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Teaching Students with Severe Cognitive and Emotional Disabilities Using Reverse Inclusion and the Arts

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Abstract

The foundation of inclusion is to provide a sense of belonging, meaning and purpose for all students. In theory, the emotional, social, and academic needs of special education students are met by a specialized team of educators within an existing program for typically developing children. For a number of students with severe cognitive disabilities and behavior disorders, this type of inclusive setting is not practical, accessible, or beneficial given the complexities of the students and the programs offered. Furthermore, there is limited research supporting the benefits of inclusion for students with severe disabilities and certain behavioral disorders, which implies a need for further research and examination of inclusive programs available. It is important to first describe some of the complexities, which exclude some students from participating in traditional inclusive classrooms. For example, a student with a severe disability may have medical and daily living needs, which are better monitored and controlled within a self-contained special education setting. This student might require the constant care and attention from a classroom nurse who administers medications, monitors seizure activity, and provides emergency medical assistance at a moment’s notice. Some of the complications may be life threatening if the proper time of response, medications, and positioning apparatus are not in place. Therefore, a student may not be safe away from his/her special education setting. In addition, due to the lack of staffing, training, and environmental factors, some students with behavior disorders and sensory integration needs may not have the supports required to thrive in a general education setting.

What recent research does suggest is that same-aged general education peer support does benefit students with severe disabilities and behavior disorders. A reverse inclusive classroom is one setting that provides for the benefits of peer group support while maintaining the critical environmental, medical, and trained staffing required for the students who are not able to thrive in a general education classroom. In addition, this type of classroom requires a curriculum that is easily accessible, teaches preferred behaviors, facilitates communication, and includes social/emotional and sensory/motor integration so as to support the most critical needs. Music, movement, and the arts has been researched and proven to provide all of the needs mentioned.
Chapter One

Introduction

“Inclusion with non-disabled peers has been shown to result in increased awareness and responsiveness, increased skill acquisition, gains in communication skills, development of friendships, and an enhanced sense of belonging.” (Fisher & Meyer, 2002). Unfortunately, inclusion is not a viable option for some students with severe cognitive and behavioral disorders. Even with established inclusive programs, some students are not able to participate due to concerns such as, staffing support, medical needs, safety, scheduling, and programs that cannot accommodate for their academic, social, and emotional needs. Furthermore, for students placed in segregated self-contained classrooms, exposure to same-aged general education peers is limited or non-existent. In most cases, the need for same-aged peer group exposure is crucial for the learning of socially acceptable behaviors, the development of language skills, and exposure to the community. “A significant percentage of the students in the self-contained setting may be non-verbal, which may inhibit language development for other students. Also, maladaptive behavior may be modeled by fellow students, and the students do not have the opportunity to develop and maintain meaningful relationships with same-aged students (Schoger, 2006).”

Even with inclusive practices in place, there remains a need for educators to develop a comprehensive program that not only facilitates the building of relationships between students with severe cognitive and behavioral disorders and same-aged peers, but, also allows for equal entry/exit opportunities for students to learn new skills, and express themselves freely within a low-stress environment.

Having identified the need for this project, the author will discuss the purpose of research, preview of literature and methodology, discuss the results of the curriculum developed from this project, and develop a guideline from which special educators can accommodate and provide for the development of friendships through meaningful academic, social, emotional, and expressive interactions between same-aged general
education and special education students identified as having severe cognitive/behavioral disabilities.

**Purpose of Project**

The following research questions are the basis of the present study: How can same-aged peer group support be provided in a segregated self-contained classroom? How can social interaction between general education peer students and special education students who are non-verbal and/or exhibit aggressive behaviors be facilitated? What cognitive strategy instruction can be designed, and modeled by peer students, to improve social, sensory-motor, and expressive/receptive language skills for students with severe cognitive/behavioral disabilities? Students with severe cognitive disabilities may have multiple complications. For instance, a student with cerebral palsy may also have cortical-visual impairment, loss of hearing, a gastronomy tube for feeding, a tracheotomy tube to support breathing, and suffer from multiple daily seizure complications. Additionally, the student may require a breathing apparatus, such as an oxygen tank, or require medications that can be administered at a moments notice. Another student identified as being on the autism spectrum may have low cognitive skills, limited speech and express aggressive behaviors resulting from sensory overload, frustrations from inability to communicate feelings, improper transitioning, lack of a clear structured routine, or task avoidance. In a general education classroom, it is difficult to accommodate for the needs of the aforementioned students, especially when complications arise. Considerations for the environment such as lighting, sounds, staffing, class size, entry/exit strategies, role of the peer students, medical apparatus, and Assistive Technology must be addressed even before considering the methodology and delivery of instruction. This clearly demonstrates a need, other than inclusion into mainstream classrooms, to accommodate for students who would benefit greatly from same-aged peer group support within a safe, secure, and appropriately staffed classroom. Another form of inclusion, known as reverse inclusion, is an alternative program, which addresses this current need.
“Reverse inclusion refers to settings whereby a relatively small group of typically developing children (usually 25% to 40% of the total) is added to a specialized program for children with disabilities.” (Rafferty, Boettcher & Griffin, 2001)

Reverse inclusion is not only beneficial to students with disabilities, but, based on participating general education surveys, peer students reported that they not only learned more about students with special needs, but they also benefited and developed friendships that they would not have contemplated before.

As cited in Schoger, 2006, “General education students develop respect for others with diverse characteristics and unique abilities; they increase their understanding of other children’s needs, and become more comfortable around persons with disabilities (Renzaglia et al., 2003). Most importantly, they learn how to be friends with people who are different from themselves and to value human differences. This in turn prepares them for living and working in a pluralistic society (Alper & Ryndak, 1992)”. This project will demonstrate how to work with general education teachers and administrators on a system of allowing for and preparing general education students to attend self-contained special education classrooms. Additionally, it will explain and detail the specific necessities required to support and engage learning, participating, and building relationships on several different levels.

In a reverse inclusive setting, the researcher will detail how to integrate instruction through the arts with the advantages of the special education staff, Assistive Technology, and preferential seating to support meaningful interaction between all students within a safe and secure setting. With such a diverse group of students, the researcher will introduce an instructional program that provides for academic learning, the building of relationships, and expressive communication using the arts. Teaching through music, movement, and singing are methodologies where by all students can participate and learn at their own level. “All children can be helped to learn to enjoy and to become involved in music to some extent” (Walker, A. 1996). Music and movement can have significant value for students who have difficulties with seeing, moving, hearing, thinking, and speaking. On their own level and in their own way, the uncomplicated sound of music, and singing, clapping, tapping, and dancing provides a means by which students can
engage and contribute in a group activity as independently as possible. In addition to being educational, music can be therapeutic for students with emotional difficulties. “It neutralizes negative feelings, increases stress tolerance level and harmonizes inner peace.” (Sze, S. 2006) Recently, there have been several different independent studies suggesting that the arts are linked to academic achievement through three specific areas; listening to music, learning to play music, and through dancing or drama. Music is believed to enhance language learning, and dance stimulates creativity, social skills, and motor learning. This project will, therefore, focus on a 45 minute circle-time activity for 12 students identified as having severe cognitive disabilities and/or behavior disorders integrating music, movement, song, and dance with the support of 4 same-aged general education peer students in a reverse inclusive setting. The project will describe the effects on academic, social, emotional, and motor skill development. In addition, it will describe the benefits of established friendships for all students and how to arrange and facilitate such an activity.

**Preview of Literature**

The literature review in this project first focuses on defining and explaining the benefits of reverse inclusion for students with severe cognitive/behavioral disabilities. Secondly, the study will discuss the value of strategy instruction using the arts. The literature review will discuss what prior research has discovered on music, movement, and other arts based strategies benefiting students with severe cognitive and emotional disabilities. Lastly, the preview of literature will not only address cognitive/academic benefits, but also describe the means by which music and movement are linked to enhanced communication/social interaction skills and fine and gross motor skill development.

**Preview of Methodology**

This project involved the development of a curriculum unit to facilitate improved communication, sensory, auditory, and motor skill development through IEP goals and objectives created from instructional best practices using the Special Education Administrators of County Offices (SEACO) Curriculum Guide for Students with
Moderate to Severe Disabilities. A music for special education program known as Tuned in to Learning was used to facilitate language, behavior, and social skill development. The project results in a comprehensive unit plan following modified English Language Arts Content Standards for the first grade. Students who will use this curriculum will be instructed from research based methodologies discovered in the literature review. Sheltered Instruction Observation Protocol (SIOP) lesson plan format was used in order to provide access to the curriculum for all learners.

**Significance of Project**

Researches on parent feelings about inclusion are, for the most part positive, but with some valid concerns. According to research conducted by Griffin and Rafferty, 2005, parents of students involved in inclusive programs are more likely than parents of children in segregated programs to report that their child has developed a friendship with a child outside of school who does not have a disability. “Parents often attribute their child’s developmental gains to the enhanced social exchanges in inclusive settings and opportunities for modeling age-appropriate skills (Bennett et al., 1997; Guralnick, 1994). Some parents are concerned that their child may be rejected or ridiculed by typically developing children. Thus, it is important to emphasize the role of the educator to properly prepare and educate general education peer students on ability awareness, their role as peer tutor, and the classroom expectations. Griffin and Rafferty’s research concluded that most parents and providers favor inclusive practices, but less than 25% of parents and providers of children with severe disabilities were in support of an inclusion program. Although there is an abundance of research on the impact of music, movement, and the arts benefiting special education students, there is limited research and information regarding reverse inclusion. Furthermore, a research-based curriculum developed exclusively for students with severe disabilities does not exist. Therefore, this project may provide some insight on how to better meet the needs of students with severe disabilities and behavior disorders.
Definition of Terms

**Inclusion.** “Inclusion in education is an approach to educating students with special educational needs. Under the inclusion model, students with special needs spend most or all of their time with non-disabled students. Implementation of these practices varies. Schools most frequently use them for selected students with mild to severe special needs (Wikipedia, 2012).”

**Cognitive Disability.** “Intellectual disabilities, also known as developmental delay or mental retardation, are a group of disorders defined by diminished cognitive and adaptive development. Affecting more males than females, they are diagnosed in between one and three percent of the population.

Many cognitive disabilities have a base in physiological or biological processes within the individual, such as a genetic disorder or a traumatic brain injury. Other cognitive disabilities may be based in the chemistry or structure of the person's brain. Persons with more profound cognitive disabilities often need assistance with aspects of daily living. Persons with minor learning disabilities might be able to function adequately despite their disability, maybe to the point where their disability is never diagnosed or noticed. (Disabled-World, 2012)”

**Self-Contained Classroom.** “Located within a regular education school, a full day or mostly full day class or program for children with disabilities, usually composed of children in the same categorical grouping who cannot be educated appropriately in a regular classroom; characterized by highly individualized, closely supervised specialized instruction. (Education.com, 2012)”

**Emotional and Behavioral Disorders.** The Individuals with Disabilities Act (IDEA) uses the term “emotional disturbance”, which is a general term also referring to emotional/behavioral disorders, mental illness, and schizophrenia.

“IDEA defines emotional disturbance as follows:
“…a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child’s educational performance:

(A) An inability to learn that cannot be explained by intellectual, sensory, or health factors.

(B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers.

(C) Inappropriate types of behavior or feelings under normal circumstances.

(D) A general pervasive mood of unhappiness or depression.

(E) A tendency to develop physical symptoms or fears associated with personal or school problems.”

As defined by IDEA, emotional disturbance includes schizophrenia but does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disturbance (National Dissemination Center for Children with Disabilities, 2012)

**Sheltered Instruction Observation Protocol (SIOP).** SIOP is a researched-based structured model of instruction, which helps teachers plan and deliver lessons that provide English language facilitation through varied methods of instruction using visual, auditory, kinesthetic, and tactile supports.

**Ability Awareness.** Ability awareness refers to a process of understanding and appreciating disabilities within society. Teaching ability awareness brings to light ways in
which others perceive the world in hopes of building acceptance for our individual differences within a nurturing environment for growing and learning.

**Collaboration.** Educators share responsibilities of goals, decisions, classroom instruction, problem solving, and classroom management. Special education and general teachers work together to develop new skills and strategies to help all students meet educational standards within one classroom.

**Summary of Chapter**

This chapter discussed the purpose of the project in order to describe the need and implementation of a reverse inclusive program for a segregated self-contained classroom of students with severe cognitive and emotional disabilities. The chapter also outlines a comprehensive review of the associated benefits music, movement, and the arts plays in the support of student cognitive, social, and motor development. Chapter 2 focuses on research related to inclusive practices including reverse inclusion. It will also provide researched evidence from leaders in the field of education on how instructional programs using music, singing, result in sensory, social, emotional, cognitive, and motor skill development gains for students with severe disabilities and behavior disorders.
Chapter Two

Literature Review

Beginning at the earliest stages of psychosocial development, typically-developing infants have been exposed to music therapy as a means of facilitating interaction and communication with children with multiple severe disabilities. Beyond examining interaction and communication, the study, known as Greenspan’s model, focuses on early stages of growth and how it leads to later skills and a sense of self. Music therapists working with children at an early stage of development have successfully used music to promote stimulation and arousal, thus increasing engagement, awareness of the environment, and alertness to people. Additionally, exposure to music therapy has been shown to limit infants agitation associated with feelings such as pain, fatigue, isolation, and hunger. A form of “musical communication” exists when there is a sharing of rhythm, sights, sounds, and movement. A form of intimacy forms from this type of relationship and creates relationships, which become the focus of stimulation and pleasure. The music can be manipulated to promote opportunities for extended communication.

Academic/Social/Emotional Benefits of Music

There has been recent researched-based evidence demonstrating that music can be useful as a basis for learning (Collett, 1992), to treat students with emotional and behavioral disorders (Houchens, 1983, Shennum, 1987, Gfeller, 1989, & King, 1984), as well as benefit students with mental retardation, learning disabilities, and other disabilities such as Autism (Staum, n.d.; & Stambough, 1996). As an instrument of academic learning, music and movement incorporates hands-on experiences that are essential to reasoning, analyzing, evaluating, problem solving, and enhancing creativity. Furthermore, music can be used to support speech development for students with cognitive disabilities.” Straum suggested the use of music to assist students with autism in the areas of social and language development. Autistic children have eliminated their monotonic speech by singing songs composed to match the rhythm, stress, flow and inflection of the sentence followed by a gradual fading of the musical cues. Straum also
states that “music can be used as a tool to encourage human development in cognitive, learning, perceptual, motor, social and emotional development” (as cited by Sze, S. 2006). Sze emphasizes how music acts as a tension release and therapy, which allows students to engage and express both individually and as a group. Sze suggests multi-sensory channels such as visual and kinesthetic integration with music to provide the highest educational opportunities. In addition to teaching strategies, Sze provides proven benefits of music on cognitive and social-emotional development. Furthermore, Sze supports language facilitation by suggesting the use of music according to interests, and non-verbal opportunities to assure that all students can contribute.

Students with pervasive developmental disorders have marked differences from typical students in the areas of communication, socialization, and repetitive behavior. With the difficulties in social exchanges, the wide range of behaviors, the time needed to process information, and ability to maintain attention to activities exclude many students with disabilities from whole group activities and discussions. Additionally, whether translating information about routines, academic content or social expectations, teachers rely on verbal language. For many students with cognitive disabilities, this is ineffective. This contrast between teaching and learning styles makes it difficult for students with cognitive disabilities to process and organize information effectively.

Music has been demonstrated to promote increased engagement, and improve the processing and recollection of information for students with cognitive disabilities. When incorporated with individual interests, predictable routines, and structure, music only, teacher mediated music activities, and peer-mediated activities have been linked to increased social interaction with peers. Kern and Aldridge (2006) and Bronwell (2002) suggest that simply introducing music is not enough to increase social interaction or skills. The research suggests increases in social interaction when music is paired with structure, routine, and visual supports.
Movement and Dance as a Learning Tool

“Benefits to using creative movement and dance as teaching tools in the classroom include increased student understanding of content, improved classroom behavior, and the development of new forms of assessment (Skoning, 2008).”

Stacey N. Skoning, author of “Movement and Dance in the Inclusive Classroom” draws upon Howard Gardner’s theory of multiple intelligences to integrate kinesthetic learning in an inclusive setting. Skoning offers research supporting visual-motor and kinesthetic approaches to encourage the creative development of children with cognitive disabilities. Additionally, Skoning suggests that students with cognitive disabilities may have stronger skills in musical, visual, or kinesthetic intelligences. Skoning also draws upon studies suggesting that students with behavioral challenges are most often kinesthetic learners, and, when provided with the opportunity to move while learning, they decrease non-compliant behaviors. Skoning’s article provides a wealth of research-based literature supporting the use of movement and dance in and inclusive setting. In and of itself, movement and music can be used in any type of classroom environment, but Skoning provides valid reasons demonstrating why kinesthetic learning is more beneficial for students with cognitive/emotional disabilities.

(Lee, S.B., 2002) Encouraging Social Skills through Dance: an Inclusive Program in Korea conducted a study in a classroom in Korea where social skills were taught through music and dance. Some of the students were identified as having severe emotional and developmental disorders. For example, one student had maladaptive behaviors such as hitting, grabbing others’ hair, and displaying out of seat behavior. Another student had temper outbreaks, inappropriate response behaviors, and ignored and secluded himself from others. Along with another student with similar non-compliant behaviors, the two teachers used their collective experience with song and dance to include them in a classroom activity with seven typical students. The teachers used the songs the “Hokey Pokey” and “Put Your Finger in the Air” to educate the students about body image. In addition, the lesson was designed to increase social interaction and decrease isolation. “Social isolation from early childhood could be indirectly linked to school bullying,
physical or psychological harassment and abuse as children grow (Ahmad & Smith, 1994; Batsche & knoff, 1994; Olweus, 1993; Smith & Sharp, 1994).” Beyond the main objectives for the lesson, the non-compliant students were learning to improve social and communication skills including how to appropriately respond to behaviors and socially interact as witnessed through the modeling from peers. “Many educators have found peer mediation effective in teaching academic, communication, and social skills to children who display maladaptive behaviors (Diamond , 2001; Mervis 1998).” The classroom activity was successful in decreasing inappropriate behaviors and increasing appropriate behaviors. Although the study from this classroom was inconclusive as to whether the results were directly related to the dance and music, or simply a result of working with others in a group, the music and movement provided an easy and mutual avenue for students to interact.

The study conducted in Korea presents a need for further and more “concrete” research on the benefits of inclusive small group interaction using music and movement to educate students with severe cognitive and emotional needs. In addition, “studies should be conducted on the effects on peers as they participate in a peer-group dancing program or cooperative tasks, such as efforts on academic achievement, self-esteem, and attitude toward socially isolated peers.” (Lee, Sang B. 2002)

The Arts Role in Inclusive Classrooms

As cited by Mason, Steedly, & Thormann, 2004, “Onosko and Joergensen (1998) and others have indicated, the arts are sometimes recommended as a part of an instructional strategy for use in inclusive classrooms, particularly as either “openers” to get attention and create interest, or as culminating projects for students to demonstrate their learning, particularly in cooperative learning situations (Qin, Johnson, & Johnson, 1995)”.
Benefits of Inclusive Programs

Kimberly Schoger, author of “Reverse Inclusion: Providing Peer Social Interaction Opportunities to Students Placed in Self-Contained Special Education Classrooms” suggests that “shortcomings” in funding for districts has hindered the support needed for special education students to have equal access in general education settings. Furthermore, Schoger, states that “the logistics of providing all of the students served in the special education program opportunities for peer interaction can be extremely complicated. In addition, addressing the needs of students with complex learning, physical, and behavioral issues brings challenges the general education teacher may not be prepared to handle.”

Based on participating general education surveys, Schoger also concluded that peer students reported that they not only learned more about students with special needs, but they also developed friendships that they would not have contemplated before. (Griffin & Rafferty, 2005) conducted parent and teacher surveys of preschool children in reverse inclusive programs, and reported that both special education and general education students in mild to moderate programs benefited from reverse inclusion.

Schoger provides a good argument supporting reverse inclusion in special education environments rather than mainstream classrooms. Although there is a lack of research-based support for Schoger’s conclusions, I believe that they are valid, especially in consideration of students with severe disabilities.
Chapter Three
Methodology

Participants and Setting

This project was conducted in a “medically fragile” Special Day Classroom (SDC) in northern San Diego County in California. The SDC classroom consisted of between 8 and 12 students (ages 6 to 12 years), the special education teacher, five instructional aides, and an in-class nurse. Additionally, accompanied by an instructional aide from another classroom, there were four students with mild to moderate disabilities and associated behavioral disorders (ages 7 to 10) from the same school site, and four same-aged (8 and 9 year old) peer general education students attending from a separate school that was at the same location, but separated by a chain-link fence. Circle activities were conducted daily for 45 minutes per day.

Collaboration

The researcher had to first gain permission from administrators to allow general education students within the classroom. Permission was granted, but with limitations. The students would have to provide letters from parents of both classrooms permitting their child to attend the class for up to 45 minutes at least once per week. In addition, the general education students would have to agree to give-up recess and/or elective time so as to not lose out on required academic classes. The researcher then wrote a letter to general education teaching personnel explaining the project and the perceived benefits to be gained for all the students. The letter contained specific ways in which the general education and the special education teacher could collaborate on teaching ability awareness and provide peer group experiences between the students using music, movement, and the arts. Initially, the letter did not generate a response from general educators until a 4th grade teacher demonstrated a genuine interest and excitement to collaborate.

The teachers shared experiences, discussed schedules, and provided ideas to facilitate interaction. Working within a “magnet” school focused on the visual and performing arts,
the general education teacher had several great ideas when developing a curriculum. In addition to collaborating with a general education teacher, the researcher also worked closely with another SDC teacher of students with disabilities and behavior disorders. The SDC teacher and researcher collaborated on developing a functional curriculum for his students while attending the circle activities with same-aged general education peers and students with severe disabilities. Behavior supports were discussed and implemented with the unit of study.

The researcher visited the general education students accompanied by a student identified as having a severe cognitive disability. There were approximately 30 students in the classroom. During introductions, the students greeted the special education student differently. When told that they could shake the hand of the special education student, some students appeared reluctant, not wanting to touch, but just stare. Many of the students shook hands with excitement. The special education was non-verbal, but made eye-contact and smiled occasionally. The researcher discussed the differences that we have as individuals such as, hair color, height, and abilities. As well as differences, there was a discussion about similarities and the appreciation for both. The students had a genuine interest and curiosity asking questions such as; what happened to her? Why is she in a wheelchair? Can she understand me? In most instances, the researcher would remind students of their own individual differences, and draw upon the similarities they have rather than differences.

Most of the students were excited, and were willing to lose “free-time” in order to attend the special education classroom. Since there were 30 students in the classroom, volunteers would have to rotate in groups of four. The special education and general education teachers then discussed the roles of students as “peer-tutors” and role models for the other students. The students were made aware of possible medical implications and abrupt behaviors that might be experienced in the classroom. Lastly, the students were escorted, as a group to the special education classroom to be introduced to the other special education students and staff members. The students were then provided with letters identifying the parameters of the program to the parents and requesting signatures to participate.
Fortunately, open houses from both schools occurred around the same time as letters went home. The general education and special education teachers attended each other’s open houses, and discussed the benefits of the program and answered any questions/concerns from the parents. All but three of the permission letters were signed.

Methodology

The theme for the curriculum mirrored age-appropriate school-wide themes for the first grade. For the first eight weeks, the theme was “All About Me” followed by “School Tools” for the second eight weeks. A SIOP lesson plan format was used to support all learners. The lesson plan consisted of a checklist insuring proper preparation, comprehensible input, background building, teaching strategies, interaction opportunities, materials, lesson delivery, and review/assessment. The lesson plans included IEP goals and objectives along with sensory/motor integration activities. In addition to academic learning, the intent of the lessons were centered on enhancing communication, creating a sense of belonging, behavior management, creating friendships, and developing social skills. Peer students were asked to model activities, provide hand-over-hand assistance if comfortable, and display proper behaviors at all times.

Seating strategies consisted of pairing small-groups of at least one student with behaviors, a student with a severe disability, and a general education peer student. The activities involved music, movement, instruments, singing, and other art based activities. The circle activity would begin with introductions and songs incorporating good morning, ABC’s, days of the week, colors, months of the year, and counting. A multi-sensory music program called Tuned-In to Learning was used to help provide academic learning and behavior management using visual/auditory supports, expressive language supports, social interaction opportunities, and fine/gross motor development. Dancing songs were also used to facilitate interaction through choreographed movements and individual expression.

Assistive Technology consisted of single-button input/output devices, mounted head switches, I pads, cause and effect devices, and supports to assist with gripping and
holding onto objects. Visual supports were also used to help students transition, monitor behaviors, and make choices.

**Support**

Instructional aides were asked to help prepare materials and facilitate participation for students with severe disabilities using encouragement, wheelchair assistance, Assistive Technology, hand-under-hand supports, assistance with gripping, writing, and passing objects. Instructional and nursing staffs were additionally asked to monitor behaviors, sensory stimulation, and medical status. General education peer students were encouraged, if comfortable, to provide assistance with participating in activities when appropriate.

**Procedures and Instruments**

This program was designed, with same-aged general education peer student support, as a nine-lesson English Language Arts Unit for students with severe disabilities and behavior disorders. The unit is based on interactive music and movement assisted strategy instruction. The unit incorporates highly motivating songs and material that are easily accessed by all students. Modified Content Standards for the first-grade were supported as well as IEP goals and objectives. Furthermore, the unit demonstrates a therapeutic approach to behavior management, and simulated reinforcement to conversational speech. Within the special education environment, the students are supported with the necessary supplementary aids, 1-on-1 assistance, and medical aid/apparatus. General education students are being provided with first-hand experiences of other children’s needs and unique abilities. It provides an opportunity to make friendships and become more adapted to living and working in pluralistic community. The unit design was created exclusively based on the research-based studies and methodologies detailed in the literature review.
Summary of Chapter

This chapter discussed the initial general education teacher, parent, and administrative efforts required to provide general education students with an opportunity to support students with severe cognitive disabilities and behavioral disorders in a self-contained special education classroom. In order to allow for the participation and acquisition of skills for all students, the chapter emphasizes the role of the general education student and support required from the instructional aides and nursing staff. The chapter details music and movement programs that, along with meeting modified California English Language Arts (ELA) Content Standards, provide for equal participation, sensory/motor development, behavior supports and therapeutic benefits, as well as communication opportunities. Furthermore, the chapter emphasizes structured and specifically designed activities integrating song, dance, and music to offer multiple opportunities to enhance/acquire skills through preferred styles of learning. In the following chapter, the curriculum unit will be presented in detail.
Chapter 4

Results

This project was designed to determine the benefits of teaching students with severe disabilities and emotional disorders using reverse inclusion and the arts. A unit of study was developed based on research-based methodologies discussed in the literature review. Instruction included the meeting of IEP goals and objectives from modified California ELA standards. Additional behavior supports were included to support the students with behavior needs. This chapter will discuss the project, delivery of instruction, contents, and results.

The students with disabilities and emotional disorders were able to begin attending the medically fragile classroom two weeks prior to including same-aged general education peers. This was done to allow time for the students to adjust to the change in routine, lower affective filters, and build relationships with staff members and students with severe disabilities. The students with emotional behaviors were supported by an instructional aide from their classroom, who was familiar with each student’s antecedents for behaviors.

The general education peer students attended the first lesson of the first unit of study “all about me”, which began with a good morning song where each student was greeted by the researcher. Students were asked to shake hands with their neighbors and say “good morning”. Single button input/output devices were used to assist non-verbal students with greetings. Each day there was a different student of the day, who would answer questions from the other students and make choices during activities. Initially, peer students were picked to model good behaviors and communication skills. Introductions were followed by a set of sing-along ABC, number counting, days of the week, and months of the year songs. Each song was supported with pictures and visuals of letters, numbers, and words. Students could raise their hand or be chosen at random to go to the whiteboard and hold visuals or use a pointer to follow along with songs. The students were then requested to pick an instrument, such as tambourine, maraca, bells, or drum and play them or pass them along according to the song. Instructional aides or, if comfortable, peer students
used physical support to help students with severe disabilities grasp, play, and pass instruments.

During choice making activities, students picked from different *Tuned In to Learning* songs, which helped teach social skills and pragmatics. Each easy to learn Sing-along song was designed to help students make eye contact, describe emotions, initiate conversation, use body language, make compliments, and self-regulate behaviors. For instance, the song “*Getting to Know Someone*” and accompanying pictures would help students to identify favorite foods, hobbies, and animals. One student would ask another student “What is your favorite food?” The other student would then answer verbally or touch a picture, and then ask another student a question with support from the song. The researcher would facilitate interaction between students, and monitor participation and inclusion of all students.

A series of sing-along songs including “Driving my Tractor” and “Animal Boogie” from the publisher “*Barefoot Books*” were sung as warm-ups and transitioning strategies. The melodies, visual graphics, and repetition of words helped to calm and provide the students with content that was enjoyable to hear.

During the final 15 minutes of each day students would be given the opportunity to dance to different *Tuned In to Learning* adapted dance and movement songs including, “Do the Robot”, “Dance Party at the Zoo”, and “Who Wants to Dance?”. Students in wheelchairs were aided with arm and leg movements or placed in “standers” or “walkers” so as to be as independent as possible.

Researcher would go to the classroom of general education students to follow-up on the days and activities, as well as answer questions about behaviors witnessed or medical complications, or general questions.
Chapter 5

Discussion

Reverse Inclusion

Throughout the unit of study, several transformations were witnessed, which validated the reverse inclusion program. Beginning with the general education students, it was evident that, for many, it was an eye-opening experience. As each wave of four students came into the classroom, they were confronted with having to sit next to students who noticeably looked and behaved differently. Follow-up discussions revealed that many students were initially frightened, shy, and unable to be assertive in their role. For some students it appeared to be second-nature as they did not appear to be phased by students yelling-out unexpectedly, drooling, throwing objects, talking to themselves, and contorting their bodies and limbs in different directions. Others looked noticeably uncomfortable becoming rigid and quiet. Still other students would hold the hands of the students with severe disabilities, helping them to grasp objects, use Assistive Technology, and move to the rhythm of music.

As the general education students began to become familiar with the differences and similarities of the special education students, they began to realize that the behaviors were not directed at them, but, rather a part of the student’s disability and means of expressing his/her excitement, frustration, or means of self-regulation. As students became more comfortable, behaviors became unnoticeable and more predictable. Not all students attended regularly, but, as discussed with the general education teacher, many students were excited to attend the medically fragile classroom, even if it meant giving up personal time. Given the grade-level of the students, it was not clear if they grasped or fully understood the reasoning behind their differences, but it was evident that they were able to realize the similarities and ways in which they could form friendships and support one another. Some general education students reported that, while attending the medically fragile class, they did not have to worry about being judged, or try to act cool. It was the only place they could be themselves. On one occasion, the general education principal attended a class and told one of her students that this was a great thing she was
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...doing to support students with special needs. The student looked up at her and said “we are learning a lot too”.

Perhaps, the most noticeable benefit of including the general education peers was the effect that they had on the students with emotional disorders. It was clearly evident that the students with behaviors looked to the general education students as role models. They were visibly excited, as they would wave or say hello, clap their hands, or bounce in their chairs with excitement as the general education students entered the room. During circle activities, rather than communicating with familiar classmates, the students with behaviors would attempt to communicate with their general education peers. Not only did the students with behaviors take on the same mannerisms and good behaviors of the general education students, but their communication skills improved dramatically. One student who would only make vocalizations was able to form words and, eventually, speak coherent sentences. The teacher of the students with emotional disorders, and attending instructional aides, observed dramatically improved conversational speech capabilities, self-regulation of behaviors, and improved academic performance from all of the students who participated in the project. With improved behaviors, speech capabilities, and developed friendships, the students with emotional disorders asked to join their general education classmates during lunch times. They now meet daily during lunch. Prior to this project, it was reported by the SDC teacher that the students were teased, ridiculed, and excluded from activities while on the general education campus. Since the project, the students with emotional disorders appear to be happier, more confident, and feel as though they are a part of both schools.

Although it was not as visibly noticeable, there was a meaningful impact for the students with severe disabilities. They were unable to communicate verbally with the general education peers, but demonstrated increased socialization skills using eye-contact, facial expressions, body movements, and vocalizations. Some of the students would laugh, smile, make eye-contact, and attempt to touch the general education peer students to gain attention. Although these skills were observed before the program, there was an obvious increase in frequency and duration of attempts to socialize when being engaged by the general education peer students. Improvements were demonstrated
through IEP goals pertaining to increased socialization/verbalization skills, tolerance for touching and holding objects, increased eye-contact/tracking, improved motor skills, and increased duration attending to activities. With support from the general education students, the students with behavior disorders were encouraged to be peer tutors for the students with severe disabilities. This was clearly beneficial to the students with behavior disorders who were excited to support the students with severe disabilities using newly acquired skills learned from the general education students.

Bringing all of the students together through the reverse inclusion program was clearly beneficial for all of the students. Friendships were formed, and have continued to thrive in environments outside of the classroom. In addition to increases in interest, participation, and socialization, there has been marked improvements in behavior management, academic learning, and gross-motor function skills. Teaching such a diverse group of students within a classroom would not have been possible without using an instructional strategy that was accessible for all the students. Music, movement, and arts related activities provided a low-stress environment where students could manage behaviors, express themselves freely, and participate individually or as a group.

**The Arts**

As an instrument of facilitating meaningful interaction between general education peer students, students with severe disabilities, and students with emotional disorders music, movement, singing, and playing instruments provided an equal entry point were all students could participate and interact in their own way and at their own level. Furthermore, the arts helped students with the attainment and progress of complex needs resulting from a variety of disabilities. Along with the benefits of peer support, the students were able to develop through the arts socially, cognitively, emotionally, and physically. Students with severe disabilities were able to improve upon gross and fine motor skills while playing instruments and moving, while in the wheelchair or gate-trainer, to music related activities. There appeared to be a genuine interest, joy, and stimulation from the music, which aided in the ability to focus on given tasks, and channel frustrations and anger into forms of positive expression and communication. The
students with behavior disorders appeared to have fun while singing easy to learn songs. The same songs were requested and used routinely throughout the unit of study, which not only helped the students build confidence gradually, but also decreased anxiety as the repetitive lyrics offered easy entry and exit points during activities.

Limitations

In collaboration with the general education teacher and SDC teacher of students with mild/moderate disabilities and behavior disorders, it was agreed upon that the students with emotional disorders chosen to be included in the program would be the ones most likely to benefit from their general education peers. For this reason, the same groups of four to six students with behavior disorders were chosen to participate. One of the intentions of this project was to include the students who would most likely be excluded from mainstream inclusive program. Although the students with behavior disorders who were involved in this project were excluded from mainstream classrooms, there were other students with more severe behaviors who were not able to participate.

Future Plans

The researcher will use the curriculum next year as part of his daily circle activities agenda. The unit plan provides an overall idea of the curriculum, which can be adjusted to meet the needs for a diverse group of students. The lesson plans have also been designed to incorporate sensory-motor skill, communication, and behavior activities so as to meet the highest need of each student.

This summer, three of the general education students from this project have been working as interns in the medically fragile classroom. This clearly reflects the positive impact this project has had on the general education peer students. As more and more general education peers are included in segregated special education classrooms, general and special education teachers can collaborate on strategies to expand on the role of the general education peer tutor and include activities that also meet their academic needs.

The students with behavior disorders appeared to benefit the most from this project. It was clear that music, singing, and movement activities provided, not only calming
therapeutic benefits, but also routine, repetitive, and easy to learn songs that enhanced communication opportunities with same-aged peers. As relationships developed, the students with behavior disorders were clearly disappointed when their same-aged peers were not present. Prior to this unit of study, students with behaviors were sometimes removed from activities when behaviors escalated. This did not occur when same aged-peers were present as students were highly motivated to interact with peers and participate in the music and movement curriculum. As it became clear how much the students with behaviors mimicked mannerisms of their same-aged peers, it emphasized the importance for same-aged peers to maintain proper etiquette at all times. In the future, the researcher will more thoroughly prepare and follow-up with peer students on their roles in the special education classroom.

It became clear to the researcher that the students with behaviors disorders and same-aged peer students were highly motivated to communicate with one another, but not as motivated to interact with the students with severe disabilities. This was mainly due to the limited communication skills of the students with severe disabilities. In the future, the researcher will integrate more opportunities for the students with severe disabilities to communicate using Assistive Technology.

**Future Research**

Research is limited on reverse-inclusive programs as are the benefits of inclusive programs for students with severe disabilities. It is the opinion of the researcher that this is due to the limited skills and feedback provided by the students with severe cognitive disabilities. Future research should include alternate forms of measuring skill acquisition and academic learning through student attentiveness, eye-contact, body position/movement, vocalizations, and facial expressions.
Conclusion

The “circle of courage” is a model of teaching for independence, mastery, belonging, and generosity. Academic learning is only a portion of what is important to learn in the classroom. Therefore, it was important for the researcher to measure the success of this unit of study by not only academic terms, but also those that incorporate the social, emotional, and physical well-being of the student. By this standard of assessment, it was clear that this project was highly beneficial to all of the students. Music, movement, singing, and dancing provided an avenue by which all students could participate, learn, and interact on their own terms and in their own way. Furthermore, the same-aged general education peer students played a critical role in the motivation, attentiveness, and learning for the special education students. With the student to teacher ratio, emphasis placed on academics, and limited environmental supports offered in a general education classroom, it would not be possible to meet the varied needs of such a diverse group of students. Inclusion is a well-researched and successful program for many students. But, there is a small minority of students that would not be able to thrive in a mainstream setting. To support all students, further research is needed to validate reverse inclusive programs, by not only academic standards, but also social-emotional, behavior, and a belonging to the community.
References


