

Learning Disabilities in the Music Classroom: Implications for the Music Educator

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Vast changes in the education of children with disabilities have occurred in the past 40 years. Until the 1960s, schools were allowed to exclude children with disabilities, but federal legislation and related court decisions, including the Elementary and Secondary Education Act of 1965 (P. L. 89-10), Section 504 of the Rehabilitation Act of 1973, The Education for All Handicapped Children Act of 1975 (P. L. 94-142), and the recent amendments to the Individuals with Disabilities Education Act (IDEA) in 1997 (P. L. 101-476, amendments P. L. 105-17), have gradually opened the door to free and appropriate education in the least restrictive environment (Horne, 1996). The most recent law and its subsequent amendments mandate that eligible children with disabilities have special education and related services designed to address their unique educational needs made available to them.

Under the current IDEA law, there are six principles that provide the structure for special education: free appropriate public education, appropriate evaluation, individualized education program (IEP), least restrictive environment, parent and student participation in decision making, and procedural safeguards. Of the six principles, those that have the most impact on music educators are free appropriate public education, individualized education program, and least restrictive environment (Heumann, 1994).

Free appropriate public education designates that each child with a disability is entitled to a no-cost program of regular and special education services that are appropriate for his or her specific needs. General and ensemble-specific music is a core part of public school education in this country; thus, children with disabilities have the right to participate in these programs. The IEP is a written statement tailored to each student with a disability and includes information on the present level of his or her educational performance, how his or her disability affects performance, measurable annual goals and short-term objectives, special education and related services, program modifications, dates of services, and transition plans. If music is included as an annual goal, which can be requested by the parent, child, educator, or advocate, the music teacher will need to be included in this process and begin keeping documentation on music and perhaps social skills in the music setting. The principle of least restrictive environment is that children with disabilities will be educated with their able-bodied peers unless this education is not effective even with the use of supplementary aids and services. Students with disabilities are therefore placed in regular music classes and music teachers, who know best whether students are making progress in their curriculum, have the right and responsibility to ask for supplementary aids and services when necessary.

During the 1994-95 school year, more than 4.9 million children were receiving special education or related services; in the 1993-94 school year, 43.4% of such students were in the regular education classroom with their able-bodied peers (U.S. Department of Education, 1996). Roughly 5 to 10% of *all* school-aged children receive services for learning disabilities, with a high percentage being served in the regular classroom; thus, there is a high likelihood that a music teacher will interact with these students in the music classroom (U.S. Department of Education, 1998). According to the U. S. Department of Education and the National Institute of Child Health and Human Development, 17.5% of children will have difficulty learning to read in the first three years of school. Thirty-five percent of students with learning disabilities do not finish high school. Fifty-two percent of children receiving special education services in the public school system are students with learning disabilities.

Due to the high probability of working with students with learning disabilities, music educators should be familiar with these disabilities. They need to have a working definition of learning disabilities, have an understanding of the various types of learning disabilities, and be aware of academic and social characteristics that accompany the various disorders. Because we work as a team in the elementary school,

no one teacher can address his or her subject matter in total isolation. Children bring to the music classroom a myriad of social and academic successes and failures from other parts of their lives. The music specialist should be familiar with how music can be used to address these outside challenges, as well as how the music curriculum may need to be adapted to provide the most successful learning experience.

Research on Music and Children with Learning Disabilities

The Individuals with Disabilities Education Act (IDEA) defines a learning disability as a “disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or to do mathematical calculations” (NICHCY, 2001).

Individuals with learning disabilities typically have difficulties in one or more of the following areas: language, arithmetic, auditory processing, organization, attention and concentration, motor coordination, memory, and resulting behavioral issues (NCLD, 2001). With 5% of school-aged children labeled as learning disabled and with inclusion being the educational movement of our times, we are no longer responsible for teaching just music but are charged with teaching the whole child. This includes targeting both music and nonmusic skills in the music setting (Aebischer & Sheridan, 1982; Campbell, 1972; Gfeller, 1984; McCoy, 1982). Children participate in the arts before they enter formal education—they draw, sing, act, and dance. These are natural activities for young children; thus, the arts should function as natural forums to enhance academic learning. The arts allow children to gain discipline as they learn to work toward goals (Smith, 1980, 1988).

Traditionally, there has been an association between teaching music and reading due to the similar skills required (such as auditory discrimination, understanding a symbol system, etc.) (Bygrave, 1994; Hurwitz, Wolff, Bortnick, & Kokas, 1975; Lamb & Gregory, 1993; Martin, 1983; Moyer, 1976; Roskam, 1979). Chants and repetitive action songs target aspects of language such as pitch development, dynamics, and rhythm, as well as aspects of culture, listening skills, articulation, and syllabification. Targeting word recognition, comprehension, reading study skills, and literary appreciation through song lyrics can be more motivating and enjoyable for the reader than simply reading without the musical enhancement (McCarthy, 1985).

Developmental curriculums designed for children with learning disabilities have included suggested activities and materials for the music setting (Kelly et al., 1973; Moyer, 1976; Owens, 1974). In 1976, a program, “Music for Children with Reading Learning Disabilities,” was begun in Newton, Massachusetts, in an effort to teach music skills, to teach skills necessary in language reading through music, and to evaluate whether the development of music skills resulted in an improvement in language reading skills. Classes for students as well as seminars for teachers, parents, and others interested in teaching music to students with learning disabilities were initiated (Moyer, 1976). The focus was on rhythm (developing rhythm patterns through large and small muscle groups), singing (perceiving and comprehending melodic patterns and producing them accurately), and notation (reading and notating both rhythmically and melodically). “The author felt that children with reading learning disabilities desperately need many of the basic skills which music instruction is uniquely able to give them” (p. 3).

Music has been used with some success to improve math scores for students with learning disabilities. It has been played to mask background noise while students did math problems (Vernetti & Jacobs, 1972), music relaxation and visual imagery have been used prior to working on math (Schuster & Vincent, 1980), and pieces of music selected individually by students have been played while they completed a math exam (Abikoff, Courtney, Szeibel, & Koplewicz, 1996).

Over the past two decades teachers have studied auditory processing issues related to students with learning disabilities. Teachers and therapists have used music and music tests as diagnostic measures to determine melodic/rhythmic aptitude differences between grade-level readers and readers with learning disabilities (Atterbury, 1983a, 1984c, 1985), to formulate a musical profile of students with learning

disabilities (Decuir & Braswell, 1978), to detect reading problems (McGivern, Berka, Languis, & Chapman, 1991), to determine hemispheric laterality between typical students and students with learning disabilities (Strong, 1992), and as a therapeutic intervention for speech discrimination (Baxley, 1979), language development (Kranyik, 1970), and auditory awareness (Roskam, 1979).

A child's initial learning begins with motor responses; thus, deficits in this area can have a domino effect on achievement in other areas. Music teachers have a wonderful opportunity to assist students with perceptual-motor development through rhythm and motor activities (Rosenkranz, 1974) and motor-sensory training targeting body awareness, body relaxation, gross and fine motor training, and sensory perception training (deVincentis & Johnson, 1978). In 1983, Gilbert compared the motor music skills of nonhandicapped and learning disabled children and found that although children with learning disabilities tend to be lagging behind in motor skills, they can benefit from sequential practice and rehearsal.

Students with learning disabilities do not spontaneously use memory strategies (i.e., mnemonic devices). The students' attention must be engaged, and memory aids need to be demonstrated, practiced, and reinforced. Musical mnemonics are especially effective due to the value and interest music holds for students (Gfeller, 1986). Presenting material in different music formats has proven to be an effective technique in helping students recall information (Bottari & Evans, 1982; Shehan, 1981).

Due to the social ramifications of a disability, ways of using music to effect behavioral change have been examined (Montello & Coons, 1998). Students can have a poor self-image due to the rift between grade level expectations and personal achievement. Music activities focusing on expression of feelings and promotion of success can be used to address this issue (Brodeur, 1989). Teachers have used music for arousal, relaxation, or to trigger positive affirmation discussions in the special education resource room (Applegate & Hamm, 1985).

This review of the research supports the use of music in a variety of ways to address the academic and social challenges for students with learning disabilities and provides valuable information as we consider how best to adapt our curriculum to meet their unique learning styles.

Implications for Music Educators

A model of learning disabilities first established in the 1960s and consistently supported since its inception outlines four stages of information processing used in learning: input, integration, memory, and output (NICHCY, 2001). Each of these stages is associated with specific types of learning disabilities. Input is the process of the brain recording information that comes from the senses. A disability in this area can manifest itself in either an auditory or visual perception impairment. An individual with an auditory perception disability may not distinguish differences between words that sound similar or may not be able to distinguish between two different musical pitches. An individual with a visual perception disability may reverse letters when reading or may skip lines in a song text when singing.

Integration is the process of interpreting information through sequencing, abstracting, and organizing. An individual with a sequencing disability may not be able to tell a story in order from beginning to end or may not be able to play a repeated rhythmic pattern on an instrument. An individual who has difficulty with abstraction may confuse different meanings of a word used in different contexts or may not be able to transfer information from a music theory lesson to the practical application of performing a piece of music.

Memory is the storage of information for later retrieval. Students with learning disabilities generally have difficulty with short-term rather than long-term memory. For example, a student with a memory disability may not be able to remember a series of numbers for a short time or echo sing a short melody after a model.

Output of information is achieved through language or motor activities. An individual with a language disability may have difficulty responding effectively to a direct question or may have difficulty singing a

phrase from a song when asked. Motor disabilities are divided into fine and gross motor difficulties. Individuals with a fine motor disability may have difficulty writing or may have problems fingering notes on the recorder. Individuals with a gross motor disability may stumble and fall or may not be able to do movement activities to music while maintaining a steady beat (NICHY, 2001; Schwartz, 1985). On top of these four processing areas, there are related behavioral problems, such as distractibility, anxiety, impulsiveness, a low tolerance for frustration, and poor self-esteem (Schwartz, 1985).

Much of the difficulty in working with individuals with disabilities comes from the frustration on the part of both the student and the teacher when the student is not able to perform some tasks developmentally appropriate for his or her age level while perhaps excelling in other areas. This is often misinterpreted as an outright refusal associated with a behavioral problem, as opposed to a legitimate inability to perform the task. It is essential for the music teacher to be aware of who in the class has been diagnosed with a learning disability, what type, and what behaviors are associated with the particular disability. This knowledge will help the music teacher more appropriately interact with learning disabled students and put them in situations where they can be successful while working on areas where there are deficits.

Atterbury (1989) feels strongly that music teachers should be involved in placement decisions, know the associated laws, be aware of relevant research, and be able to define music learning demands and describe the alternative instructional strategies necessary to meet these demands. She suggests teachers insist upon supplementary aids and services but be specific in their requests and able to explain for what purposes the additional resources are needed. These supplemental services may vary from a paraprofessional working directly with the child with special needs, to communication books using a Picture Exchange System, to adapted rhythmic percussion frames for students who have motor coordination challenges. Teachers will be most successful if they determine how the disability affects learning, observe the student, develop appropriate expectations, and then translate this information into instructional strategies (Atterbury, 1983b; de l'Etoile, 1996).

Atterbury (1984a) questions whether chronological mainstreaming in the music setting offers the best benefit for students with learning disabilities. She suggests that students be provided with supplemental or individual instruction. In an article designed to educate learning disability specialists on what music teachers need to better teach students with learning disabilities, Atterbury (1984b) suggests that each teacher have an awareness of the other's academic and behavioral objectives. This information, along with the music teacher's knowledge of his or her own music curriculum, provides the framework for designing strategies for successfully integrating learning disabled students into the music classroom.

Techniques appropriate for the music classroom are listed in the Strategies for Teaching the Learning Disabled Child sidebar (part 1 and part 2). Because each child with a learning disability has different strengths and needs, it is imperative for the music teacher to collaborate with the special educator. Based on the information obtained in this collaboration, the music teacher can then implement appropriate strategies. For additional resources available on the Web, see the On-line Resources for the Music Educator sidebar.

It is important for the music teacher facing the challenge of working with children with learning disabilities to realize that the strategies used with learning disabled students are applicable to other teaching situations. Good teaching is good teaching, regardless of the subject matter or the student (Cassidy, 1990). Breaking down each task into sequential steps, ascertaining students' ability levels, and then helping them make progress are the keys to success when working with all children. Children with special needs just require additional repetitions, prompts, reinforcers, models, learning style options, and response time (Cassidy, 1990).

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