

No Child Left Bored

How to challenge gifted and talented students with a continuum of high-end learning opportunities

By Sally M. Reis

On a wet gray day in November, Michael walked into his 2nd-grade classroom in Torrington, Conn., holding a recording of the music of Tchaikovsky's "Nutcracker Suite" carefully wrapped in plastic. Michael explained to his teacher that he wanted her to listen to this special music, which he'd been practicing on his piano at home because he had a question he wanted to discuss with her.

"I've been wondering," Michael said to his teacher. "There are some parts of this composition that are really happy, and some parts that are really sad. Do you think Tchaikovsky wrote the sad parts when he was really sad and the happy parts when he was really happy? Or do you think that when he was really sad, he wrote the happy music to cheer him up?"

The 2nd-grade teacher smiled and suggested he find the enrichment specialist in the school to see whether she could help him find answers to his questions. Her job was to work on talent development opportunities with all students. In addition to asking creative, thoughtful, advanced questions, Michael read several years above grade level, was advanced in math and excelled in music. Before the year was over, Michael produced a "talking" book and accompanying audiotape summarizing his research on Tchaikovsky.

Continuum of Services

Michael's academic progress was a direct result of his school district's efforts to meet gifted students' needs by offering appropriate challenges, including an analysis of his interests and learning styles, differentiated instruction and accelerated content in advanced instructional groups in both math and reading with other 2nd-grade students from across four classes.

He also was engaged in enrichment clusters, where he worked during designated time blocks with students of various ages who shared his interests. An adult with advanced knowledge and expertise in his interest area provided guidance.

These enrichment clusters are part of an approach called the Schoolwide Enrichment Model developed by the University of Connecticut that is widely used in educational settings in the United States as well as other countries.

At the highest level, the pedagogy involved in Michael's education also changed as he moved beyond advanced lesson learning to the development of an independent study in his area of choice with individual research and the use of advanced research methods. His district's highly individualized curriculum modification procedures included curriculum compacting and acceleration as well as first-hand investigative opportunities.

Underserved Students

The highly targeted array of learning opportunities that Michael

enjoyed is not common practice in schools and districts across the country.

A few states have created separate schools for academically talented students in math and science such as the North Carolina School for Science and Mathematics. Some large districts have established magnet schools to serve the needs of academically talented students. In St. Paul, Minn., several magnet and theme schools are available for gifted learners, including schools with full-time programs for academically gifted and talented students with a focus on critical and creative thinking skills. Capitol Hill Gifted and Talented Magnet School is one of these, and services are provided for students in grades 1-8. Districts and states also have developed innovative programs that include mentorships, Saturday programs, after-school enrichment activities and summer internships.

However, recent experiences suggest strongly that this attention has decreased in the years following the implementation of No Child Left Behind. In a recent study that my colleagues conducted, across 92 observation days in all subject areas, gifted students experienced only minimal instructional or curricular differentiation.

For example, I observed two talented readers in one elementary school on nine separate occasions and never saw them receive any reading instruction at all. The students had no challenging chapter books assigned and instead spent their time searching for websites about their favorite rock stars (Britney Spears and Christina Aguilera). During each observation, these talented readers were left to work on their own while they searched the web, chatted with each other, went to the library to wander and read easy books (such as the Babysitter's Club), which they selected without assistance from their classroom teacher or librarian.

When I questioned their teacher about whether this reading group ever received reading instruction, he sighed and responded: "I try to get to them at least once a week, but I am not always able to do that. You see, so many of my other students read below grade level that it is hard to justify not working with them. Many of these lower readers will be retained in this grade if they do not improve. The top group already reads at grade level so I rarely have any instructional time to give to them."

Promising Practices

In the last decade, many promising practices have been implemented to challenge gifted and high potential students. Joseph Renzulli, director of the National Research Center on the Gifted and Talented, recommends developing a continuum of services to challenge the diverse learning and affective needs of all students at all grade levels. This continuum provides services that range from general enrichment for all students across all grade levels, to curriculum differentiation procedures including both enrichment and acceleration for rapid learners, advanced classes, individualized research opportunities for identified gifted and talented students, and counseling and other services to meet affective needs.

Some services are relatively inexpensive, some involve considerable time and funds, while others have no cost as they involve strategies for grouping and regrouping students, based on interests and achievement levels.

Two considerations exist when a districtwide continuum of services is developed. The first is organizational, relating to where and when students will be provided with services to meet their advanced learning needs. How and when will students at different grade levels be grouped together in or across different schools?

For example, gifted and talented students can be grouped by instructional level in both elementary and middle schools. They can be cluster grouped in one or more content areas across classrooms and assigned to classes with teachers who have had professional development and use strategies to meet their learning needs. Separate classes can be provided for gifted students at any grade level.

Interventions to attempt to reverse underachievement can be incorporated into counseling options either during or after school at the high school level. Students can have opportunities for advanced project work after school or during a time that their curriculum has been compacted.

The second consideration in the development of a districtwide continuum of services relates to curriculum and learning opportunities as decisions must be made about what will be taught and why. Will acceleration opportunities be made available? Will the regular curriculum be extended with enrichment or will it be compacted and replaced with teacher-selected advanced content? Will students have the opportunity to pursue their personal interests using independent study?

Both considerations should be addressed as a continuum of services is developed. If organizational structures are the only component addressed in a districtwide continuum of services, little thought will have been extended to essential instructional and curricular decisions. For example, if students are grouped into a separate class for gifted students without any advanced or accelerated curriculum or instruction, little justifiable reason exists for that instructional grouping.

Establishing opportunities for enrichment across the grade levels and differentiation in all classrooms are one way to begin the development of a continuum of services that range from some level of service in the regular classroom setting to a separate school or center for gifted learners.

School-based gifted programs offer a diverse set of learning opportunities. Resource room programs enable teachers to send out students from their regular classrooms to spend time with other high potential students and to enable them to work on in-depth, advanced independent study projects and group projects in their interest areas. In some districts, students have the opportunity to travel to a center one day each week to work with other identified gifted and talented students on advanced curriculum or to pursue individual interests.

In St. Louis County, Mo., the Center for Creative Learning was established in 1990 as part of the Rockwood School District's commitment to meeting the learning needs of its most advanced students. The center supplements the regular school program by providing differentiated educational opportunities for academically gifted students in grades K-5. Students spend one day each week at the center studying advanced content and exploring personal interests through independent study. While at their home schools, these same students receive enrichment and acceleration experiences through the efforts of their regular classroom teachers. Still other gifted programs incorporate innovative mentorship opportunities in which a bright student is paired with an older student or adult with both an interest and expertise in the same area.

Differentiated Learning

Curriculum compacting and differentiated instruction are two essential services for our most advanced students. With training, teachers can use curriculum compacting to differentiate curriculum and eliminate previously mastered work. In a national study, we found that with only a few hours of training classroom teachers learned to eliminate between 40 and 50 percent of the previously mastered regular

curriculum for both high-ability and gifted students. Interestingly, no differences were found between students whose work was compacted and students who did all the work in reading, math computation, social studies and spelling. In fact, in some content areas, scores were actually higher when this elimination of previously mastered content took place.

Some schools use cluster grouping to enable students who are gifted or academically advanced in a certain content area to be grouped in one classroom with other students who are talented in the same area. When cluster grouping is used, one 5th-grade teacher may have a group of six advanced math students clustered in a classroom, instead of distributed among four different classrooms, enabling more in-depth and complex differentiated learning opportunities to be targeted by a teacher with advanced training to meet the needs of these students.

Research by both Marcia Gentry from Purdue University and James Kulik from the University of Michigan has found cluster grouping and other instructional grouping with differentiated instruction and content benefits gifted and talented students and helps challenge other students across all levels of achievement. Many principals and superintendents urge classroom teachers to use differentiated instruction and curriculum compacting across all grade levels to ensure sufficient challenge to all students and to eliminate content that students already have mastered.

Various forms of acceleration also are used in schools, including the most common form, grade skipping, as well as early entrance to kindergarten or 1st grade, content-level acceleration (enabling students who are advanced in reading to work at an advanced level that is commensurate with their reading comprehension level) and curriculum compacting. A recent report by Professors Nicholas Colangelo and Susan Assouline at the University of Iowa, titled "A Nation Deceived," provides research support for the many different types of acceleration that are successful with gifted learners.

Some districts have adopted policies that enable acceleration to be more widely used in schools. The Ohio State Department of Education suggests its local districts consider adopting a comprehensive model policy for advanced learners (www.oagc.com/Documents/GiftedPoliciesandPlan/AccelerationPolicy4_12_06.pdf).

Services for gifted and high-potential learners also can include a number of challenging curriculum content options implemented in classrooms. Several research-based curriculum and instructional options have been developed under the auspices of the federal Jacob Javits Education Act that also produced the most recent federal report on what is happening with academically talented students in America.

Professor Katherine Gavin and her colleagues at University of Connecticut have developed exciting advanced math curriculum in a program called Project M3, Mentoring Mathematical Minds, for academically talented elementary students. Curriculum in science and social studies has been developed by Professors Sandra Kaplan at University of Southern California and Joyce Van Tassel-Baska, at the College of William and Mary.

National programs also have been developed for high-ability students, such as Future Problem Solving, conceived by E. Paul Torrance at the University of Georgia. These programs have enabled hundreds of thousands of students to apply problem-solving techniques to real-world problems in society and in their communities. Although not intended solely for academically talented and advanced students, Future Problem Solving is widely used in gifted programs because of the curricular freedom and academic challenge associated with the

problems that students pursue.

Likewise, programs such as Odyssey of the Mind and Destination Imagination encourage teams of students to use creative problem solving to design structures, vehicles and solutions to problems such as designing a vehicle that uses a mousetrap as its primary power source. Many gifted students have the opportunity to participate in National History Day, in which they work individually or in small groups on a project about an historical event, person or event related to a theme that is determined each year. Using primary source data such as diaries or other archives gathered in libraries, museums and interviews, students prepare research papers, projects, media presentations or performances as entries.

Computer Diagnostics

The latest innovation to challenge gifted and talented learners in classrooms and in separate gifted programs is a new online system designed to use strength-based assessment and differentiated learning experiences for gifted and talented students. Renzulli Learning www.renzullilearning.com provides a computer-based diagnostic assessment and then creates an individual profile of each student's academic strengths, interests, learning styles and preferred modes of expression.

The online assessment, which takes about 30 minutes, results in a printed profile that highlights individual student strengths. It is accompanied by a differentiation search engine that selects hundreds of resources that relate specifically to each student's interests, learning styles and product styles. The search engine matches student strengths and interests to an enrichment database of 16,000 enrichment activities, materials, resources, contests and competitions, independent studies and opportunities for research and follow-up.

A project management tool called the Wizard Project Maker guides students and teachers to use specifically selected resources for assigned curricular activities, independent or small-group investigative projects and research studies. Students' work can be saved in an electronic portfolio. The system also offers many tools for teachers to more easily differentiate instruction and curriculum and to group students by interests, abilities and learning styles.

Summer Programs

National programs called Talent Search exist at the Center for Talented Youth at Johns Hopkins University and Northwestern University that actively recruit and provide testing and program opportunities for academically talented youth. These students generally have scored highly on standardized tests and are recommended by teachers or counselors to participate in early assessment and may be eligible for multiple options, including summer programs, acceleration and college courses. Other summer programs like Mentor Connection at the University of Connecticut focus on in-depth investigative experiences for students in the summer under the mentorship of doctoral-level professors or researchers.

In other states, advanced, intensive summer programs are provided by Governor's Schools in specific content areas. The Pennsylvania Governor's Schools of Excellence, for example, offer five-week-long summer residential programs on college campuses committed to meeting the educational needs of artistically or academically talented high school students, including one in science and technology at Carnegie Mellon University. The National Association for Gifted Children's website provides a comprehensive list of summer programs for academically talented students as well as a comprehensive list of parent recommendations and research findings that district adminis-

trators can recommend to parents of talented students.

The goal for each superintendent and administrator is to work with teachers and parents to develop a program and a continuum of services that is appropriate for each individual school, taking into account the unique learning needs of the students, the programs and services already in place and what is needed to challenge every child. For every child deserves the opportunity to make continuous progress in learning.

Sally Reis, a former school district administrator, is a professor of educational psychology in the Neag School of Education at the University of Connecticut, Gentry Building, Storrs, CT 06269. E-mail: sally.reis@uconn.edu