

National Research Center on the Gifted and Talented NEWSLETTER



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NRC/GT: Professional Development—Not an Event

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"Reforms don't spread in places where teachers do not have the capacity to implement them."

Linda Darling-Hammond, AERA (1998)

What does professional development mean to you? Is it a periodic calendar event? Is it based on your school district's needs? Is it a time to discuss critical issues related to school district priorities? Is it mandatory attendance at a workshop? Are professional development opportunities self-initiated? To what extent have you benefited from professional development opportunities?

How would you answer the questions above? Do you think that your answers would be similar to those of other staff members? Why or why not? Try to gather some informal data by asking your colleagues about their views of professional development. Developing a working understanding of how professional development is viewed by staff members is a critical step in creating an effective plan tailored to your school needs, the needs of each staff member, and the needs of students as well as their parents.

Several years ago, we designed a survey of professional development practices in gifted education. We thought long and hard about the type of information that we wanted to know. We conducted a thorough review of the literature, attended conferences, convened groups of professionals with various prior experiences, and drafted potential items. We wanted to know the extent to which professional development was really tied to the overall visions of school districts. Some of the resulting data from the survey were highlighted in an earlier newsletter (Westberg et al., 1998). Looking back on the data and the outcomes from several studies over the last 10 years of The National Research Center of the Gifted and Talented (NRC/GT) led to a

synthesis of professional development principles. Over and over, one word captured the essence of the principles: *CHANGE*. Change is certainly difficult; it is a process. We may be acutely aware of the need to restructure a curriculum unit, develop challenging opportunities for students to demonstrate their mathematics or science skills, or address students' affective needs. Of course, the level of change required to respond to any of these identified needs would vary by person. Most likely, a quick fix would not be appropriate for any plan to change one's curriculum, instructional style, or classroom climate. Far too many times, a mediocre plan is created just to do something different. We really do not know if the plan will result in improvement or the desired change. We may just want to try something without really analyzing the best way to approach an articulated plan that is responsive to the identified needs at the school, grade, or personal level. We do not always attend to the context in which the change must take place.

The following principles consider the person, as well as the environment, the process, and the end product (e.g., changes in behavior, knowledge base, and instructional approaches). Take a moment and review the 16 principles that emerged from our research. We are sure that you will soon recognize that many of these principles are also reflective of literature beyond the field of gifted and talented education. Go ahead and place a check under "agree" or "disagree" next to each of the following NRC/GT research-based principles.

Do you agree with the NRC/GT research-based principles?

- | | |
|--|--|
| <p style="text-align: center;">Agree Disagree</p> | <p><input type="checkbox"/> <input type="checkbox"/> 1. Professional development requires a personal and professional commitment to make a change in existing strategies and practices.</p> <p><input type="checkbox"/> <input type="checkbox"/> 2. Professional development opportunities have to be in response to an identified need: school level, grade level, small group, or individual.</p> <p><input type="checkbox"/> <input type="checkbox"/> 3. Professional development must be multi-faceted and responsive to varied learning styles.</p> |
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- | | | |
|-------------------|---|---|
| Agree
Disagree | <input type="checkbox"/> <input type="checkbox"/> | 4. Professional development needs to go beyond knowledge acquisition; knowledge and experiences must be applied. |
| | <input type="checkbox"/> <input type="checkbox"/> | 5. Professional development may require mentor/protégé experiences. |
| | <input type="checkbox"/> <input type="checkbox"/> | 6. Professional development may be more effective with opportunities to observe master teachers in similar roles, engage in collegial coaching, and demonstrate practices. |
| | <input type="checkbox"/> <input type="checkbox"/> | 7. Professional development requires time for reflection (e.g., How does this new strategy or practice add to my repertoire? Should this new strategy or practice replace a former one?). |
| | <input type="checkbox"/> <input type="checkbox"/> | 8. Professional development needs to have an impact on students, teachers, curriculum, school policies, or school procedures. |
| | <input type="checkbox"/> <input type="checkbox"/> | 9. Professional development needs to be valued. |
| | <input type="checkbox"/> <input type="checkbox"/> | 10. Professional development requires a desire to learn. Lifelong learners want and need opportunities for continual growth. |
| | <input type="checkbox"/> <input type="checkbox"/> | 11. Professional development requires a "personal growth plan" (e.g., What do I want to accomplish? What job will I seek? What skills do I need? How will new skills make a difference in the school or community? How will students benefit?). |
| | <input type="checkbox"/> <input type="checkbox"/> | 12. Professional development requires prolonged time, practice, feedback, and reflection. |
| | <input type="checkbox"/> <input type="checkbox"/> | 13. Professional development needs to be differentiated (e.g., What do I know? What do I need to know? How will I seek opportunities to learn? How will I share the experiences with others?). |
| | <input type="checkbox"/> <input type="checkbox"/> | 14. Professional development plans should reflect creative problem solving guidelines (e.g., find the problem, identify the problem, and seek sources to resolve or redefine the problem). |
| | <input type="checkbox"/> <input type="checkbox"/> | 15. Professional development requires administrative and collegial support and a willingness to experience failure. |
| | <input type="checkbox"/> <input type="checkbox"/> | 16. Professional development requires the collection, analysis, and application of school-level and district-level data to make informed decisions. |

Count the number of checks you have under the heading of "agree." Did you agree with more than 10 principles of professional development? What were your personal professional development experiences that seemed to result in similar principles? Did you recall your early or current involvement in professional development opportunities?

Professional development has many definitions. There are also multiple terms used in textbooks, journals, and newsletters, such as staff development or inservice. Obviously, the preferred term or phrase is a personal choice, as long as people understand the definition. In our survey of professional development practices, we wanted to make sure that one definition guided the responses. We crafted several definitions and finally wordsmithed one that reflected our views:

Professional development is a planned program of learning opportunities to improve the performance of the administrative and instructional staff. (NRC/GT, 1996)

I, too, reviewed the list of 16 principles of professional development in gifted and talented education and checked the appropriate boxes as I reflected on my experiences as an educator for over three decades. I recalled several early experiences with formal and informal approaches. Mandatory attendance at a presentation on a topic chosen by administrators was not always well received. Sometimes people, myself included, assumed the role of reluctant learners or disinterested attendees. The presentation topic may have been selected by someone's identified need, but those of us who were not engaged in the topic may not have recognized or even agreed with the focus. Clock-watching was a popular habit. I empathized with presenters who were clearly passionate and very knowledgeable about their topics. Many of them learned to read their audiences and to make adjustments in their pre-planned presentations. Obviously, this was not always an easy task. But this is what we ask of ourselves as we work with young people everyday. Shouldn't we also be able to adopt this same professional stance with adults?

At times, reluctant attendees connected with topics. You could see the changes in participants: body language, level of focus, engagement in questions and answers, or level of participation in hands-on activities. Successful professional development experiences are not a given. Missing the mark is a reality. However, if people are encouraged to share their ideas for the types, styles, or topics of professional

development opportunities, the potential for experimenting with suggested strategies and practices will most likely increase.

Designing formal professional development opportunities in response to identified needs is not difficult. One approach would be to ask teachers and administrators to list the outstanding achievements of the school. Then, ask them to list areas of improvement. Review the lists, check for common topics, and summarize the input. Return the lists for additional input by asking staff members to select their first priority for their school. What needs are identified most often? Share the summary of needs with staff members and discuss possible approaches to addressing identified needs. Involving faculty at each phase of planning professional development opportunities will certainly require a little more time, but the effort will be worthwhile.

Remember that professional development is not an event. It is an ongoing opportunity to help you meet your goals as they relate to your role as an educator. Each of us who has chosen to be an educator understands what an enormous

responsibility it is to work with youngsters and adults who touch our lives. Changes in practices, instructional styles, or curriculum are realities in places where people have the talent, commitment, and resources to implement them. Are these the places where you want to work? Are these the places where you want your children to attend school?

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Attention Deficit Disorders and Gifted Students: What Do We Really Know?

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This monograph summarizes current scientific knowledge about Attention-Deficit/Hyperactivity Disorder (ADHD) in children and presents issues related to ADHD in gifted students. Causes, assessment, diagnosis, educational strategies and medical interventions are discussed. A range of perspectives, including behavioral, cognitive, and neurobiological, are applied to the interaction of ADHD and giftedness. Provisional recommendations for parents and teachers are provided along with directions for future research.

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Williams Syndrome: A Study of Unique Musical Talents in Persons with Disabilities

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"The more a teacher is aware of the past experiences of students, of their hopes, desires, [and] chief interests, the better will he [she] understand the forces at work that need to be directed and utilized for the formation of reflective habits." (Dewey, 1939, p. 615)

Smiling, sociable, and often musically adept, persons with Williams Syndrome (WS) have only recently been recognized as a distinct group of people with talents and needs that may differentiate them from people with other disabling conditions. *Music & Minds*, a 10-day residential program at the University of Connecticut, was based on talent development practices from the Schoolwide Enrichment Model (SEM). Participants' individual learning styles, prior experiences, patterns of talent development, and educational needs were considered in the development of appropriate programming (Renzulli, 1977, 1994; Renzulli & Reis, 1985, 1997). In particular, emphasis throughout *Music & Minds* was on the interests of participants, since research studies in a variety of fields have shown that learning is easier and more productive when people are able to work in an area of their own selection. Music was integral to all aspects of the program.

Why Williams Syndrome (WS) and Music?

Incidence of WS is estimated between 1 in 20,000 and 1 in 50,000 (Gorman, 1992). WS is evident at birth, occurs in all ethnic groups, affects males and females equally, and has been reported throughout the world (Pober & Dykens, 1993). Individuals with WS typically have cardiovascular abnormalities, short stature, and Full Scale IQs in the mildly to moderately mentally retarded range (Udwin, Yule, & Martin, 1987). Einfield and Hall (1994) described the "typical facial appearance, the so-called 'elfin' facies, with an upturned nose, sometimes called retroussé with a rather bow-shaped mouth. Abnormal dentition is always present. There is often a particular iris pattern [in the eyes] described as star shaped or stellate" (p. 276). Although individuals with

Williams Syndrome have below average IQ scores, they have unique cognitive profiles characterized by relative strengths in language and music, which contrast with extremely poor visuospatial and visuomotor skills (Don, Schellenberg, & Rourke, 1999).

It is only recently that musicality in WS has been a focus of interest for researchers; however, love of music has been anecdotally associated with WS from the time the syndrome was first described. In an early report delineating the psychological characteristics of the syndrome, each child was noted to be musical (von Arnim & Engel, 1964). In another early case study, music was reported to be the child's "truest love" (Anonymous, 1985, p. 968). More recently, researchers initiated formal and informal studies of music in WS at Belvoir Terrace, a Massachusetts summer music camp that added a special week for individuals with WS. Lenhoff (1996), a scientist and parent of a child with WS, reported that the WS campers exhibited high interest and responsiveness to music, facility with complex rhythms, strong lyric memory, ease with composing, and a higher incidence of absolute pitch than seen in the normal population. Within the group, several campers stood out for specific accomplishments in music. Levitin and Bellugi (1998) tested rhythm production skills of 8 music camp attendees with WS (mean age 13.4 years) and found them equivalent to typically developing children of age 5 to 7 years for a number of correct responses, but more musical when responding in error. Don et al. (1999) used standardized tests of melodic and rhythmic discrimination as well as structured interviews to assess music skills of 19 children with WS (8 to 13 years). In contrast to earlier studies, these children were not selected because of their musical skills or interests. Results showed that music skills in the children with WS were at levels expected for vocabulary age peers. Tonal discrimination was equivalent to the control group, but rhythmic discrimination, though within expectation for receptive vocabulary age, was poorer. Musicality in the WS group was most frequently expressed by interest in music and emotional responsiveness to music. The WS group expressed higher interest in music and greater emotional response, being made both happy (100% vs. 84%) and sad (79% vs. 47%) more often than the control children. Thus, as parents and clinicians have reported, music is an area of special interest and responsiveness in many persons with WS.

Unfortunately, persons with WS are viewed as disabled, and previous research has focused on genetic, medical, linguistic, and psychological deficits. Educational programs have

generally focused on their disabilities and failed to provide opportunities for the specific identification and development of the unique musical talents observed in many persons with WS. The absence of a systematic approach to talent development in persons with WS that takes into account both their strengths and limitations has placed this entire group at an educational and occupational disadvantage. To counter this lack, *Music & Minds* was designed to investigate effective teaching practices in relation to the musical abilities, interests, and learning styles in the WS population.

The Music & Minds Program

Music & Minds was open to young adults (ages 18 to 29) with Williams Syndrome who exhibited interests and or talents in music. Sixteen individuals (8 males, 8 females) were invited to participate in the 10-day residential summer program held at the University of Connecticut during the summer of 1998 and 20 participants attended *Music & Minds* in 1999 (12 males, 8 females). The summer 1998 project was supported by the United States Department of Education, Office of Educational Research and Improvement, under the Javits Act. Educational psychology professors specializing in gifted and talented education organized the program and were joined by music, drama, and creative movement faculty. Allied health and physical therapy professors analyzed physical limitations, and developed individualized plans for increased mobility and physical fitness in the participants.

Daily classes in chorus, general music, individual instrument or voice, movement, drama, and math were part of the multi-faceted program. Evenings and weekend enrichment activities included an in-house musical night-club, field trips to hear and play the local Carillon, and participation in an evening drumming session. Students were housed in double rooms and ate meals in the University cafeteria. Throughout

the program, emphasis was on the joy of learning new skills and sharing accomplishments. A public performance reflecting all aspects of *Music & Minds* was presented by the participants on the final day.

Using Enrichment Programs

The conceptual framework of *Music & Minds* was based on components of the Schoolwide Enrichment Model (Renzulli, 1994; Renzulli & Reis, 1985, 1997). The SEM has three major components: analyzing students' talents, interests, and learning styles to identify patterns;

modifying curriculum to address unique interests, abilities, and styles; and providing a series of planned enrichment opportunities based on the Enrichment Triad (Renzulli, 1977). The Triad, with over 20 years of research and development, is the cornerstone of the SEM program.

The underlying theory of SEM is Renzulli's (1978) three ring conception of giftedness, which focuses on the development of three interrelated clusters of traits (above average ability, task commitment, and creativity) as applied to a particular area of interest or talent. Approaching talent development in this way seemed particularly appropriate for use with

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Case Study of One Participant

Charles is 24 years of age. Charles was diagnosed with Williams Syndrome when he was 2 years old. Once identified, he was referred to a nearby association that had an early intervention program. He attended the program 4 days a week for 3 years. On the fifth day he slept because, as he explained, even though he enjoyed it, the program was very tiring. He next attended a local kindergarten where he began special physical and occupational therapy that continued until he was 12 years old. The local middle school had no appropriate program for students with special needs, so Charles was enrolled in a self-contained special education school in a nearby town where he stayed until he was 21 years old. In school, Charles performed poorly in mathematics, and hated work sheets. He still has difficulty writing and solving equations. He uses a calculator. However, he can count to 1000, and sort music tapes and cassettes by musical category, having developed the latter skill while working at a music store. He tells time with and without a clock; "it is a rhythm thing." He enjoys reading The Hardy Boys, Scottish novels, British heritage books and magazines, and romances.

From age 3, Charles demonstrated his musical talent by singing "Sesame Street" songs in both English and Spanish. He has had access to a piano since he was young. When he was 6 years old, his cousin gave him a Pavarotti record and Charles began to play along on the piano prior to any formal lessons. He has demonstrated perfect pitch, and has developed the ability to follow musical notation once he has heard the music played. "He relates to the ups and downs of print," his mother explained. At age 13, he began regular drum lessons, and later became a full member of a local Scottish Pipe Marching Band, where he has been promoted to (snare) drummer first class. He plays his instruments (snare drum, piano, keyboard, bagpipe chanter, and saxophone) for at least 2 to 3 hours a day, and listens to his records, CDs, and tapes for at least 4 hours.

Currently, Charles is completing a 3-year residential post secondary program focusing on independent living skills. Although he frequently says that "music is my life," it is not available at this 3-year program. At this time, employment possibilities for Charles are scarce and his family worries what might be available for him as he grows older.

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persons with WS, who demonstrated interest in music, but required educational opportunities in other areas. SEM encourages creative productivity in young people by exposing them to a variety of topics, areas of interest, and fields of study; and trains them to apply advanced content, process-training skills, and methodologies to self-selected areas of interest.

Instrumentation and Results

Instruments used during *Music & Minds* were adapted from enrichment programs and used to identify interests in young people. Instruments such as "The Learning Styles Inventory" (Renzulli, Smith, & Rizza, 1997), "The Secondary Interest-A-Lyzer" (Hébert, Sorenson, & Renzulli, 1997), and "My Way...An Expression Style Inventory" (Kettle, Renzulli, & Rizza, 1998), along with personal records, anecdotal reports, checklists, and questionnaires, were used to collect information to develop appropriate programming for participants.

Parent reports, self-report, psychological testing, and school records indicated below average, but relatively strong verbal skills, such as vocabulary and memory. By contrast, participants demonstrated notable deficits in math abilities. Although participants' math skills were low, particularly in the area of fractions, they accurately used basic arithmetic facts and, to varying degrees, could add and subtract. Participants revealed poor self-concept with regard to math skills and were hesitant about their ability in this area. Parents reported that participants lacked basic math skills, and math was rarely applied in daily living, such as counting change when making a purchase.

Responses to assessment instruments revealed participants' strong preferences for discussion, verbal drill and recitation, lecture, simulations, peer teaching, and teaching games requiring demonstration and or verbal responses. In addition, their preferred expression styles were oral, dramatization, and music. With this in mind, lessons were developed that incorporated visual aids, games, lectures, discussions, and simulations.

Application of SEM to the Teaching of Fractions

The content of the *Music & Math* curriculum revolved around identifying equivalent fractions, understanding components of fractions, and practical applications to time, money, measurement, musical notes, and objects. Teaching of fractions was not taught theoretically or in isolation, but was tied to daily living. For example, students were asked to

locate and identify the building halfway between a home and a shopping center on a town diagram.

Music was used as an instructional methodology and learning tool. A piano and drum set were present in the classroom and used by instructors, guest artists, and participants throughout the treatment. At appropriate moments, the piano provided parallel sounds and rhythms to the discussion of fractions. This was evident during the opening discussion where the piano helped illustrate the relationship between a fraction's denominator and numerator. For example, the concept of one-fourth was enhanced by playing four (4) quarter notes to represent the denominator and one (1) quarter note to represent the numerator. The difference between one-fourth, one-half, and one-whole was also demonstrated using musical notes and sounds. These differences were intensified by using rhythmic lines with clapping of hands and stomping of feet.

To strengthen memory, students created rhythmic "songs." These little musical ditties stemmed from the various rules or dimensions of fractions. One example was "To • tal • eq • ual • parts" (G-G-G-G-C) played as four quarter notes followed by a whole note. Students applied this rhythmic line to remember the meaning of the denominator, and instructors hummed the notes in rhythm (without words) as a prompt when needed during classroom activities. Musical variations were used to relate fractions to real world situations.

The Music in *Music & Minds*

Music & Minds was designed on the premise that music is a form of discourse that should be at the core of musical study, experience, and the music education of our WS participants. What did we learn about our participants with WS during *Music & Minds*? Prior experience had provided clear evidence that musically talented persons with Williams Syndrome often taught themselves to play a musical instrument—the drums, guitar, or perhaps the piano. They usually already knew the kind of sound in which they had an interest. They insisted on the right equipment. They listened to their mentors and tried to emulate them, and although they often ran into problems of sound production and control, they were able to find their own way through them, comparing notes with fellow practitioners. They often followed the example of preferred models. Throughout the program, participants were encouraged to move beyond a preexisting emphasis on performing by extending their musical understanding and techniques to include perceptive listening, improvisation, and composition.

Music classes included composing-listening, performing-listening, and audience-listening within a musical and cultural range wide enough for students to appreciate music beyond what they had previously experienced. Smaller groups than whole-class or whole-band or whole-chorus were found to be essential for student interaction, musical decision-making, and individual choice and were incorporated into larger classes. Curriculum was broadly defined rather than written in advance, so that it could be quickly adapted to the individual circumstances and daily challenges.

To identify how many participants had achieved various levels of ability in music, we operationally defined musical ability as "the ability to understand and improvise in music, as well as the high level of skills, both present skill areas and potential, that can be developed in music." We identified 5 participants as having high skill and potential. Another 5 participants were identified as having mid-level skills or potential, and 6 participants were described as having low performance or potential. Approximately 12.5% of our participants demonstrated perfect pitch and 25% demonstrated relative pitch.

With the exception of one participant, the most musically able participants had good word reading skills. All participants who displayed high levels of musical ability had similar patterns of home support, with early lessons and encouragement in music. Their parents provided continuous reinforcement for musical training and musical exploration. Participants who were lower in musical performance had parents who also provided a great deal of encouragement and support, but not in the area of music.

By offering persons with WS broad and deep musical experiences, we may be able to significantly increase the possibility that they will engage in a wider variety of talent development activities in these areas. We may also enhance their understanding of what is taking place musically and extend the musical skills that are available for their personal and professional use.

Educational Issues

Three findings from *Music & Minds* are critical. The first is that the individual within-syndrome variability in our groups of participants with WS was so large that group described traits are likely to be deceptive. Therefore, individual assessments of each child should be periodically performed to note the change and progress of the individual. For example, while most of our participants were extremely

outgoing and friendly, some were shy and reserved. Seven participants appeared to be primarily auditory learners, 6 were more visual learners, and others were mixed. Several high-functioning participants had accurate appraisals of their abilities as compared with their chronological peers, and other young persons with WS. Although most were not particularly bothered by their deficits, and did not make external comparisons, higher functioning individuals appeared more susceptible to performance anxiety.

The second finding is that we must avoid the usual assessment stance of looking for disturbances or negative symptoms. While school psychologists are not usually inclined to look for positive behaviors, it is the positive behaviors that might act as a base to build constructive educational plans for this group. The teachers who interact with these children daily are usually well aware of the negative symptoms and could profit from knowledge of the potential to be discovered through positive traits.

Another important finding was that many of the participants were limited by firm, and sometimes inaccurate, beliefs about their ability to learn. Participants consistently told us what they could not do, such as "I can't measure," "I can't cut (with scissors, or with knives)." One young man had an acute physiological reaction to taking the pretest in math, sweating and repeating "I can't do this at all!" Several participants had distinct, rigid ways of doing things and could not break the pattern. "I have always done it this way and I can't change." This rigidity of style also appeared within music.

Accordingly, based on what we learned in *Music & Minds*, the following considerations should be taken into account in implementing programs for this unique population.

1. All participants displayed what may be described as a romance with music and rhythm. The absence of music in their school experiences and sometimes in their home life resulted in the loss of opportunities to find and develop their potential talent areas and also to find joy in their lives. Music could be used as a powerful teaching tool throughout school years to help develop skills in deficit areas.
2. Parents generally were realistic about the academic strengths and weaknesses of their children and were able to provide specific information about their abilities within content areas such as reading and math.

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3. Parental involvement played a key role in the development of musical talent. All the participants who displayed the highest levels of musical ability had extensive home encouragement.
4. Instruments focusing on learning styles, interests, and product style preferences that have been developed for general populations were easily adapted and helpful in identifying the interests, learning styles, and product preferences for individuals with Williams Syndrome.
5. Differences in living skills within this group should be recognized. Some participants were already extremely independent and needed to have flexibility and respect for their ability to live as almost self-sufficient adults. Others required much more support and help, but, when encouraged, quickly moved towards relative independence in some areas. Prior limiting expectations should be avoided.
6. The curriculum should not be planned in great depth in advance for this special population. Major themes should be identified, but the goal should be to develop curriculum around the interests, styles, product preferences, and abilities of each student.
7. Some deficits can be addressed and overcome through the use of strengths and interests. Math gains were made by a group of our participants when music was used to teach math.

Our experiences in *Music & Minds* were extremely gratifying for both participants and observers, but these experiences should extend beyond a 10-day summer program. By engaging the love and appreciation for music in persons with Williams Syndrome, we may increase confidence and abilities in academic areas. Purposeful development of musical skills has the potential to extend the talent potential and help enrich the lives of persons with Williams Syndrome.

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Gifted Program Evaluation in Progress

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Introduction

One of the most important, and most challenging aspects of the gifted coordinator's duties is program design. This task can be a large and daunting one. Many questions face the evaluator. How should the task of program evaluation begin? What information should be collected? Are there standards for a good gifted program? Where should the effort be focused? (see Fetterman, 1993; Renzulli, 1975). What follows are one district's answers to those questions. We reviewed current program policies and practices as a way to conduct an informal evaluation that would allow us to make decisions throughout the school year. The process is documented month-by-month to illustrate the steps of gathering input and making decisions. This small district is located in a suburb of Minneapolis, MN. It is comprised of one high school, one middle school, and two elementary schools. There is an elementary gifted coordinator (.60 full-time equivalent [FTE]), a middle school gifted coordinator (.33 FTE), and a high school advanced placement coordinator (less than .20 FTE).

August/September

The first step in the process was to look at the current program. We began with the identification process. The procedure being used consisted of a matrix system that assigned points to three pieces of information gathered about students. Parent and classroom teachers completed a very simple yes/no checklist of student characteristics. Also included on the matrix were the scores from the Cognitive Abilities Test (Thorndike & Hagen, 1993). Points were totaled and compared to the required minimum score needed for inclusion in the gifted program. Only students referred by a teacher or parent were tested at the end of first grade. The gifted coordinator had sole responsibility for identifying the students.

The gifted program at the elementary level was a pullout for identified students in grades 2-4. Identified students were clustered with one teacher at each grade level in one elementary building and dispersed among several teachers at the other building. Students in each grade level were scheduled to meet with the gifted coordinator every other day for a period of 50 minutes.

The next task was to identify the goals of the program. This proved to be more elusive. The program lacked written goals; however, a search of the district's records uncovered two pertinent documents. The first was the district board policy requiring the individual sites to develop procedures for identifying students for inclusion in the gifted program.

The second document was the final recommendation of the district-wide Gifted Education Study Group. This group consisted of parents, staff, and administrators from grades K-12. They met over an extended period, read current literature in the gifted field, and discussed the merits and applications for this district. The end result was a document that gave clear direction to the overall gifted program.

The resulting philosophy/mission statement was over 4 years old and had not been implemented. The study group provided valuable information regarding the district's focus for the program, but required updating. The opinions and suggestions of both staff and parents needed to be collected.

As part of the informal evaluation process, a brief written survey was given to all elementary teachers and parents of identified elementary students. Each group was asked to list positive outcomes of the program, as well as possible changes. Teachers were asked to indicate how the coordinator could help them in their classroom and what goals/outcomes they felt were important for the program. Parents were asked to list possible discussion topics for monthly parent meetings and to provide any other input they wanted to share. Four teachers from each building responded to the survey. Seventeen of the 56 families in the program responded.

A common thread found in the answers of both parents and staff was the positive response to the challenge the students received in the program, particularly within the math curriculum. Both groups also mentioned the positive effects on students:

- spending time in small groups reading and discussing challenging novels;
- participating in Junior Great Books (The Great Books Foundation, 1992) and Omnibus (Rogers, 1989) with parent volunteers; and
- working with Challenge Math (Haag, Kaufman, Martin, & Rising, 1986), which requires manipulating math concepts and using different number base systems.

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Several teachers wanted activities for the students to do after they completed other assignments. Parents asked for curriculum changes within the classroom instead of an add-on to an already full day. There was concern about students participating in the pullout program and returning to the classroom to make up work.

Parent responses for discussion topics were very revealing. The majority requested help with the social/emotional needs of gifted students. Parents wanted to know how they could help their child reduce anxiety, deal with perfectionism, and cope with underachievement and lack of motivation. Our direct response to these requests was to provide monthly parent meetings offering information and discussion on topics selected from this list.

While this information was being collected, the elementary and middle school gifted coordinators met to discuss the issues of continuity between their two programs. A meeting with the superintendent and the building administrators was requested and scheduled for early October.

October

The administrative meeting involved the three gifted coordinators, principals from the four buildings, the coordinator of teaching and learning, and the superintendent. Each participant was asked to respond to a few questions in preparation for the meeting. The questions included commenting on the current identification/placement process, the program as it currently existed, possible future program directions, and suggestions for moving forward in implementing those directions. Responses were varied. Three of nine participants had formal training in gifted education, each having earned a Master's degree in that field. Responses centered on the need to have a defensible identification process matched to services. Of particular concern was the need for all teachers to differentiate curriculum within their classroom. For example, some teachers believed students were spending too much time reading the basic chapter on the Boston Tea Party when they could be delving into the perspectives of the participants in the event. Their findings could then be presented to the class in a multimedia format. Because these teachers were also parents of gifted children, the need for parental communication and involvement was also seen as vital to the success of the gifted program.

Comments and concerns of the other members included everything from the desire to have good public relations

within the community, to concerns with the elite nature of gifted programming, to the lack of funding, and to the unwillingness of some staff members to differentiate curriculum.

After much discussion, we developed a plan to help each member proceed in an organized and cohesive fashion. Some participants had specific concerns for their building; others were not convinced that change was necessary. In the past, parents raised concerns about the lack of continuity in the district. All agreed that this needed to change.

The identification process needed revision at all levels, particularly at the elementary level where initial placement generally occurs. All principals were asked to incorporate professional development opportunities on best practices and programs in gifted education through their site-based management teams. They were also asked to check on the status of differentiation at each site. Additionally, the elementary coordinator was asked to work with the coordinator of teaching and learning to begin revision of the elementary service model.

November

The administrative team met again in mid-November for a progress update. Professional development opportunities were being discussed at middle and high school levels, but at the elementary level there was little progress. High school course offerings were changing to incorporate advanced placement classes for the next school year. At the middle school, there were opportunities for a variety of co-curricular activities, including geography contests, spelling bees, and authors' conferences.

At the elementary level, progress was being made on redesigning the service delivery model. There were 13 identified students. One teacher chose to retain the pullout model for 7 identified students. Another teacher volunteered to use the resource model with 6 identified students. The resource model was designed to meet specific needs of a cluster of gifted students by providing resources and activities to extend and enrich grade level objectives and course materials. Extension activities were completed in the classroom, while other students worked on concepts they needed to master. In this way, the gifted program would be part of the students' day—not an add-on of curriculum that did not connect with regular curriculum. The intent was to give the other staff members a living example of what this model would look like. Six identified students remained in the classroom. The elementary gifted coordinator set aside

30 minutes every other day to focus on these resource students. Much of that time was spent preparing activities for these students to complete within their classrooms. Activities were prepared to enhance the curriculum, requiring performance at higher levels. Time was also available to introduce activities, conference with students as they worked on long-term assignments, and provide individual help with research and study skills. Classroom teachers and the elementary gifted coordinator collaborated closely on this model. The beauty of this arrangement was the flexibility it offered classroom teachers to include students not formally identified as gifted. Teachers could also exclude identified students from particular activities based on individual needs.

While progress was being made in several areas, identification for inclusion in the program was still a big concern. Several local districts were contacted to develop a good sense of how comparable districts were identifying students. After reviewing these processes, members assigned to this task made preliminary recommendations. The first recommendation was to delay the administration of the Cognitive Abilities Test (CogAT) until the end of grade 2. The elementary gifted coordinator would work within each grade 2 classroom providing whole group lessons in thinking skills and would keep problem-based assessment logs on students. The CogAT would be administered to all grade 2 students to be as inclusive as possible in the initial screening.

The next recommendation was to include the Kranz Talent Identification Instrument (Kranz, 1981) as a screening tool. This instrument asks teachers to identify talent areas in academics, arts, and motor skills. The third recommendation was to replace the current checklists with Renzulli scales (Renzulli, Smith, White, Callahan, & Hartman, 1976). The Renzulli scales offer additional information because each characteristic is rated on a one to four scale instead of with a simple yes or no. Both teachers and parents would be given instruction on how to complete the scale. The final recommendation was to involve a team, instead of just the gifted coordinator, to review each student's portfolio to determine the best match for services within the program.

There was some concern with these recommendations. Change can be difficult; it was certainly true in this situation. Over the next few months, there would be limited success with the acceptance of these recommendations.

January

We convened an advisory group consisting of teachers representing each grade level. It was a joint committee with teachers from both elementary buildings. It took a great deal of encouragement to find a representative from each grade level. Many teachers were already very busy and the gifted program was not a high priority. Eventually, the Gifted Advisory Group convened, including one representative from grades 1, 2, and 3, and two representatives from grade 4.

February

The Gifted Advisory Group met for the first time. The elementary gifted coordinator, coordinator of teaching and learning, and one elementary principal attended the meeting. The elementary gifted coordinator shared concerns with the identification process. The group reviewed screening and identification techniques other districts were using. They also studied the National Association for Gifted Children gifted program standards (NAGC, 1998). The idea of making these changes was very difficult for some, while not as difficult for others.

Within days following the initial meeting it was decided to disband the group and meet with the teachers separately at each building. Two meetings with grades 1 and 2 teachers were scheduled for March.

March

The first meeting was held at one building. With the input of grade 1 and 2 teachers, the overall plan was articulated and organized as a paragraph form. Two weeks later, a meeting was held at the other elementary building. Teachers' input was gathered; the articulated plan resulting from the Gifted Advisory Group was not shared with them. This group of teachers was extremely concerned about making any changes; therefore, presenting an articulated plan was not advisable. We scheduled another meeting with building representatives.

April

The elementary coordinator returned to the first building to present the articulated plan, using a flow chart, and provided a rationale for suggested changes. Each staff member was given a copy of the plan to review. We received very limited, but positive feedback.

May

The site-based decision making team at one elementary school approved the new identification process.

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Unfortunately, the staff at the other building was still very concerned about potential changes. A second meeting with them proved to be impossible to schedule. The school year ended with a split decision between the two buildings with no final determination of the district plan to identify new students.

Final Words

Program design and implementation are challenging, but rewarding tasks. Finding the identification procedure and program model that is right for your own district is vital, but it takes time. There can be many stumbling blocks along the way, both from fellow staff members and administrators. Our district is halfway there to implementing an identification process that should be more inclusive. We made baby steps in demonstrating how differentiation within the classroom can be done. We still need to work on professional development for this to be fully realized. As with any change within a school district, the key is to have administrative support and a few willing teachers who can help you model proposed changes. The ultimate goal is to provide programming and service opportunities matched to students' needs that are also linked to the overall goals and management of the district.

Documenting the progression of ideas and suggestions for possible changes in the current gifted and talented programs and services in this one district was certainly an effective method of using informal evaluation techniques to make decisions. Keeping a monthly log aided the decision-making process. Ideas and suggestions need to emerge from

meetings with administrators, teachers, and parents to ensure a commitment to implementing the most defensible and appropriate opportunities for bright youngsters.

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Attention Deficit Disorders and Gifted Students: What Do We Really Know?

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Few current topics in education have engendered as much attention, concern, and passion as Attention-Deficit/Hyperactivity Disorder (ADHD), particularly in gifted children. We recognize that giftedness is multifaceted and can be assessed in many ways other than a standardized IQ test. We will summarize and differentiate between what is *known* and what is *assumed* about ADHD in gifted students. (See our NRC/GT monograph for a complete analysis of this topic.)

ADHD: History, Definition, and Etiology

Attention-Deficit/Hyperactivity Disorder (ADHD) is a "syndrome," i.e., a grouping of symptoms that typically occur together. The core symptoms of ADHD are impulsivity, inattention, and hyperactivity (American Psychiatric Association, 1994). Estimates of the prevalence of ADHD among school age children vary but the median estimate across all definitions of ADHD and all types of studies is 2% in boys and girls combined (Lahey, Miller, Gordon, & Riley, 1999).

Family, adoption, and twin studies demonstrate that genetic factors are very important in ADHD, but environmental factors also play a significant role since heritability is less than 100%. Environmental factors, including premature birth, head injury, fetal alcohol syndrome, prenatal exposure to drugs of abuse, such as cocaine, lead toxicity, prenatal maternal smoking, and rare endocrine abnormalities can all cause the ADHD syndrome.

How Is ADHD Assessed and Diagnosed?

Four subtypes of Attention-Deficit/Hyperactivity Disorder (ADHD) are recognized in the DSM-IV: Predominantly Hyperactive/Impulsive, Predominantly Inattentive,

Combined, and Not Otherwise Specified (American Psychiatric Association, 1994). To meet the criteria for one of the specific subtypes, at least 6 of the 9 symptoms of hyperactivity/impulsivity, or at least 6 criteria from the 9 symptoms of inattention must be present. (Combined type means both sets of criteria are met.) The symptoms must occur *in more than one setting*, must persist for *at least 6 months*, and must affect the individual "to a degree that is *maladaptive and inconsistent with developmental level*" (American Psychiatric Association, 1994, p. 83).

Under optimal circumstances, a team, *including a qualified clinician*, such as a pediatrician, family physician, psychiatrist, neurologist, or psychologist should make the diagnosis of ADHD because only these types of specialists can assess the physical and psychological problems that mimic ADHD. Information about these conditions is rarely available to school personnel, no matter how observant, experienced, or well trained.

For the majority of children with ADHD, symptoms become clear-cut when their behavior can be observed regularly and compared to other children over a sustained period. The classroom teacher, therefore, is typically the best person to make such comparisons, especially when systematic behavioral checklists or rating scales are employed. When the child in question is gifted, an individual who specializes in giftedness should also be included in the process to provide information about the child's behavior in comparison to other children of similar abilities (Silverman, 1998).

ADHD or Gifted: Either or Both?

In recent years, several authors (Baum, Olenchak, & Owen, 1998; Cramond, 1995; Freed & Parsons, 1997; Lind, 1993; Tucker & Hafenstein, 1997; Webb & Latimer, 1993) have expressed concern that giftedness is often misconstrued as ADHD and that the diagnosis of ADHD among the gifted population has run amok. We acknowledge for the purposes of this discussion that there are cases of mistaken diagnosis, although as of this writing, we have found *no empirical data* in the medical, educational, or psychological literature to substantiate the extent of this concern.

The lack of scientific data heightens our dismay over the wave of skepticism that appears to prevail about the existence of ADHD in gifted children. Specifically, we are concerned that the question "ADHD or gifted?" dismisses the possibility that the two conditions may coexist. Prudent attempts to avoid over-diagnosis must be balanced against a

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child's need for evaluation and treatment in the context of inevitable uncertainty when medical diagnoses are invoked.

In this context, Silverman (1998) notes that some professionals erroneously assume that a child who demonstrates sustained attention, such as a gifted child engaged in a high-interest activity, cannot have ADHD. It is understandable that an observer might discount the possibility of ADHD because from all appearances the child is so absorbed in a task that other stimuli fade into oblivion. While this state of rapt attention is often described as "flow" (Csikszentmihalyi, 1990), it can also be ascribed to "hyperfocus," which is a similar condition that individuals with ADHD frequently experience (Hallowell & Ratey, 1994).

Activities that are continuously reinforcing and "automatic," such as video or computer games or reading for pleasure, do not distinguish children who have ADHD from children who do not have ADHD, whereas effortful tasks do (Borcherding et al., 1988; Douglas & Parry, 1994; Wigal et al., 1998). By virtue of their giftedness, the range of tasks that are perceived as "effortless" is broader for gifted children, which is why their ADHD may be less apparent than in children who struggle more obviously and to lesser effect.

Recent work (Kalbfleisch, 2000) suggests that the gifted child with ADHD is particularly predisposed to exhibit this state of "flow" or "hyperfocus." While this can be a positive aspect of task commitment and a sign of motivation, it becomes a problem when the child is asked to shift from one task to another. Therefore, while cognitively this state can have positive aspects, behaviorally it can also cause problems (Moon, Zentall, Grskovic, Hall, & Stormont, in press). Furthermore, ADHD is not characterized by an *inability* to sustain attention, but rather by the inability to appropriately regulate the application of attention to tasks that are not intrinsically rewarding and/or that require effort. Such tasks are, sadly, characteristic of much of the work that is typically required in school, even in programs for gifted students.

While a misdiagnosis of ADHD is undesirable, diagnostic errors of omission are just as serious and may be even more prevalent among gifted students. This difficulty occurs when a student's over-reliance on strengths inadvertently obscures the disability. While emphasizing strengths may highlight a student's gifts and talents, it does not eliminate the reality of the condition and can, in fact, lead to a worse predicament in

which the student distrusts his or her abilities because of the struggle to maintain them. On the other hand, if a student is allowed to acknowledge and experience the disability, he or she may learn appropriate compensatory or coping skills.

We believe that acknowledging that a child can be both gifted and have ADHD and that exploring the ways in which these conditions might interact in each child is a more productive way of looking at the problem than agonizing about a false dichotomy.

Given the realities of the co-existence of giftedness and ADHD, the question should not be "ADHD or gifted?" but rather "how impaired is this student by his/her ADHD?" Some children are able to compensate in most situations for their ADHD (and neither they nor their parents or teachers may be aware of it); others are seriously handicapped. The single most relevant element that must be considered in evaluating ADHD is the degree of *impairment* a child experiences as a result of the behaviors.

A child whose behavior causes him/her to be impaired academically, socially, or in the development of a sense of self, should be examined from a clinical/medical perspective to exclude potentially treatable conditions, even if the behavior may be similar to the traits typically ascribed to creativity or giftedness (Cramond, 1995) or to "overexcitabilities" (Piechowski, 1997; Silverman, 1993). However, this does not mean that every child who is impaired needs medication. As many authors have noted (Diller, 1998; Flick, 1998; Hartmann, 1993; Lerner, Lowenthal, & Lerner, 1995), non-medical interventions can be used within the school and home and should be tried before more intrusive interventions are employed.

The 1999 reauthorization of the Individuals with Disabilities Education Act explicitly recognized, for the first time, ADHD (and ADD) as disorders that should be classified as Other Health Impaired, when they adversely affect a child's educational performance. The reader is referred to www.chadd.org/legislative/govt.htm for further detailed information and relevant hyperlinks.

ADHD and Giftedness: Where Do We Go From Here?

Clearly, there is need for additional empirical research on giftedness and attention deficit disorders. Questions such as incidence of DSM-IV subtypes of ADHD among the gifted population must be investigated before other types of research can proceed. If such research were to show that current DSM-IV criteria identify significantly different

proportions of gifted students compared to the general population (over or under diagnosis), subsequent studies would be able to explore the sources and characteristics of the discrepancies. The availability of data would in turn facilitate and encourage the development of strategies for appropriate identification and curriculum. Contact the NRC/GT website (www.gifted.uconn.edu) if you know of identical twins (ages 5-16), one of whom presents characteristics of ADHD or ADD.

ADHD is not a defect that must be "cured." In fact, our experience of many gifted children with ADHD resonates with our colleagues' perceptions that the condition can not only inhibit, but enhance the realization of gifts and talents.

Educators of gifted students with ADHD face a formidable task in that they must provide opportunities for students to apply their strengths while ameliorating their deficits. Although the same might be said of any sound educational program, this is more daunting for gifted students with ADHD because of the striking disparities these conditions can create. Only through consistent attention, immeasurable creativity, and enduring patience by educators, parents, and students, coupled with substantive research, can these challenges be adequately addressed.

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