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Inclusion in Higher-Level Instrumental Ensembles

Currently, the majority of students in middle school or high school instrumental ensembles do not have significant disabilities or severe limitations that exclude them from participation. There are several reasons this should be evaluated. First, both students with learning exceptionalities and students without learning difficulties can benefit from being in an inclusive classroom. Second, students with learning exceptionalities can benefit from being involved in a music ensemble. Third, the reasons that currently exclude students with special needs from participating in higher level instrumental ensembles need to be solved. Additionally, accommodations need to be created so that interested students with exceptionalities can participate in higher level ensembles. Because learning exceptionalities vary, this research targets people affected by moderate developmental delays (DD).

The Woodcock Johnson test of cognitive ability (WJ) and the Weschler Intelligence Scale for Children-Revised (WISCR) define someone that is affected by a moderate DD, as having an IQ within the range of 50 to 70. The WJ and WISCR test for memory, perceptual speed, reasoning, verbal and performance IQ, distractibility, speed, math and reading. ¹ The Merriam-Webster dictionary defines mental retardation or a DD as "subaverage intellectual equivalent to or less than an IQ of 70 that is accompanied by deficits in abilities (as in communication or self-care) necessary for independent daily functioning."² Many characteristics

¹ Ronald E Reeve, Robert J Hall, Richard S Zakreski, "The Woodcook Johnson Tests of Cognitive Ability: Concurrent Validity with the WISC-R," *Learning Disability Quarterly*, 2, no. 2 (1979): 66. Merriam Webster Dictionary, s.v. "mental retardation."

of a moderate DD are common in other learning exceptionalities. For example, attention deficits, slow processing, reasoning, and memory (storing and retrieving information), some vision deficits, as well as speech and language deficits all affect people with moderate DD.^{3 4} People that have learning exceptionalities may also be affected, to a less or more severe extent, by attention deficits, memory deficits, and speech and language issues. Because of these commonalities, solutions for students with DD can be applied to assist students with other learning exceptionalities in music classrooms.

Music can assist students with DD develop attentiveness, awareness, memory, processing, and reinforce concepts learned in other classes. Music is especially unique because it allows students expressive and creative freedoms. In a study done by Larry Talkington and Nancy Briggs, students with and without learning exceptionalities were given three creative tasks. The study showed that students with moderate DD showed just as much potential for creativity as their peers without learning exceptionalities. ⁶ A creative outlet that provides opportunities to create and express is important for students with DD, especially as they reach adolescence.⁷ Creative outlets can assist special needs students in developing communication skills to express their needs and feelings. Music is unique because it can "stimulate sensations and associations which in turn create moods." Authors of the article *Promoting Inclusion in* Secondary Classrooms argue that literacy (writing, reading, and verbalizing), provides

³ Larry Talkington, Nancy Briggs, "An Exploratory Study of Creativity in Mentally Retarded Youth," *Education* and Training of the Mentally Retarded, 13, no. 1 (February, 1978): 55.

4 Ronald E Reeve, Robert J Hall, Richard S Zakreski, "The Woodcook Johnson Tests of Cognitive Ability:

Concurrent Validity with the WISC-R," *Learning Disability Quarterly*, 2, no. 2 (Spring, 1979): 67. Sara Carter, "Music Therapy for Mentally Retarded Children," *Music Therapy for Handicapped Children* 2, (Saint Louis, MO: 1994): 77.

⁶Larry Talkington, Nancy Briggs, 57.

⁷ Margo Mastropieri, Thomas Scruggs, "Promoting Inclusion in Secondary Classrooms," *Learning Disability* Quarterly, 24, no. 4 (Fall, 2001): 269.

Willem Van DeWall, Music In Institutions (Washington D.C.: McGrath Publishing Company, 1936), 65.

opportunities for self-expression, and therefore is important in the curriculum for students with DD. Music can also be an equally important venue for both creativity and self-expression. For example, music can aid students with DD in developing emotion awareness. 9 Allowing students DD to participate in creative opportunities can aid in developing problem solving skills and in building self-esteem. ¹⁰ Furthermore, people generally have a positive relationship with music, playing in an ensemble can help ease some of the frustration with academic classes. 11 In addition to creativity, expression, development of emotional intelligence, and relieving frustration with academic classes, there are specific advantages to participating in instrumental ensembles and performing live, rather than with recordings.

Participating in ensembles and playing instruments can provide unique experiences, for students with DD, that recordings and playing alone cannot provide. Recordings are an exact duplication and do not allow students to experiment freely with rhythm so they can later develop rhythmic accuracy. ¹² Having different experiences with rhythm can challenge and build attentiveness. ¹³ Playing instruments can help students with DD develop coordination, assist with movement of the upper arms, develop grasp and other fine motor skills, and develop hand eye coordination. 14 Additionally, playing instruments can increase breath control and physical endurance for students with DD. 15 "Instrumental musical activities of this kind can create special situations in which we can intensify handicapped children's commitment and give them

⁹ Sara Carter, "Music Therapy for Mentally Retarded Children," Music Therapy for Handicapped Children 2, (Saint

Louis, MO: 1994): 77.

10 Larry Talkington, Nancy Briggs, "An Exploratory Study of Creativity in Mentally Retarded Youth," *Education* and Training of the Mentally Retarded, 13, no. 1 (February, 1978): 58.

11 Willem Van DeWall, *Music In Institutions* (Washington D.C.: McGrath Publishing Company, 1936), 52.

¹² Paul Nordoff, Clive Robbins, *Music Therapy in Special Education* (Saint Louis, MO: MMB Music, 1983), 78. 13 Paul Nordoff, Clive Robbins, 81.

¹⁴ Frans Schalkwijk, trnltd., Music and People with Developmental Disabilities: Music Therapy, Remedial Music Making and Music Activities (Bristol, PA:Jessica Kingsley Publishers, 1994), 89. 15 Willem Van DeWall, 162-165.

opportunities to develop perceptiveness, concentration, and initiative. Through consistently directed work they can experience purposefulness, perseverance, responsibility, and self-confidence-central and essential qualities for the growth of an integrated personality." ¹⁶ Providing instrumental ensemble opportunities is equally advantageous for all learners, and it is suggested that ensembles focus on social aspects of making music. ¹⁷

Currently, there is a movement to incorporate 21st century job skills such as: social skills, collaboration, communication, leadership and initiative, creativity, and critical thinking. ¹⁸

Authors of the article *Promoting Inclusion in Secondary Classrooms* argue job internships in the community are important for students with special needs to establish favorable employment competencies. While job internships are absolutely important, 21st century job skills are already embedded in music education curriculum. Through music, students with DD can develop skills in decision making and planning. ¹⁹ Instrumental ensembles can help students with DD adapt skills such as cooperation and social skills. ²⁰ Additionally, music ensembles can help students with DD, learn discipline and self control. ²¹ Inclusive classrooms have a unique quality because students without exceptionalionalities can model social skills, cooperation, and self control, for students with DD.

There are many benefits of inclusion in classrooms for all students. According to the zone of proximal development, students can learn concepts beyond what they are capable of with the

¹⁶ Paul Nordoff, Clive Robbins, *Music Therapy in Special Education* (Saint Louis, MO: MMB Music, 1983), 81.

¹⁷ Willem Van DeWall, *Music In Institutions* (Washington D.C.: McGrath Publishing Company, 1936), 175-195.
18 Nadia Hillman, "Learning 21st Century Skills: Implementation of Programs and Practices," (Dissertation,

University of Southern California, 2012), 11.

19 Frans Schalkwijk, trnltd., *Music and People with Developmental Disabilities: Music Therapy, Remedial Music Making and Music Activities* (Bristol, PA:Jessica Kingsley Publishers, 1994), 21.

20 Frans Schalkwijk, 21.

²¹ Frans Schalkwijk, 21.

help of others that have more knowledge. "Through social interactions, with more knowledgeable others, such as more advanced peers and adults, children eventually develop higher mental functions such as language, logic, problem-solving skills, moral reasoning, and memory schemas."22 It is possible for a person with a DD to learn higher mental functions with help from their peers. "With practice and experience, however, the student's zone will move, as the result of cognitive growth, and development..."²³ Inclusive classrooms are important in assisting students that have DD, but it can also help students without developmental delays. This is because students without DD have to think about the information in new ways to structure explanations for their peers to understand. "Explaining something to someone else often requires the explainer to think about the material in new ways, such as relating it to the questioner's prior knowledge or experience, translating it in terms familiar to the questioner, or generating new examples...such cognitive activities force the explainer to clarify concepts, elaborate on them, reorganize thinking, or reconceptualize the material in some manner."²⁴ Additionally, inclusion practices or "the village concept" (author of book), are useful for all students to develop acceptance, tolerance, and empathy which is important when living in diverse communities.²⁵ "Students who are brought up - in school - using the village concept are being socialized to a worldview of global community." ²⁶ Therefore, it is important to provide opportunities for students to work together.

²² Peter Doolittle, "Vygotsky's Zone of Proximal Development as a Theoretical Foundation for Cooperative Learning," *Journal on Excellence in College Teaching*, 8, no. 1, (1997), 84. 23 Peter Doolittle, 85.

²⁴ Alison King, "Structuring Peer Interaction to promote High- Level Cognitive Processing" *Theory Into Practice*. 41, no. 1, (Winter, 2002), 36. 25 Ricardo Garcia, *Teaching Diversity* (Bloomington, IN: Phi Delta Educational Foundation, 1998), 113.

²⁶ Ricardo Garcia, *Teaching Diversity* (Bloomington, IN: Phi Delta Educational Foundation, 1998), 111.

"Classrooms communities must function as microorganisms of the larger community."²⁷ Cooperation in classrooms reinforces modern day job skills. Collaboration opportunities can assist students with DD increase vocabulary, willingness to cooperate, trust of peers and adults, and the ability to listen to and follow directions. ²⁸ Helping students with DD form bonds with their peers can assist teachers in establishing groups in which mentors are willing to assist their peers. It is important for teachers to facilitate a positive and supportive environment within their classrooms for cooperation amongst peers to take place. Before students work together, it is suggested that teachers assist students in defining skills necessary for working together in groups.²⁹ For example, listening, acknowledgment of peer comments, paraphrasing, clarifying, elaboration and summarizing are some of the necessary skills of collaboration. ³⁰ Several resources also suggest holding student meetings to discuss conflict/resolution skills and define what is necessary to facilitate group conduct. ³¹ Besides group collaboration, there are a number of other teaching strategies to help students with DD succeed in a music classroom.

First, it is important to consult with resources such as special education teachers, paraprofessionals, families of students with DD, counselors, music therapists, and other resources in the community that support people with special needs.³² Other teaching strategies include modifying instruction, guiding specific music vocabulary, memory strengthening techniques, and establishing routines within the classroom. This is not an exhaustive list, but can

²⁷ Ricardo Garcia, 118.

²⁸ Laura Heidingsfelder, "The Slogan of the Century: Music for every child, every child for music," *Music* Educators Journal, 100. no. 4 (June, 2014), 50.

29 Judy Olson, Jennifer Platt, Teaching Children and Adolescents With Special Needs (Boston, NY: 2004), 228.

³⁰Dianne Bryant, Deborah Smith, Brian Bryant, Teaching Students With Special Needs In Inclusive Classrooms (Boston, NY: Pearson 2008), 377.

31 Dianne Bryant, Deborah Smith, Brian Bryant, 378.

³² Dianne Bryant, Deborah Smith, Brian Bryant, 300.

provide some guidance. Students with DD have deficits in retaining information. Some solutions that can help students with DD cultivate memory, are concepts taught through multiple senses, repetition, and mnemonics. Students with DD are especially receptive to auditory influences and pictures and are unable to process verbal instruction easily. Therefore, teachers should provide students with clear and concise instruction. Providing support and going over unfamiliar vocabulary is another way to accommodate speech and language delays for students with DD. Teachers can also use multimedia sources, such as powerpoint slides to emphasize points. Visuals can help students with DD can form meaningful relationships between experiences, pictures, and words. Powerpoint slides can also be used to show objectives and schedules of activities. Maintaining consistency in classroom routines is important: students with DD need to know what to expect during class. Considering instruments is crucial in creating a successful music education for students with DD.

"Each child who plays an instrument will experience its musical character clearly, and through it become more conscious of the part he plays, and feels its meaning and importance in the total composition." Students with DD should be given a choice of instruments, as they feel more connected and are more willing to play when they have autonomy over something that is within their control. Suggested percussive instruments include tambourines, cymbals, gongs,

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³³ Judy Olson, Jennifer Platt, *Teaching Children and Adolescents With Special Needs* (Boston, NY: 2004), 271-283.

Walter Murray, Irving Bloom, "Characteristics of Slow Learners and Pupils of Normal Intelligence Referred to a

Child Guidance Clinic," *The Journal of Educational Research*, 54, no. 2 (October, 1960), 45.

35 Judy Olson, Jennifer Platt, *Teaching Children and Adolescents With Special Needs* (Boston, NY: 2004),

³⁶ Lilian Parham, "Teaching Low IQs to Read" *The English Journal*, 32, no. 10, (December, 1943), 561.

³⁷ Lillian Parham, 561.

Dianne Bryant, Deborah Smith, Brian Bryant, *Teaching Students With Special Needs In Inclusive Classrooms* (Boston, NY: Pearson 2008), 348.

Paul Nordoff, Clive Robbins, *Music Therapy in Special Education* (Saint Louis, MO: MMB Music, 1983), 82.

Paul Nordoff, Clive Robbins, *Music Therapy in Special Education* (Saint Louis, MO: MMB Music, 1983), 82.

Paul Nordoff, Clive Robbins, *Music Therapy in Special Education* (Saint Louis, MO: MMB Music, 1983), 81.

shakers, and resonator bells. 41 Percussive instruments provide vibration perception, they are also easy to hold and sturdy to handle. 42 For percussive instruments, students with DD need a variety of beaters to choose from for the ease of grasp, and to experience different sound qualities of each beater. 43 Students with DD may not be able to keep a steady beat using percussive instruments, may come in late, or may come in early. Teachers can adapt by cueing students early or late- depending on when they usually come in, and by letting students experience steady beat through multiple senses, which takes patience. 44 Percussion instruments are important, but it is also important to provide an assortment of melodic instruments to keep students with DD engaged. Playing a melodic instrument helps students with DD establish connections with melody. 45 Reed horns, stringed instruments with one string, melodicas, and Orff Schulwerk xylophones are some melodic instruments that can be used. If the schools budget allows, students with DD can be provided with adaptive instruments such as the skoog (sound output through touch of large colored buttons), sound beam (sound output through movement), and the magic flute (sound output through breath and movement of head). The three instruments are a small scope of adaptive instruments. However, these adaptive instruments are built on the same concept of using an interface that allows a teacher to program instrument sound sets i.e. brass or strings, steady rhythms and pitch sets i.e. a major scale or a pentatonic scale. Some adaptive instruments also permit dynamic contrast which is based on touch or breath. For more capable students with DD, it may be possible to offer notation sources which challenge students further.

⁴¹ Paul Nordoff, Clive Robbins, 77.

⁴² Paul Nordoff, Clive Robbins, 72. 43 Paul Nordoff, Clive Robbins, 83

⁴⁴ Paul Nordoff, Clive Robbins, 136.

⁴⁵ Paul Nordoff, Clive Robbins, 85

In an eye tracking study done by Nancy Bazar, she found that eye tracking is slower and more random for people with mild cognitive DD. 46 Bazar showed people without and with DD pictures and then asked questions about each picture. Bazar found that people with DD spent more than half the time fixating pictures and questions than their peers without DD. Eye tracking makes following music difficult for students with DD. Therefore, some strategies include color-coding notes, creating larger print, or simplifying notation to symbols rather than notation. Electronics are used for students that have reading deficits and highlight the words as students listen the text.⁴⁷ Although, there is no software that does this for music, it could be useful for students, and is interesting to consider. Another modification would be to print larger music or use color-coding. Color-coding notes, or specific sound sets is a simpler way for students with DD follow along to music and can alleviate frustrations of reading standard notation. ⁴⁸ Kodalv methods of symbol before sound simplify music notation for students with DD. Beginning notation methods of Kodaly are especially useful since students with DD function at a cognitive age that is well below their chronological age. ⁴⁹ If teachers know the age a student functions cognitively, they can use methods similar to elementary music education methods.

Inclusiveness is a difficult concept for higher level ensembles because students, and even teachers do not want to feel that the pleasing level of aesthetic expression are sacrificed. ⁵⁰ In a survey done by (author inclusion in band inclusion in new jersey schools), students were less

⁴⁶ Nancy Bazar, "Web Usability or Accessibility: Comparisons Between People With and Without Disabilities in Viewing Complex Naturalistic Scenes Using Eye Tracking" (Dissertation, Mount Saint Marys University, 2005), 128.

^{128.} 47 Judy Olson, Jennifer Platt, *Teaching Children and Adolescents With Special Needs* (Boston, NY: 2004), 331. 48 Paul Nordoff, Clive Robbins, *Music Therapy in Special Education* (Saint Louis, MO: MMB Music, 1983), 145.

⁴⁹ Margo Mastropieri, Thomas Scruggs, "Promoting Inclusion in Secondary Classrooms," *Learning Disability Quarterly*, 24, no. 4 (Fall, 2001): 273.

Christopher Johnson, Alice-Ann Darrow, "The Effects of Positive Models of Inclusion on Band Students'

Othristopher Johnson, Alice-Ann Darrow, "The Effects of Positive Models of Inclusion on Band Students" Attitudinal Statements Regarding the Integration of Students With Disabilities," *Journal of Research in Music Education*, 45, no. 2 (Summer 1997), 174.

likely to accept peers unless they were previously involved in successful inclusive classrooms. Therefore, it is important to choose music that is pleasing and challenging enough for students with and without DD. Music that is improvisatory, or music that is ambient in character, can serve itself for inclusive ensembles. Music with definite melody and mood, explicit rhythm, and established form is highly engaging for students with DD and can be educational for students without DD.⁵¹ Students with DD are also more engaged and more willing to participate if music tells a story and their instrument has a clearly defined character or part within the ensemble. 52 Students without DD will also enjoy their part in program music and this can aid in the creative and expressive elements that are unique to music. Another music modification is to find music that uses simple melodic patterns, or music that is pentatonic so that the music is aesthetically pleasing and allows room for improvisation. ⁵³

Cultivating a music education that is enriching for all students, especially those with learning exceptionalities, needs more research. One area that could be useful is how to accommodate individualized education plans (IEP) in an instrumental music ensemble. It would be useful to look at a large number of IEPs for students that have moderate DD. The next step would be to compare and contrast IEPs, find common accommodations, and then determine solutions that support the students' needs in an instrumental ensemble. Other areas not covered, include behavior management strategies for students with DD, facilitating ways students with DD can experience basic music concepts, setting expectations and assessment based on the capabilities of a student with DD, and metacognitive strategies. Specific music examples that could be adapted to inclusive ensembles, or music already written specifically for inclusive

^{Paul Nordoff, Clive Robbins,} *Music Therapy in Special Education* (Saint Louis, MO: MMB Music, 1983), 94.
Paul Nordoff, Clive Robbins, 95.
Paul Nordoff, Clive Robbins, 95.

ensembles is yet another area of detailed research. Finally, it is important that all students with various special needs be given opportunities to participate in music ensembles. Therefore, it would be useful to analyze differences in learning exceptionalities to find solutions for music educators to support all students.

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