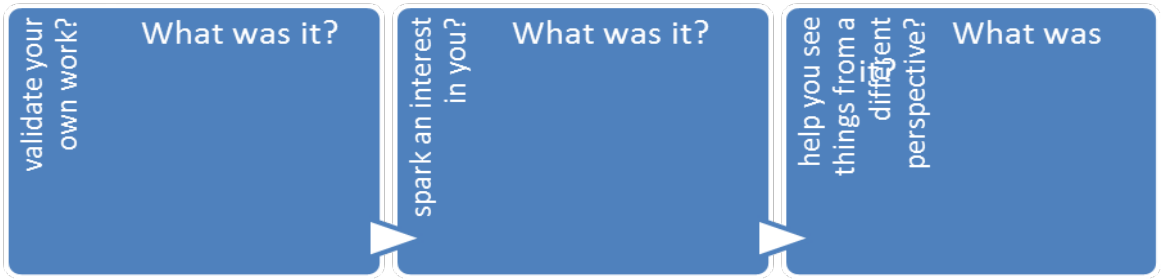
Note. From “Down Syndrome—What You Should Know About The Characteristics of Down Syndrome Children,” by C. Kendall, November 27, 2010, Ezine articles.
Retrieved from http://ezinearticles.com/?Down-Syndrome---What-You-Should-Know-About-The-Characteristics-of-Down-Syndrome-Children&id=5456626

Evaluation Form

Name:_____ Date_____Topic_____

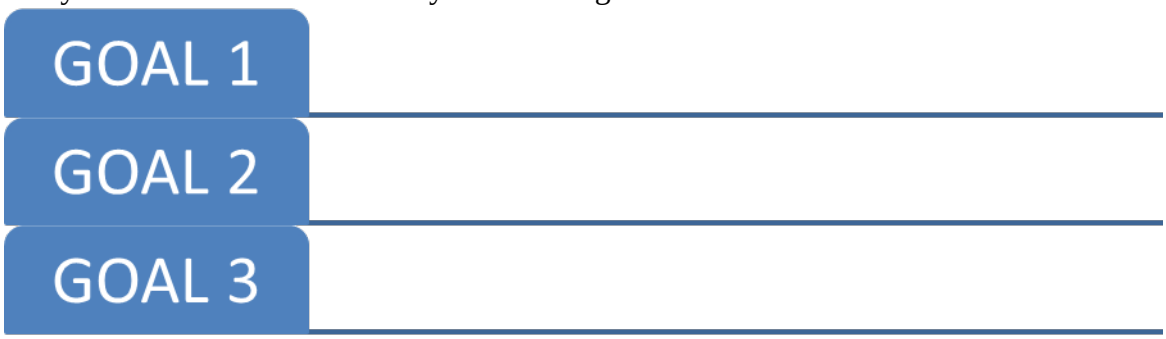
Identify Three Main Concepts or Ideas you are taking away from the workshop:

Did anything mentioned today. . .



What is one way you are going to use the information from the workshop today in your instructional practice?

List three goals you are going to make for yourself based on the topic of the workshop today. These will be reviewed at your coaching session.



MAY

Workshop Title: Professional Development Evaluation and Wrap Up

Time: 3 hours

Summary: The last workshop of the year will be dedicated to reviewing the data from the study as a means to see what the present levels of performance were at the beginning of the year and a way to evaluate the progress of teachers in making a systematic change in the service delivery in the classroom. It will reexamine the data from research questions of the study and review the outcomes of the project.

Learning Objectives:

- Participants will share self-reflection about professional development for the year and share their own growth and understanding about working with standards-based instruction and students with multiple disabilities who have cognitive functioning levels below 2 years of age.
- Participants will share artifacts from students demonstrating standards-based instruction.
- Participants will identify areas for continued professional development.

Materials:

Handout 1: Self-assessment questionnaire given at the beginning of the year for each teacher.

Handout 2: Evaluation Form

Procedure for Workshop:

A. Participants are greeted and introductions made.

1. As participants sign in, PowerPoints and handouts are available for them to pick up.

2. Teachers will be arranged in table groups to facilitate sharing and group interaction.

3 Set group norms.

4 Housekeeping business: breaks.

5 Goal is today is to do one of three things for each person: (a) validate what you are doing, (b) inspire you to investigate further, and (c) see things in a different way.

6 Participants will fill out the same self-assessment questionnaire they completed at the beginning of the year (Handout 1).

B. Teachers will discuss workshops.

1. Teachers will share challenges and triumphs in workshops including goals format least one workshop

2. Teachers will share artifacts to demonstrate workshop implementation

C. Teachers will share experience of small group community of practice.

1. Teachers will share challenges and triumphs in small group including goals format least one small group

2. Teachers will share artifacts to demonstrate small group implementation

D. Teachers will share experience of coaching.

1. Teachers will share challenges and triumphs in coaching including goals format least one workshop

2. Teachers will share artifacts to demonstrate coaching implementation

E. Teachers will use their own baseline information from questionnaire to determine next steps to improving instructional practice.

F. Goal setting and wrap up.

1. Teachers will fill out evaluation form (Handout 2) to set three goals they want to accomplish for themselves from the workshop today.

2. Teachers will share three things they are taking away from the day based on the goals from the beginning of session: (a) validate what you are doing, (b) inspire you to investigate further, and (c) see things in a different way.

Handout 1

A Self-Assessment for Providing Standards-Based Instruction for Students With Multiple disabilities who have cognitive functioning levels below 2 years of age

Rate yourself according to the following scale. How often do you . . . . . .?

1 = always 2 = often 3 = sometimes 4 = almost never 5 = never

A. ***Methodological Belief System About Abilities of Students***

1. _____ Believe that your students are able to do the grade-level content provided by the general education curriculum with modifications to their functioning level?
2. _____ Create lessons based on academic content equivalent to grade level of students?
3. _____ Know the standards that your activities are addressing?
4. _____ Use the excuse of the disabilities to hold lower expectations for your students?
5. _____ Say that the disabilities are too severe for students to be able to meet academic standards?

B. ***Professional Development***

6. _____ Received professional development that addressed the content areas for the students you work with?
7. _____ Get time to collaborate with colleagues to plan instruction?
8. _____ Get resources to teach grade level content?
9. _____ Receive support with instruction for your students?
10. _____ Receive strategies to modify content for your students?

C. ***Characteristics of Students***

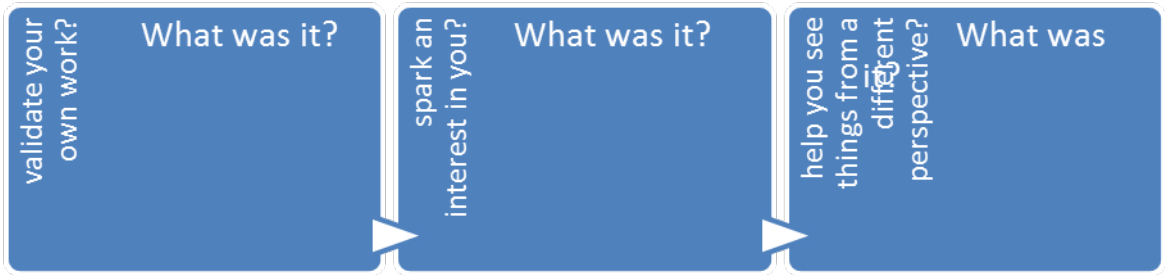
11. _____ Study the characteristics of the disabilities in your students?
12. _____ Adjusted your instruction to accommodate specific characteristics of disabilities in your class?
13. _____ Identify why a student is doing something based on the specific disability?
14. _____ Ask another professional about the specific characteristics of the disabilities in your class?
15. _____ End up realizing that the behavior of a given student is a typical characteristic of the disability?

Evaluation Form

Name:_____ Date_____Topic_____

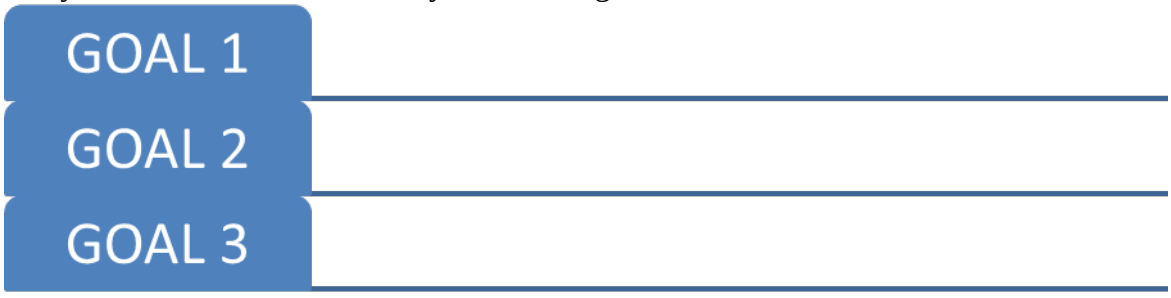
Identify Three Main Concepts or Ideas you are taking away from the workshop:

Did anything mentioned today. . .



What is one way you are going to use the information from the workshop today in your instructional practice?

List three goals you are going to make for yourself based on the topic of the workshop today. These will be reviewed at your coaching session.



Evaluation Plan and Materials

The last workshop of the year will be dedicated to reviewing the data from the project as a means to see what the present levels of performance were at the beginning of the year and a way to evaluate the progress of teachers in making a systematic change in the service delivery in the classroom. The May workshop is focused on reexamining the data from the research questions of the study and review the outcome of the project. This information will come from Handout 1 A Self-Assessment for Providing Standards-Based Instruction for Students With Multiple disabilities who have cognitive functioning levels below 2 years of age completed by participants in the May workshop. The team will be able to compare the same self assessment for that was completed at the beginning of the year. It is hoped that there will be a different response to the research questions that investigated (a) how teachers are providing standards-based instruction to students who are developmentally below 2 years of age and (b) how teachers are determining appropriate instructional strategies for these students. The evaluation tool is included in the materials from the May workshop. During this session teachers will bring in and share their goals, challenges and successes from each month of training. There will also be time to reflect on process, content and product of the training and set goals for the next phase of training.

During this month, the individual coaching sessions will allow teachers to do an informal self-evaluation based on topics addressed throughout the year with the administrator and look at professional growth and progress based on goals established throughout the year during each month of training. The communities of practice session will be structured to generate plans by the teachers for continuation of improvement plan for next year. They will ask and answer the questions “What worked?” and “Where do we need more support?”

Appendix B: Participant Invitation Letter

Date

Dear Educator,

My name is Tana Donaghy. I am an education doctoral candidate at Walden University. The purpose of this letter is to invite you to participate in a study designed to investigate how teachers working with students who are developmentally functioning below 2 years of age are meeting the federal legislature requirement to provide standards-based instructional practices in order to access general education level curriculum standards in a large southern California school district. This study will also explore how teachers are determining appropriate instructional strategies with students who have multiple disabilities and developmentally functioning below 2 years of age.

You are being invited to participate because you work with students who have multiple disabilities who are functioning below a developmental level of 2 years of age within a large southern California school district. This study will consist of two teachers from each of the elementary, middle, and high schools for a total of 20 teachers. Participation in this study involves an interview, one classroom observation session, and a review of your lesson plans.

Each participant will be asked to read and sign a human subject's consent form with assurances of confidentiality. Letter designations will be used for the identity of participants in order to ensure confidentiality. Each participant has the right to (a) participate voluntarily, (b) withdraw at any time, (c) understand the nature of the research and any impact on them, (d) ask questions about the conclusions; (e) have privacy protected, (f) understand any benefits that may accrue from the study, and (g) be provided a verbal or written consent form.

In the next few days, I will be contacting you in person. At that time please be prepared to accept or decline the invitation. Again, you are not under any obligation to participate in the study.

Thank you,

Tana Donaghy

Appendix C: Demographic Survey

Please make sure you have completed a consent form before completion of demographic survey.

All teachers interested in participation in this study need to complete this demographic survey. This survey will be used to ensure that criteria are met in the selection of potential participants.

From the qualified pool of respondents six teachers will be invited to participate in a pilot test of data collection tools. Twenty teachers will be invited to participate in actual study.

Name _____

What credentials do you hold?

How many years have you worked with students who have multiple disabilities who have cognitive functioning levels below 2 years of age who function developmental below 2 years of age?

What grade level are your students?

Appendix D: Teacher Consent Form

You are invited to take part in a research study on the "Examining the Instruction of Students with Multiple Disabilities Functioning Developmentally Below 2 Years of Age in Grades K-12." You were chosen for the study because you work with students who have multiple disabilities who are developmentally functioning below 2 years of age within a large southern California school district.

This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part. Researcher, Tana Donaghy, who is a doctoral student at Walden University, is conducting this study. As part of full disclosure procedures, it is important that participant is aware that Tana Donaghy is an employee of the same school district as all participating teachers. This study is completely separate from role of employee at district.

Background Information: The purpose of this study is to explore how teachers working with students who have multiple disabilities and are developmentally functioning below 2 years of age are meeting the federal legislature requirement to provide standards based instructional practices in order to access general education level curriculum standards in a large southern California school district. It will explore the how teachers determine instructional practices for these students.

Twenty teachers will be selected for interviews and classroom observations. All data collected will be analyzed for patterns, themes, and links associated with the research question.

Procedures: If you agree to be in this study, you will be asked to:

Complete a demographic survey asking about number of years working with this student population, credential held and grade level of students.

From those that complete the survey, some teachers will be randomly selected to also be interviewed and observed, as explained further below. Only 20 teachers will be needed for interviews and observations.

Participate in a confidential audio recorded interview lasting approximately 60 minutes. Once the audio recording is transcribed, you will be given an opportunity to review the notes of the interview to determine if it is accurate and if you would like to add anything to your statement.

Allow the researcher to observe a normal teaching period lasting approximately 30 minutes.
Provide lesson plan for standards-based instruction

There will be an estimated total time commitment of 1 hour and 30 minutes.

Voluntary Nature of the Study: Your participation in this study is voluntary. This means that your decision of whether or not you want to be in the study will respected with no repercussions. No one will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind during the study. If you feel stressed during the study you may stop at any time.

Risks and Benefits of Being in the Study:

The following are considered minimal risk:

Unintended disclosure of confidential information because identifiers will be on interview and observation documents during the interview, observation, and analysis only.

Perceived coercion to participate due to any existing or expected relationship between the participant and the researcher because the researcher will be a selecting participant from the county school system where researcher is employed.

Student names will be removed from all artifacts collected and replaced with a corresponding code for identification purposes.

The results of this research will add to a limited bank of research done on the standards based instruction with students with multiple disabilities. On a local level it will make administrators aware of professional development needs of teachers working with this unique population of students. The most important implication for practice from this research may be a systematic approach to educational instruction for students with multiple disabilities functioning below 2 years of age for teaching mathematics, English language arts and science. This systematic approach may be able to affect a new alternate assessment that utilizes a growth model and impacts instructional strategies.

Compensation: There will be no compensation for being in the study.

Confidentiality: Any information you provide will be kept confidential. The researcher will not use your information for any purposes outside of this research project. Also, the

researcher will not include your name or anything else that could identify you in any reports of the study.

Contacts and Questions: You may ask any questions you may have about the study now. Or if you have questions about the study later, you may contact the researcher via misstanad@aol.com, or tana.donaghy@waldenu.edu. You may also contact the university's Research Participant Advocate with any questions or concerns about your rights as participants at 612-312-1210 or email address irb@waldenu.edu . Walden University's approval number for this study is 09-18-13-0248050 and it expires on September 17, 2014.

Statement of Consent: I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By signing below, I am agreeing to the terms described above. Electronic signatures are regulated by the Uniform Electronic Transactions Act. Legally, an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically.

You are encouraged to keep a copy of this consent form for your records.

Date of Consent:

Printed Name of Participant:

Participant's Written or Electronic* Signature:

Researcher's Written or Electronic* Signature:

Appendix E: Participant Interview Questions

The two main research questions guiding this project study will be:

1. How are teachers providing standards-based instruction to students who multiple disabilities and are developmentally below 2 years of age?
2. How are teachers determining appropriate instructional strategies with students who have multiple disabilities and are developmentally functioning below 2 years of age?

Interview Questions

1. What teaching credentials do you hold?
2. How many years have you worked with students with multiple disabilities who are functioning below 2 years of age?
3. What grade level are your students?
4. Are you aware of the federal legislative mandates regarding your students?
5. What drives your daily schedule in your class?
6. How do you provide access to grade-level standards?
7. How do you determine what types of instructional strategies you feel you need to use in your classroom?
8. How often do you attend professional development related to content areas?
9. What is your opinion on standards based instruction for students with multiple disabilities who are functioning below 2 years of age?

Appendix F: Sample Interview Transcript

Introduction:

Interviewer: Welcome and thank you for your time today. I just want to review the Invitation to Participate form that you signed when you agreed to participate in this study. The title of my study is "Examining the Instruction of Students with Multiple Disabilities Functioning Developmentally Below 2 Years of Age in Grades K-12." The purpose of this study is to determine how teachers are working with students who have multiple disabilities who have cognitive functioning levels below 2 years of age and who are developmentally functioning below 2 years of age to meet federal legislative mandates for standards-based instruction.

You were among the teachers who met the requirements for participation based on your years of experience working with students who have multiple disabilities who have cognitive functioning levels below 2 years of age and who are developmentally functioning below 2 years of age. I have already collected your information from the SurveyMonkey website. From those that completed the survey, 20 teachers were randomly selected to be interviewed and observed.

Thank you for allowing me to observe your class and agreeing to speak with me about your kids. I am recording today's interview so I can capture all of your thoughts correctly and so that I can develop a transcript of your opinions in regards to the education of students with multiple disabilities who have cognitive functioning levels below 2 years of age.

After I write up the transcript, I will ask you to review it to make sure I have written out your responses correctly.

Interviewee: Okay.

Interviewer: This interview will be number coded so that I can keep your identity confidential. There are no right or wrong answers, I just want our honest and professional opinion. I predict that this interview should take about 45-60 minutes to complete. Any questions?

Interviewee: No.

Research questions:

Interviewer: Before we begin, I would like to go over my research questions so you will understand what questions my study is attempting to answer. This study has two main questions it will collect data to answer. The first one is "How are teachers providing standards-based instruction for students developmentally functioning below 2 years of age in kindergarten through 12th grade. In addition, this study will examine how teachers are determining appropriate instructional strategies with these students. Any questions?

Interviewee: Not yet, but we don't really focus on standards-based instruction.

Guiding questions:

Interviewer: Let's start with your credentials? What credentials do you hold?

Interviewee: A moderate to severe special education credential.

Interviewer: And how many years have you worked with students with multiple disabilities who are functioning below 2 years of age?

Interviewee: Sixteen years.

Interviewer: What grade level are your students?

Interviewee: I have students between third grade and sixth grade.

Interviewer: Tell me about your kids.

Interviewee: I have seven kids that range in functioning levels from 4 to 11 months old. They all have to be diapered. Four of them are G-tubed and three have to be fed by hand. They have cerebral palsy, Down syndrome, Angelman's syndrome and autism. Several of my kids have seizures so we have to keep track of them. One kid has seizures up to 3 mins. five or six times a day.

Interviewer: Are you aware of the federal legislative mandates regarding your students?

Interviewee: If you are talking about NCLB and IDEA, yes.

Interviewer: So you are aware that the IDEA requires that you are doing standards-based instruction with standards-based IEPs?

Interviewee: I use the SEACO guide and the CAPA standards

Interviewer: What drives your daily schedule in your class?

Interviewee: Diaper changing and feeding, IEP goals and objectives, which staff show up, behavior, mood of the students.

Interviewer: Tell me what your day looks like.

Interviewee: School starts and 8:30, but the buses arrive at 8:20. I have two paraeducators that ride the bus so but the time they arrive and we get the kids off the buses it is 8:45-8:50. Once the kids get to school, we do all the diapering and begin feeding. Then we have morning circle where we doing roll call, good morning songs, days of week and calendar. We also do the alphabet, number rock, and hand jazz. Then we have life skills on Monday, Wednesday and Friday, and prevocational skills on Tuesday and Thursday. Then the kids go out for recess at 10-10:30. When they come in we have listening skills and some go to speech. After that we do story time and lunch. In the afternoon we do life skills, math, and arts and crafts. Then we have APE and independent study and free choice. At 2:00 we begin to get them ready for the bus. Feeding and diapering take up all my time. Along with medical issues, it takes so long to feed a student with G-tube, and then the suctioning and seizure protocols do take all our time.

Interviewer: How do you provide access to grade-level standards?

Interviewee: As I said earlier, we use the SEACO curriculum guide and the CAPA standards for our IEPs. We focus on functional skills and independent living skills according to the IEP goals and objectives.

Interviewer: How do you determine what types of instructional strategies you feel you need to use in your classroom?

Interviewee: Accommodations are based on student ability level, and interests. We use assessment data and positioning of students.

Interviewer: How often do you attend professional development related to content areas?

Interviewee: I have attended some great professional development trainings in the last year. I go to everything about working with these kids. I went to the autism institute, and 4 days of "Every Move Counts" about intentional communication, and I every year I complete the required CPI and CPR training. I have my MOVE certification. I also went to the Conscious Discipline training this year.

Interviewer: What about any trainings on content areas like math, ELA, science, history and social studies.

Interviewee: I don't remember ever any workshops for SD on content. I know that the diploma-bound teachers are getting training on Pictorial Math and Bridgeworks.

Interviewer: What is your opinion on standards-based instruction for students with multiple disabilities who are functioning below 2 years of age?

Interviewee: Students who are functioning below 2 years old need to build independent living skills and be focused on quality of life instead of academics.

Interviewer: So what do you think kids functioning below 2 years should be working on?

Interviewee: We work on functional skills and socialization skills. I have them do independent skills with a staff member to work on their IEP goals. We might do some prevocational skills like grasping and releasing or recreation and leisure since that is what they will be doing when they leave our programs.

Interviewer: You've mentioned that your program is mainly focused on IEP goals and objectives. What are typical IEP goals?

Interviewee: I write goals for my students that will help with independent living skills. Things like attending to task, tolerating diaper changing, will communicate a need or a want, will chose her own photo, will participate by cooperating in and tolerating range of motion exercises. I work on sensory stimulation skills.

Interviewer: Thank you for sharing your opinions and ideas regarding the education of these students. Do you have any last comments?

Interviewee: Well, just that expecting these kids to do academics and standards is ridiculous. They should could work in our classrooms and really see what our kids are like before making unrealistic expectations into legislation.

Interviewer: Thank you again for your time. Let me remind you about the confidentiality of this interview and that I will have the transcript of it ready for you to review in a couple days. If you have any questions please refer to your consent letter for contact information.

Appendix G: Observation Protocol

Place: Observations will be held in the individual classrooms of participating teachers.

Purpose: To observe

1. How teachers are providing standards-based instruction to students who have multiple disabilities and are developmentally below 2 years old?

2. How are teachers determining appropriate instructional strategies with students who have multiple disabilities and are developmentally functioning below 2 years of age?

What to look for: Researcher will be looking for a variety of standards-based instructional practices, and evidence of grade-level standards.

Time: 60 minutes.

Aim: During the observation the researcher will take notes on the teaching methods used by classroom teachers.

Participant _____ Date:_____

Location: _____ Time:_____

Observation Notes	Reflective Notes

Appendix H: Sample Field Notes from Observation

Place: Observations will be held in the individual classrooms of participating teachers.

Purpose: To observe how, teachers are providing standards-based instruction to students who have multiple disabilities and are developmentally below 2 years old?

How are teachers determining appropriate instructional strategies with students who have multiple disabilities and are developmentally functioning below 2 years of age?

What to look for: Researcher will be looking for a variety of standards-based instructional practices, and evidence of grade-level standards.

Time: 60 minutes.

Aim: During the observation the researcher will take notes on the teaching methods used by classroom teachers.

Participant 3 Date:_____

Location: Southern California Middle school Time: 10:00 a.m.—10:45

Students: There are 10 students, four boys and six girls. There are three ambulatory students and seven who utilize wheelchairs. It would appear that a few students have Down syndrome, and others have Cerebral Palsy. Some have autism or autistic tendencies. The seven in wheelchairs need to have diapers changed. It appears that three have G-tubes.

Environment: The room has no student desks, student chairs and two large tables. Activities are conducted on the tables and on the wheelchair trays. The decorations are closer to elementary or preschool images and colors. There are posters of animals with the letters of the alphabet along the top of the walls. There is a platform that appears to be

used to change diapers. There is a privacy screen that is pulled in front of the platform when changing is done. There is a TV and one computer. There did not appear to be a content-based schedule to guide instruction. The schedule seemed to be a list of activities: Toileting, morning circle, small group, story time, snack, centers, lunch, art, songs, IEP goals, get ready to go home.

Lesson: The lesson I observed was during the period titled "Storytime." The teacher had all the students in a circle and had a big book entitled The Napping House on a stand. The teacher read each page to the students. There was no interaction between the book and the students. The other adults in the classroom were taking one student at a time into the bathroom or laid them on the platform to change them. No evidence of standards, or differentiation. No evidence of communication systems or interaction.

Materials: The materials used in the lesson consisted of the big book. It did not appear like the students were able to read or understand the words of the story, but no objects were used to explain the meaning.

Conclusion: There did not appear to be any real instruction happening in this classroom nor lesson. It would appear that the teacher is not aligning what is happening in the classroom to any legislative mandates regarding academic instruction for these students

Appendix I: Artifacts Review Checklist

Participant:_____ Date:_____
Type of Artifact: _____

	Item	Present or not present	Comment
1	Is there evidence of differentiation of instruction?		
2	Is there a state content standard listed?		
3	Are there goals and objectives related to the state standard?		
4	Is there an alignment of activity to standard?		
5	Is the content standard grade appropriate?		
6	Is there evidence of instruction at the functioning level of student?		
7	Are materials appropriate to the grade level and functioning level of students?		

Appendix J: Data Summary Sheet Main Ideas—Interview Question

Interview Questions	Categories	Key terms/phrases (in interviews that refer to categories
Question 4. Are you aware of the federal legislative mandates regarding your students?	Belief System	Independent living skills, quality of life, working on functional needs, need things that can take them through their life.
Question 5. What drives your daily schedule in your class?	Belief System	Individual Education Plan Goal and Objective (IEP), staff, behavior, feeding, diapering.
Question 6. How do you provide access to grade-level standards?	Belief System	Functional skills, not able to do academics.
Question 7. How do you determine what types of instructional strategies you feel you need to use in your classroom?	Belief System	Functional skills, not able to do academics.
Question 8. How often do you attend professional development related to content areas?	Professional Development	Never, none, I do not remember ever having PD in content areas, I go to everything.
Question 9. What is your opinion on standards-based instruction for students with multiple disabilities who are functioning below 2 years of age?	Characteristics of Students	My kids cannot do academics, it is ridiculous to make them do academics, functional skills.

Appendix K: Topics to Patterns and Codes

Topic 1. Belief System (bs)

Functional rather than academic (bs.frta.)

Independent living skills (bs.frta.ils)

Sensory stimulation (bs.frta.ss)

Too low to do standardized testing, and standards (bs.tlfs.)

No meaningful interaction with test (bs.tlfs.nmi)

Individualization of instruction (bs.tlfs.ii)

IEP goals drive day (bs.iep.)

The team agreed on these areas of deficit (bs.iep.aod)

Independent needs (bs.iep.in)

Topic 2. Professional Development (pd.)

Did not have grade-level content knowledge (pd.nck.)

Lack of content knowledge instruction (pd.nck.tr.)

No training in standards based instruction (pd.nck.sbi)

No collaboration with general education resources (pd.nck.ncol.)

No Curriculum (pd.nc.)

No materials, or assessment (pd.nc.ma.)

No training on strategies for instruction (pd.nc.sfi.)

Topic #3 Characteristics of Students (cs.)

Severity of disability

Custodial care (cs.sd.cc.)

Medical care (cs.sd.mc)

Specific disabilities (cs.sdis)

Multiple disabilities (cs.sdis.md)