MONTGOMERY COUNTY PUBLIC SCHOOLS

A Guidebook for

Twice Exceptional Students

Supporting the Achievement of Gifted Students with Special Needs

MCPS

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Twice Exceptional Students

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CONTENTS

A. Policy A-1
B. Introduction B-1
C. Population C-1
D. Identification D-1
E. Characteristics E-1
F. Framework for Success F-1
  Strength-based Instruction F-1
  Goals F-1
  Best Practices F-2
G. Adaptations and Accommodations G-1
  Definitions G-1
  Guiding Principles G-2
H. Interventions H-1
  Overcoming Obstacles Related to Writing H-1
  Overcoming Obstacles Related to Organization H-2
  Overcoming Obstacles Related to Reading H-2
  Overcoming Obstacles Related to Memory H-3
I. What Works/What Doesn't Work I-1
  School Climate I-1
  Instructional Skills and Strategies I-1
  Content Areas I-2
  Evaluation/Assessment I-3
  What Works—Charts I-4
J. Staff Development J-1
K. Programs and Services K-1
  Service Model Components K-1
  Program Features K-1
L. Who's Who—Roles and Responsibilities in MCPS L-1
M. Conclusion M-1
N. Resources N-1
O. Acknowledgments O-1
P. Bibliography P-1

POLICY

The state of Maryland has adopted into law and the Montgomery County Public Schools (MCPS) Board of Education has adopted into its policy the key concepts of the definition of gifted and talented students originally stated in the Jacob K. Javits Gifted and Talented Students Education Act (1988).

Gifted and talented students are defined as:

> ...children and youth with outstanding talent (who) perform or show the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience, or environment.
>
> They require services or activities not ordinarily provided by the schools.
>
> Outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor.

The Maryland State Department of Education's (MSDE) *Local Planning Team Handbook* in the creation of each school system's master plan, calls for "assisting schools in the identification of, and provision of services to, gifted and talented students (including economically disadvantaged students, English language learners, and students with disabilities)."

MCPS Board policy states that "underachieving and traditionally *underserved* students will be nurtured through a variety of efforts including…distributing characteristics of gifted/learning disabled and/or underrepresented groups and adaptive techniques that assist these students in mastering challenging instruction."

This guidebook meets that requirement of the state and county policy. It does so with the goal of helping to increase the number of students realizing their true potential.

INTRODUCTION

Diamonds are rare. Two hundred fifty tons of rock, sand, and gravel must be processed to yield one carat of polished diamond. The diamonds we will be discussing in this guidebook also are rare. They are often not identified because their brilliance and roughness may mask one another and we see only the rough parts—their inability to write or read effectively resulting in an attitude of discouragement and defeat. When we do find these diamonds, not only do we help them to reach their potential, we identify the gifts and talents that will benefit our entire society.

The purpose of *The GT/LD Guidebook—Supporting the Achievement of Gifted Students with Special Needs* is to assist staff, parents, and the students in understanding the identification process and in accessing appropriate instruction. As directed by Maryland law and by MCPS GT policy 10A, we must identify and serve not only the students who perform, but also the students who show "the potential for performing at high levels"…and these "talents are present in children and youth from all cultural groups, across all economic strata..." We must also be aware that these talents are present in a diverse group of students. Although much of this guidebook focuses on the identification and appropriate education of students who are gifted and simultaneously have learning disabilities (GT/LD), much of what is stated on the following pages will serve to help in the identification and appropriate programming for all gifted, underachieving students as well as to help other students reach their true potential. Many of the suggested teaching practices and strategies included in the guidebook have been found to be effective with all students.

POPULATION

Students who are GT/LD are those who are considered gifted, have a learning disability as defined by IDEA, and require special education services in order to receive educational benefit.

A student is gifted if he/she:

- possesses outstanding abilities in the areas of general intellectual capabilities, specific academic aptitudes or the arts.

  Jacob K. Javits Gifted and Talented Students Education Act (1988)

Definition of a specific learning disability (SLD):

A. "SLD" means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations.

B. "SLD" includes conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.

C. "SLD" does not include students who have learning problems which are primarily the result of visual, hearing, or motor impairments, mental retardation, emotional disturbance, or environmental, cultural, or economic disadvantage.

COMAR 13A.05.01.03B(65)

The IEP team shall determine that a student has an SLD if:

A. The student does not achieve commensurate with the student's age and ability levels in one or more of the areas listed in c (1) (b) of this regulation, when provided with learning experiences appropriate for the student's age and ability levels.

B. The student has a severe discrepancy between achievement and intellectual ability in one or more of the following areas:

   i. Oral expression
   ii. Listening comprehension
   iii. Basic reading skills
   iv. Reading comprehension
   v. Written expression
   vi. Mathematics calculation
   vii. Mathematics reasoning

C. The severe discrepancy between ability and achievement is not primarily the result of—

   i. a visual, hearing, or motor impairment;
   ii. mental retardation;
   iii. emotional disturbance; or
   iv. environmental, cultural, or economic disadvantage.

COMAR 13A.05.01.06D(1)

MSDE Guidelines provide information about nonverbal learning disabilities:

- A nonverbal learning disability is defined by the Maryland State Department of Education as "characterized by problems in visual-spatial-organizational, tactile-perceptual, psychomotor, and/or nonverbal problem-solving skills. Academic difficulties in computational mathematics and/or writing skills may be related to nonverbal or performance-based disabilities."

  Harnadek & Rourke, 1994; Torgesen, 1993. *Identifying Specific Learning Disabilities, MSDE,* 2001.

Research indicates that between 2 percent and 5 percent of all students are GT/LD (Dix & Schafer, 1996; Whitmore, 1981). The majority of GT/LD students are served appropriately in their home schools. At this time, approximately 175 students are served in all GT/LD special classroom settings in Montgomery County.

Students receiving GT/LD services typically demonstrate outstanding abilities in either the verbal or visual-spatial areas. Despite these outstanding abilities, GT/LD students typically have production problems, particularly in the area

of written output. Organization, memory, and reading also may be significantly impacted. Many of these students are identified as gifted as a result of the global screening that occurs for all MCPS students during the second semester of Grade 2. Others are identified as gifted when their superior abilities are discovered as part of the process of identifying their learning disabilities.

An Individual Education Plan (IEP) team may determine that a student who is GT/LD needs the more intensive services of a special GT/LD classroom setting when they have not been able to succeed in a less restrictive setting, especially when provided with learning experiences appropriate for their ability levels. The special GT/LD classroom setting serves students who demonstrate superior cognitive ability. The majority of these students score two standard deviations above the mean on the verbal or performance scales of the WISC, or comparable intelligence scales.

The special GT/LD classroom setting provides students with the adaptations, accommodations, and special instruction that empower them to access rigorous instruction. IEP teams may determine that students whose needs are primarily behavioral may be better served in a setting other than the special GT/LD classroom setting.

Although much of this guidebook focuses on the student who is GT/LD, many of the strategies included in the strength-based instruction and what works section have proven effective in working with not only students who are identified as GT/LD, but with students who are LD and students who are underachieving, as well.

IDENTIFICATION

They are the students who may be light years ahead in math, but reading below grade level. Ask them about the Civil War, DNA cloning, lasers, or ancient civilizations and one might be bombarded with information, but ask them to write about the same topic and they may produce little or nothing. Outside of class, they are the creative problem solvers and analytical thinkers who may show strong commitment to tasks in which they are interested. In school, frustrated by their inability to demonstrate academic achievement commensurate with their ability, they often are at great risk of failing.

Successful identification is like a puzzle with several sets of stakeholders, all holding one or more of the pieces. The puzzle pieces may not make sense in isolation, but together they can eventually provide a picture of an individual child's educational environment and history, strengths, needs, and learning styles. The first step is to help those holding the individual pieces to recognize them and figure out how to put them together.

Often it is the educators who are sensitive to and address students' apparent school performance difficulties carefully and proactively through Educational Management Team (EMT) and Collaborative Action Process (CAP) meetings that initiate the referral to the IEP team. During the EMT and CAP meetings, educational teams plan ways to support all struggling general education students.

Regardless of the specific disability, students who are GT/LD have repeatedly reported school as being a difficult and frustrating experience. It is sometimes the behaviors associated with these school reactions that begins the process that leads to specific diagnosis and learning plans.

Does this mean that all of these children fit the formal guidelines of GT/LD? No. But these behaviors do provide clues that the formal identification process should be considered. It means that these sets of stakeholders need to begin communicating and that the parents need to understand their position of importance in the identification process.

Delivery of appropriate educational services to students who are GT/LD is dependent on the quality of the working relationship between educators, parents, and students.

The Stakeholders

Educators have the experience and training to identify students who are having problems. Guiding a student/family through the identification process takes time and the teacher must work closely with the parents. Collaboration is critical to begin any special testing or intervention. The identification process is crucial to effective delivery of services to students who are GT/LD.

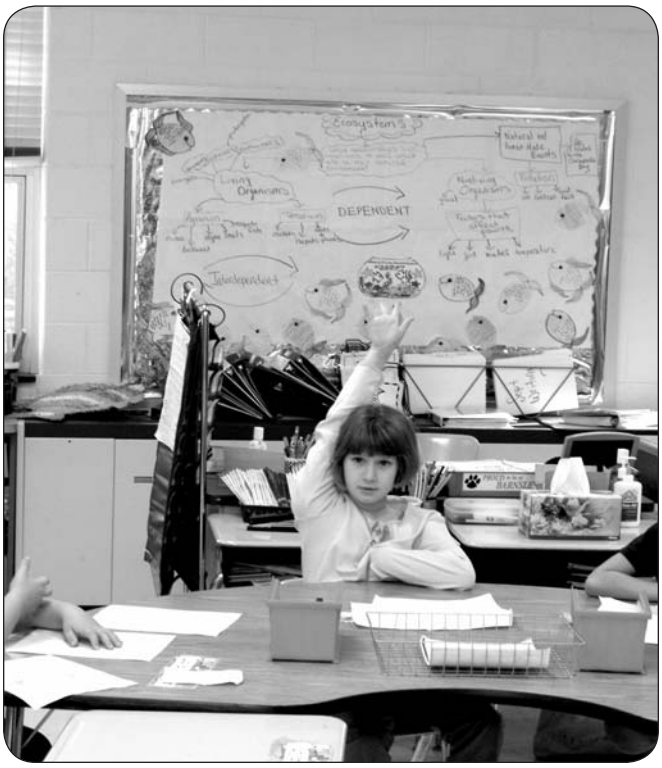
Parents, of course, are their children's first teachers and bear responsibility for making educational choices. Parents of children who are GT/LD often are concerned about the average (or below-average) performance of a child they know is bright, but are often not aware of the resources that are available to help, or even of their right to request an educational evaluation if they suspect that their child may have an educational disability that requires the provision of special education and related services. As a result, their puzzle pieces may be the last to fall into place. A phone call to the teacher or counselor can open the discussion. Parents and teachers must work collaboratively in developing educational services for all children.

Students are critically important stakeholders in the team. The importance of early identification and intervention has been well documented. These children are a puzzle to themselves and often are greatly relieved when diagnosed. They no longer carry the burden of "fault" for their lack of success in school.

Identifying Gifted and Talented Students

MCPS (GT Policy, MCPS 2002; 10A):

1. MCPS will carry out a broad-based screening of all students in Grade 2 and a rescreening of students in Grades 3–5. Recognizing there is a range of abilities among gifted and talented students, this screening will identify gifted and talented students using multiple criteria including objective and subjective indicators. Nominations are obtained from parents, teachers, and other school staff, and tests measure critical thinking, problem solving, and verbal reasoning.



2. To meet the needs of gifted and talented students during early childhood years, the following actions will take place:
   - Schools will make every effort to recognize and foster early evidences of giftedness and adjust reading and other academic programs appropriately.
   - Prekindergarten, first, and second grade teachers will plan activities which will nurture curiosity, creativity, and the development of thinking skills.
3. In Grades 6–8, schools will recommend students for classes of gifted and talented or for gifted and talented cluster groupings on the basis of mastery of course prerequisites, willingness to complete challenging assignments, previous grades, teacher recommendations, or other appropriate measures.
4. In Grades 9–12, students will be admitted to Honors and Advance Placement classes on the basis of mastery of course prerequisites, willingness to complete challenging assignments, previous grades, student interest, teacher/counselor recommendations, or other appropriate measures.

Identification Considerations for Students Who Are GT/LD

- Students who are identified as GT/LD in Montgomery County are identified as learning disabled through special education procedures. (*Identifying Specific Learning Disabilities,* 2001. Procedural safeguards brochure, COMAR 13A.OS.06D) Currently, when students are evaluated for suspected learning disabilities, information becomes available about their strengths and challenges. The information revealed by this process may serve to identify students as gifted who otherwise might have gone unidentified. People often are surprised to see evidence of superior abilities when what has been seen previously is the daily struggle that a student is experiencing.
- MSDE has a very comprehensive and broad process for diagnosing learning disabilities. Using the IQ and educational discrepancy range is one consideration among many. MSDE 's learning disability identification guidelines include students who are functioning in the "superior" and "very superior" range. *(Identifying Specific Learning Disabilities, 2001.)*

IQ Score Range	*Educational Discrepancy Range*
130–139	95–100
120–129	89–94

- In a letter to the Learning Disabilities Association of North Carolina, the United States Department of Education (1995) has offered guidelines for the identification of GT/LD students.
  1. "…each child who is evaluated for a suspected learning disability must be measured against his or her own expected performance, and not against some arbitrary general standard…" In other words, no child's IQ can be too high for that child to be considered for eligibility for special education services.
  2. A multidisciplinary team may find a child has a specific learning disability "if the child does not achieve commensurate with his or her age and ability levels …when provided with learning experiences appropriate for the child's age and ability levels…" CFR S300.541 (a) (1) (Code of Federal Regulations).
  3. It is "generally" appropriate for the multidisciplinary team to include, in its written report, information regarding "outside or extra" instructional help or support which "may indicate the child's current educational achievement reflects the service augmentation, not what the child's achievement would be without such help." Such information should be considered …in deciding if the child has "a severe discrepancy between achievement and ability that is not correctable without special education and related services."
- These guidelines have been reaffirmed in Pennsylvania District Court. *West Chester Area School District v. Chad C., 194 F.supp.2d 417 (E.D.Pa.2002)*
  1. "Under Individuals with Disabilities Education Act (IDEA), middle school student had need for special education…even though he was not receiving failing grades; his grades were going down and he was not performing at level predicted as a result of aptitude tests.
  2. The court referred to "…the Third Cirucuit's mandate that a student's entitlement to IDEA services 'must be gauged in relation to the child's potential.' (1998)"
- IQ tests are not and should not be the only way to identify students' strengths. In fact, in the future, IQ tests may not be a typical way of identifying students' disabilities, so they may not be readily available as a diagnostic tool for identifying gifted students. MCPS, like other school systems, has developed a methodology for GT screening to determine gifted identification. Some students who are GT/LD have been and will continue to be identified by this global screening process. For others, the masking of their giftedness will leave them unidentified. It is crucial that the professionals that are identifying giftedness be familiar with characteristics of students who are GT/LD as well as with the screening data patterns that may suggest a gifted student with disabilities. Only an IEP team can make the final determination that a child has a learning disability.
- IEP teams must give special consideration when in the process of identifying gifted students with learning disabilities. (*Identifying Specific Learning Disabilities,* MSDE.*)*
  1. Teams must recognize that a student may be gifted or have far-above-average ability and also have a specific learning disability. The specific learning disability may be manifested in an inability to complete classwork at the level expected, given the student's high cognitive ability, without tutoring or support. Like students with learning disabilities, these gifted students may have organizational or processing weaknesses that make it difficult to achieve classroom expectations.
  2. In order to be identified with a specific learning disability, high-ability students should display evidence

> of a discrepancy between their cognitive ability and their achievement. Although a discrepancy between ability and achievement should not be the only measure of a learning disability for high-ability students, it should be carefully considered as one indication that a disability exists. (Brody & Mills, 1997.)

One promising alternative means of identifying students who are GT/LD is being piloted in MCPS. By analyzing the records of students who are currently in the GT/LD program, staff has developed a profile of what to look for in the records of students to help in identifying those students who may warrant extra supports or services. These students have typically performed at very high levels in some, but not all of the GT global screening measures. On the other hand, they have simultaneously performed very poorly in one or more of the county, state, and national standardized assessments used to measure individual student progress. By taking a closer look at students with this type of profile, schools may be better able to target gifted underachieving students, including students who are GT/LD, in order to provide them with the interventions that will help each to reach his or her potential.

Challenges to Identification of Students Who Are Both Gifted and Learning Disabled

School teams should be aware of the following challenges that exist in regard to the identification of students who are GT/LD:

- Students may have been identified as gifted yet are exhibiting difficulties in school and may often be considered underachievers. They may be working at or near grade level. Their underachievement may be attributed to poor self-concept, lack of motivation, or laziness. Their superior gifts may be masking their learning disability.
- Students may have been identified as having learning disabilities, but their exceptional abilities may not have been recognized or addressed. Inadequate assessments or depressed IQ scores may lead to an underestimation of their intellectual abilities. The result is that their areas of giftedness may not be recognized or addressed. The severity of the SLD may be masking their giftedness.
- Students may appear to possess average abilities and no learning disabilities, because their abilities and disabilities may be masking each other.

(Brody & Mills, 1997; Baum, 1992 & 1994)

CHARACTERISTICS

Although the characteristics of students who are identified as GT/LD vary greatly from student to student, there are some general commonalities noted in the research.

Comparison of Characteristics of Gifted Students With or Without Disabilities

Without Disabilities	With Disabilities
Ability to learn basic skills quickly and easily and retain information with less repetition	Often struggle to learn basic skills due to cognitive processing difficulties; need to learn compensatory strategies in order to acquire basic skills and information
High verbal ability	High verbal ability but extreme difficulty in written language area; may use language in inappropriate ways and at inappropriate times
Early reading ability	Frequently have reading problems due to cognitive processing deficits
Keen powers of observation	Strong observation skills but often have deficits in memory skills
Strong critical thinking, problem solving, and decision-making skills	Excel in solving "real-world" problems; outstanding critical thinking and decision-making skills; often independently develop compensatory skills
Long attention span—persistent, intense concentration	Frequently have difficulty paying attention but may concentrate for long periods in areas of interest
Creative in the generation of thoughts, ideas, actions; innovative	Unusual imagination; frequently generate original and at times rather "bizarre" ideas; extremely divergent in thought; may appear to daydream when generating ideas
Take risks	Often unwilling to take risks with regard to academics; take risks in non-school areas without consideration of consequences
Unusual, often highly developed sense of humor	Humor may be used to divert attention from school failure; may use humor to make fun of peers or to avoid trouble
May mature at different rates than age peers	Sometimes appears immature since they may use anger, crying, withdrawal, etc. to express feelings and to deal with difficulties
Sense of independence	Require frequent teacher support and feedback in deficit areas; highly independent in other areas; often appear to be extremely stubborn and inflexible
Sensitive	Sensitive regarding disability area(s); highly critical of self and others, including teachers; can express concern about the feelings of others even while engaging in antisocial behavior
May not be accepted by other children and may feel isolated	May not be accepted by other children and may feel isolated; may be perceived as loners since they do not fit typical model for either a gifted or a learning disabled student; sometimes have difficulty being accepted by peers due to poor social skills
Exhibit leadership ability	Exhibit leadership ability; often leader among the more nontraditional students; demonstrate strong "streetwise" behavior; the disability may interfere with ability to exercise leadership skills
Wide range of interest	Wide range of interests but handicapped in pursuing them due to process/learning problems
Very focused interests, i.e., a passion about certain topics to the exclusion of others	Very focused interest, i.e., a passion about a certain topic to the exclusion of others—often not related to school subjects

Note: Credit for this chart goes to Dennis Higgins, Albuquerque, New Mexico School System; Lois Baldwin, Westchester, New York School System; Daphne Pereles, Cherry Creek School District #5, Colorado.

FRAMEWORK FOR SUCCESS

Research and a review of successful programs indicate that the most important component of the education of students who are GT/LD is providing gifted and talented instruction in a student's area of strength. It is important that the instruction emphasize problem solving, reasoning, and critical thinking, as well as include extension and elaboration of the regular curriculum. Classroom organization is flexible, yet structured with opportunities for collaborative goal setting, significant peer interactions, and cooperative learning. Students who are GT/LD receive this GT instruction in the least restrictive environment (LRE). In order to benefit from GT instruction in a typical classroom setting, educators must utilize appropriate strategies. Implementing these strategies involves close collaboration between special educators and general educators. By receiving GT instruction, students who are GT/LD have the opportunity to develop their full potential.

Students who are GT/LD need to be carefully identified so that they can receive both the challenge and supports that they deserve and need in order to access general education curricula at their ability level. Once identified, they receive a program comprising GT instruction, instruction in areas affected by their disability, appropriate adaptations/accommodations, and case management.

Strength-based Instruction

- Study and practice models for gifted education (Multiple Intelligences, Creative Problem Solving, Bloom's Taxonomy, etc.)
- Activities that focus on students' individual gifts and interests
- Open-ended outlets for the demonstration of knowledge
- Differentiated instruction
- Tasks that fit students' learning styles
- Multisensory instruction
- Guided discovery, especially when introducing new topics
- Student choices
- Collaboratively designed rubrics
- Hands-on experiences
- Real-life tasks
- Integration of visual and performing arts

Content

- Use of multiple texts
- Use of varied resources
- Curriculum compacting
- Learning contracts

Process

- Interactive journals
- Tiered assignments
- Interest centers
- Learning centers

Product

- Varied modes of expression, materials, and technologies
- Advanced assignments that require higher-order thinking skills
- Authentic assessment
- Evaluation by self and others

Goals

- To ensure that differentiated educational programs and/or services are provided systematically for gifted and talented students in all grades, K–12, including gifted students with learning disabilities or other special needs.
- To provide instructional programs for students who are GT/LD that focus on developing their strengths, interests, and superior intellectual abilities while accommodating their learning weaknesses (NAGC Position Paper, 1998).
- To provide accelerated and enriched instruction, including appropriate strategy and skill instruction, instructional adaptations, and accommodations while implementing students' IEPs.
- To extend each child's intellectual boundaries and help all students achieve their highest potential.
- To provide for all students who have the capability, motivation, or potential to accept the challenge of Honors, AP, and advanced-level courses the opportunity to do so.
- To know and understand the social/emotional profile of each student in order to provide strategies that alleviate frustration and create motivation/interest in school learning.

Best Practices

For students who are GT/LD, research and experience leads to these best practices:

- Gifted and talented instruction in students' areas of strength.
- Opportunities for the instruction of skills and strategies in academic areas that are affected by students' disabilities.
- Appropriately differentiated programs, including individualized instructional adaptations and accommodations systematically provided to students.
- Comprehensive case management to coordinate all aspects of students' individual educational plans with consistent and periodic review of students' academic progress.

For students who are gifted underachievers, research reports the following about best practices:

- Taking time to get to know the student.
- Focusing on positive traits of the student.
- Conveying a belief in students' abilities.

ADAPTATIONS AND ACCOMMODATIONS

Definitions

There is often confusion about the meaning of commonly used terms. Since multidisciplinary teams make decisions about adaptations and accommodations, it is necessary to ensure that all participants have a common vocabulary. The following definitions have proven to be especially useful in MCPS as issues related to appropriate adaptations and accommodations for students who are GT/LD are discussed.

ACCOMMODATION: Procedure or enhancement that empowers a person with a disability to complete a task that he or she would otherwise be unable to complete because of their disability.

Maryland Assessments General Principles, 1999–2000

ADAPTATION: Modification to the delivery of instruction or materials used rather than modification in content as that can affect the fulfillment of curriculum goals. Adapting curricular materials.

ERIC/OSEP Mini-Library, 1999.

ENABLING: Behavior that interferes with acquisition of new competencies, reduces a person's sense of self-control over life events (self-efficacy), and/or reinforces old or maladaptive behavior.

St. Edward's University, *www.stedwards.edu/cte/enabling.htm*

EMPOWERING: Behavior that promotes personal growth and increased competencies, increases a person's sense of control over life events, and/or encourages new coping abilities to replace maladaptive behavior.

St. Edward's University, *www.stedwards.edu/cte/enabling.htm*

DIFFERENTIATION: A way of thinking about and planning in order to meet the diverse needs of students based on their characteristics. Teachers differentiate content, process, and product according to students' readiness, interest, and learning profiles through a range of instructional and management strategies.

Renzulli, Joseph S. (1977). *The enrichment triad model: a guide for developing defensible programs for the gifted and talented.* Connecticut: Creative Learning Press.

Tomlinson, C.A. (1999). *Differentiated classrooms—one pathway to a new millennium.* Albuquerque, New Mexico: National Association for Gifted Children.

INSTRUCTION: A series of activities, tasks, strategies, steps, calculations, decisions, and other processes taught that impart knowledge or skill.

PROGRAM: A course of academic studies, goals to be accomplished, and a system of services that are intended to meet the needs of students.

Guiding Principles

The following guiding principles are put forth as the best practices for providing appropriate adaptations and accommodations for students who are GT/LD in order to ensure access to instruction.

- Accommodations used in assessments should parallel accommodations that are integrated into classroom instruction. (CEC, 2000; MSDE, 2000)
- The adaptations/accommodations are aligned with the educational impact of the individual student's disability. (CEC, 2000; MSDE, 2000)
- The adaptations/accommodations are aligned with the needs described in students' IEPs or 504 plans. (CEC, 2000; MSDE, 2000)
- The adaptations/accommodations are based upon students' strengths. (NAGC, 1998; Baum, 1991; Gardner, 1983)
- Accommodations are based on what students need in order to be provided with an equal opportunity to show what they know without the impediment of their disabilities. (NCEO, 2001)
- Assessments allow students, while using appropriate accommodations, to demonstrate their skills without the interference of their disabilities. (Adapted from CEC, 2000)
- After selecting and providing appropriate adaptations/accommodations, their impact on the performance of the individual student is evaluated and only those that are effective are continued. (Adapted from Fuchs, Fuchs, Eaton, Hamlett, and Karns, 2000)
- The adaptations/accommodations are reviewed, revised, and when appropriate, faded over time, allowing students to move from dependence to independence. (MSDE, 2000)
- A multidisciplinary team, which considers the input of the parent and student, decides upon the adaptations/accommodations. (IDEA, 1997; Section 504, 1973)
- The appropriate adaptations/accommodations and the rationale for each of them are shared with all staff members who work with them. (IDEA, 1997)

INTERVENTIONS

When planning for students who are gifted and learning disabled or underachieving, EMT, CAP, and/or IEP teams may want to consider the following menu of technology, materials, methods, and instructional strategies to determine which interventions may provide greater access to appropriately challenging instruction.

Overcoming Obstacles Related to Writing

Assistive Technology for students

- Voice-recognition software
- Writing organizational software
- Electronic spellers and dictionaries
- Computer word processor with spelling and grammar check or talking word processor
- Portable keyboards
- Word-prediction software
- Programs that allow writing to be read aloud, to provide for audio spell check, proofreading, word prediction, and homophone distinction
- Tape recorder for transcription from student dictation

Instructional Materials

- Step-by-step written directions
- Proofreading checklist
- Scoring rubric, models, and anchor papers for students to evaluate their own work
- Graphic organizers
- Guides such as story starters, webs, story charts, outlines
- Dictionaries, word banks, and thesauruses
- Personal dictionaries of misused and misspelled words
- Highlighters to indicate errors/corrections
- Copy of teacher's notes or of another student's notes (NCR paper)
- Pencil grips
- Paper with raised lines
- .5 mm mechanical pencils
- Slant boards

Teaching/Assessment Methods

- Focus on content rather than mechanics
- Focus on quality rather than quantity
- Prepare storyboards, guided imagery, dramatization, or projects before the writing process
- Set important purpose for writing such as writing for publication, writing to an expert, or writing to a famous person
- Allow students to write in area of interest or expertise
- Provide a multiple intelligence approach
- Allow students to demonstrate understanding through alternative ways/products
- Reduce or alter written requirements
- Break down assignments into smaller, more manageable parts
- Allow additional time
- Permit work with partners or small groups to confer for revising, editing, and proofreading

- Proofread for one type of error at a time
- Permit words or phrases instead of complete sentences
- Provide artistic (visual, spatial, and performing) products to communicate knowledge
- Provide scientific and technological products to communicate knowledge
- Provide dictated response to a person or tape recorder
- Provide a portfolio assessment of products and performances as well as grading writing products
- Allow alternative spelling
- Allow manuscript, cursive, or typewritten work

Instruction

- Teach the writing process
- Teach prewriting strategies, including brainstorming, making a web, and drawing about the topic
- Teach rewriting questions into answer form
- Teach writing for a variety of purposes
- Teach combining words into meaningful sentences
- Teach formulating topic sentences
- Teach organizing sentences and incorporating adequate details and support statements into organized paragraphs
- Teach language conventions (e.g., grammar, punctuation, spelling, usage)
- Teach history/structure of language
- Teach keyboarding skills
- Teach word processing
- Teach the use of multimedia resources
- Teach handwriting in an alternative way
- Teach the "traits" of writing

Overcoming Obstacles Related to Organization

Assistive Technology for students

- Use electronic organizers
- Use software organization programs
- Tape record assignments
- E-mail assignments from school to students' home accounts

Instructional Materials

- Visual models, storyboards, venn diagrams, matrices, and flow charts
- Study guides that assist with locating information and answers
- Highlighters, index tabs, and colored stickers
- Assignment books and calendars for recording assignments
- Outlines, webs, diagrams, and other graphic organizers

Teaching/Assessment Methods

- Use short, simple directions
- Provide advanced organizers regarding what students will know by the end of the lesson
- Post class and homework assignments in the same area each day and ensure that students record them and/or have a printed copy
- Verbally review class and homework assignments
- List and verbally review step-by-step directions for assignments
- Work with students to establish specific due dates for short assignments and time frames for long-term assignments
- Break up tasks into workable and obtainable steps
- Give examples and specific steps to accomplish tasks
- Provide check points for long-term assignments and monitor progress frequently
- Help students review and summarize important information and directions
- Utilize a multisensory or multiple intelligence approach to teaching organization skills
- Invite student questions regarding directions and assignments
- Provide students with a list of needed materials and their locations
- Periodically check notebooks and lockers
- Make time to organize materials and assignments
- Encourage study buddies
- Provide homework hotline or structured homework assistance
- Post a daily routine and explain any changes in that routine
- Provide an uncluttered work area
- Label and store materials in designated locations
- Provide a specific location for students to place completed work
- Provide samples of finished products

Instruction

- Teach how to prioritize tasks
- Coach about asking questions regarding unclear directions and assignments
- Teach metacognition
- Teach how to break long-term assignments into manageable components
- Teach note taking
- Teach a routine to prepare for each class
- Teach a system for organizing notebooks and lockers
- Teach how to use software organization programs
- Teach how to use assignment books, calendars, electronic organizers, visual models, and graphic organizers
- Teach how to access homework help

Overcoming Obstacles Related to Reading

Assistive Technology for students

- CD-ROMs with audio component
- Electronic spellers that speak words aloud
- Books on tape and digital books
- Computer programs that allow words to be read aloud
- Text-to-speech software

Instructional Materials

- Primary sources such as interviews, guest speakers, and demonstrations
- Multimedia presentations

- Tape-recorded directions or tests
- Text study guides and graphic organizers to help students locate information
- High-interest, appropriate-level reading material and multilevel texts about the same topic
- Above-grade-level, high-interest reading material
- Rich literature experiences
- Access to challenging programs like William and Mary, Junior Great Books
- Expository reading experiences
- Visuals (outlines, advanced organizers, graphic organizers, charts, photographs, diagrams, and maps) to aid in understanding written information
- Word banks

Teaching/Assessment Methods

- Develop interest and curiosity by activating prior knowledge before reading
- Use a multiple intelligence approach
- Begin with an experience or project
- Teach through the arts (drama, visual arts, poetry)
- Utilize simulations and moral dilemmas
- Encourage reading related to students' areas of interest
- Set purposes for reading and state what students should know after reading the text
- Ask lower-level comprehension questions in order to build up to higher-level questions
- Cue students to important words and concepts verbally and through highlighting
- Teach vocabulary in context
- Give students the opportunity to read silently before reading aloud
- Allow students to choose whether or not to read aloud
- Pair students who have strong decoding skills with weak decoders
- Allow students to do vocabulary webs, literature webs, and other difficult tasks in small groups
- Read directions or tests aloud
- Allow additional time for reading
- Teach students to outline, underline, or highlight important points in reading
- Encourage students to take notes while reading
- Offer support and clarification for imbedded directions in text
- Read text aloud to student

Instruction

- Explicitly teach pronologicial awareness and phonics
- Use multisensory reading approach
- Use a rule-based approach to teaching reading
- Teach students sight vocabulary
- Teach students how to use a textbook (index, table of contents, glossary, charts, tables, captions, and bold text)
- Teach outlining and note taking
- Teach reading strategies
- Teach students to read for meaning using abackground knowledge and contextual clues

Overcoming Obstacles Related to Memory

Assistive Technology for students

- Teachers use software programs as an alternative or additional way of presenting information
- Students tape record directions or information
- Students use software programs for organization of key points
- Teachers add notes about directions or key points as part of assignment that is given on the computer

Instructional Materials

- Multiple modalities, including art and simulations when presenting directions, explanations, and instructional content
- Multiple intelligences approach
- Materials that are meaningful to students
- Copies of the information that highlight key facts

Teaching /Assessment Methods

- Students repeat directions or information back to teacher
- Students repeat information to selves
- Teacher repeats information or directions
- Teacher reinforces students for remembering details
- Students recall important details at the end of a lesson or period of time
- Students sequence activities after a lesson or event
- Students teach information to other students
- Students deliver the schedule of events to other students
- Teacher delivers directions, explanations, and instructional content in a clear manner and at an appropriate pace
- Teacher provides students with environmental cues and prompts such as posted rules and steps for performing tasks
- Teacher provides students with written list of materials and directions
- Students use resources in the environment to recall information (notes, textbooks, pictures, etc.)
- Teacher gives auditory and visual cues to help students recall information
- Teacher relates information presented to students' previous experiences
- Teacher emphasizes key concepts

- Teacher reviews prior lesson's key comcepts and vocabulary before moving on
- Students outline, highlight, underline, or summarize information that should be remembered
- Teacher provides adequate opportunities for repetition of information through different experiences and modalities
- Teacher provides students with information from a variety of sources
- Teacher tells students what to listen for when being given directions or receiving information
- Students use advanced organizers
- Teacher uses visual imagery

Instruction

- Teach students to use associative cues or mnemonic devices
- Teach students to transform information from one modality to another (e.g., From verbal to a diagram or from visual to verbal)
- Teach students to question any directions, explanations, and instructions they do not understand
- Teach students to deliver increasingly long verbal messages
- Teach students how to organize information into smaller units
- Teach note taking and outlining
- Teach students how to highlight and summarize information
- Teach students a routine for beginning a task
- Teach students how to recognize key words
- Teach students to use resources in the environment to recall information (notes, textbooks, pictures, etc.)
- Teach students study and test-taking skills
- Teach students to practice memory skills by engaging in activities that are purposeful such as delivering messages or being in charge of a classroom task
- Teach students to practice repetition of information
- Teach students to engage in memory games and activities
- Teach students categories
- Teach listening skills
- Teach students how to use organizers such as lists, tables, and graphics
- Teach visual imagery
- Teach students systematic ways to store and retrieve information

WHAT WORKS/WHAT DOESN'T WORK FOR STUDENTS WHO ARE GT/LD

This section presents best practices based on research and "what works," as seen in MCPS GT/LD special classroom settings. These ideas and strategies should be considered carefully by educational when teams (EMT, CAP, IEP) planning for students who are GT/LD and/or underachieving, regardless of setting.

As with any menu of teaching practices or strategies, the individual student's strengths, interests, and needs must be carefully evaluated before...

School Climate

Creating a comfortable yet challenging classroom climate is essential. Addressing the social/emotional needs of students who are GT/LD is critical to their achievement. The climate is one that is designed to respect individuality and the accommodations focus on strengths and potential for success rather than remediation. School climate promotes students' development of an understanding of their unique strengths, empowering them to successfully advocate for themselves. It is counterproductive to use routine and remedial drill and practice that focus on students' disabilities. As with all students, lowering standards, confrontational communication, and inflexible expectations that diminish student individuality are inappropriate. Instead, the climate is designed to encourage interactive participation, flexibility, high standards, student participation in cooperative groups, individualized programming, active listening, and practice in conflict-resolution strategies.

The physical climate within the classroom is also carefully orchestrated. A stimulating environment is created—posters, collections, products, and highly visible student/teacher classroom standards and expectations for performance are displayed. Multimedia resources and technological tools, including word processors, tape recorders, calculators, and spell checkers are available in the classroom. Students have freedom of movement within the classroom. Careful attention is given to both the physical and social climates in the classroom creating an environment in which needs are supported and abilities are recognized and nurtured.

Instructional Skills and Strategies

Gifted Instruction

Teachers, through training and self-study, implement models for gifted education (e.g., Howard Gardner's Multiple Intelligences, Creative Problem Solving, Edward de Bono's CoRT, Bloom's Taxonomy). Teachers use activities that focus on students' strengths and interests, allowing for self-directed choices. Instruction is multisensory with hands-on experiences. Guided discovery (e.g., KWL: Know—Want to Know—Learned), a powerful strategy, is used especially when introducing new topics. Support and clarification for embedded directions, both oral and written, are given to the students.

Integrating the visual and performing arts into the program is effective. *Learning in and Through the Arts* (LITA) and *Champion of Change, The Impact of the Arts on Learning* (1999). Studies found evidence that learning in the arts has significant effects on learning in other domains. Students are more motivated and teachers report that students retain information more readily when the arts are integrated into the curriculum.

Teachers recognize that the following strategies do not work for students who are GT/LD: that remedial instruction, rigid task guidelines, and a belief that students who are GT/LD can organize their thinking without accommodations or instruction do not work for students who are GT/LD. The teachers do not consider that a lack of production is a sign of motivational weakness or lower intelligence. Rote memorization, forced oral reading, text-based instruction, and the use of only teacher-directed activities are not successful practices. Instead, teachers use instruction that obviates weaknesses; provide for production of alternative products; provide real-life tasks; provide open-ended outlets for the demonstration of knowledge; design tasks that fit the students' learning styles; differentiate instruction; and use collaboratively designed rubrics.

Thinking Skills

Students who are identified as GT/LD are capable of exceptional thinking. Many resources that focus on thinking skills are available through educational publishers and distributors. Teachers learn thinking strategies, and teach, model, and practice them in the classroom. Teachers actively participate in the learning process using the Socratic method, as they work with the students to help them formulate questions and think through logic problems. Students apply abstract concepts to everyday occurrences. Teachers help students to transfer and apply the thinking strategies that work for them in their areas of strength to their areas of need. Teachers use metacognitive skills, "Think Alouds," to model the thinking process, develop a thinking language, and help students search for their own solutions. Teachers do not assume that students already know thinking strategies and can apply them without ongoing practice.

Writing

Writing is often difficult for students who are GT/LD because many have trouble expressing themselves due to difficulty in

sequencing and attending to details. Students also may have grapho-motor deficits. Focusing on handwriting instead of content, quantity versus quality, and the use of red pens to denote errors do not work.

Establishing the writing process through discussion and practice is ongoing. Using assistive technology—portable word processors, computers, electronic spellers, organizational and word-predictive software—unlocks students' abilities to communicate what they know and understand. Graphic organizers, mind-mapping strategies; extended time for completion of work; and clear, written expectations for writing tasks help the students create writing products. Prompts guide the purpose for writing. Rubrics, proofreading for one type of error at a time, and using a highlighter to indicate corrections aid in self-evaluation of written work. Publication of writing for an audience is a great motivator.

Organization

Students identified as GT/LD frequently have problems with the organizational demands of assignments. Teachers help minimize the impact of this problem by structuring assignments with very clear directions and steps. Best practices include establishing specific due dates and a time frame for long-term assignments, providing checkpoints for monitoring progress, providing time for organizing materials and assignments, and providing a specific location for students to place completed work. Teaching students effective strategies helps them to become more self-sufficient learners. The supervised use of assistive technology and visual organizers, as well as the use of the more traditional supports of assignment books, study guides, homework hotlines, and calendars all help students become more organized. Promising new practices include posting homework assignments on Web pages, using hand-held organizers, and having students e-mail their own assignments to their home e-mail accounts.

Adults sometimes assume that students have the needed organizational skills, but are not using them because of laziness, lack of motivation, or poor attitudes. In the case of students who are GT/LD, this assumption often is not true and contributes to their academic problems and low self-esteem.

Reading

The emphasis in reading is on comprehension, listening, and gaining information. Teachers avoid overly focusing on word attack errors that do not affect comprehension. Reading worksheets, round robin reading, and below-grade-level basal readers are avoided.

A successful reading program includes the use of literature for stimulating reading interest, oral discussion using supporting text, the development of expository reading, and the use of high-interest personal reading material which may be above grade level. Programs like the William and Mary Reading Program and Junior Great Books offer great opportunities for the development of reading and writing skills for students identified as GT/LD, even though writing may be a weakness for them. These programs provide opportunities for students who are GT/LD to build on their abstract reasoning and comprehension skills. Students also benefit from explicit instruction in phonological awareness, phonics, and decoding. The Wilson Reading Program is an excellent example of a program that has proven effective in teaching these reading skills. Accommodations such as books on tape or text-to-speech software, which enable students to scan any print material and have the computer read the material to them aloud, are appropriate supports to reading.

Memory

While students who are GT/LD often possess outstanding abstract reasoning abilities and are able to see the big picture readily, they often have difficulty remembering and sequencing details. When teachers motivate students through the use of a Multiple Intelligences approach and a variety of modalities, students are much more likely to remember the details. Students are more successful when they can utilize assistive technology as well as a variety of supports in the classroom environment. Students become more independent in this area as they learn techniques to enhance their own memory such as mnemonics, visual imagery, outlining, note-taking, and highlighting. Other successful strategies include having students sequence activities after a lesson or event, having students teach information to other students, providing students with environmental cues and prompts, relating information presented to students' previous experience, and telling them what to listen for when being given directions or in receiving information.

Teaching in a way that requires students to recall details that are presented in a context that is not meaningful or does not incorporate a variety of modalities is not beneficial for these students. Once again, it is important not to assume that although these students have great ability in certain areas, they have learned the needed skills to circumvent their difficulties with memory of details.

Content Areas

Mathematics

Pre-assessment of student mastery of mathematical categories (e.g., decimal fractions, whole numbers, statistics, and probability) and objectives is an appropriate place to begin instruction. Focusing on developing conceptual skills and problem-solving strategies is essential. By using a multidisciplinary approach to math, students learn to apply and generalize skills and strategies. Using interactive, hands-on programs (e.g., Hands-on Equations), manipulatives, and math tools help students grasp content and concepts. Students may need untimed tests, a reduction in the number of problems, and direct instruction in the use of calculators for accommodations to be successful.

Lengthy, repetitive assignments; copying from textbooks, overheads or blackboards; and a focus on computation alone does not work with students who are GT/LD. Appropriate accommodations, such as a calculator, allow these students to utilize their often superior math reasoning abilities while not being held back by their computation skills.

Science

Science instruction that offers hands-on, interactive experience is most successful. Activities that incorporate problem solving and real-life investigations with a purpose and an end product, along with a thematic approach that allows for students to direct their search for knowledge and answers are meaningful to students. Simulations and the integration of

the visual and the performing arts are extremely successful when teaching science content and concepts. Focusing on science process objectives works, as does using graphic organizers to support note-taking when researching a topic.

Memorization of facts and emphasis on reading and writing are often counterproductive for these students. The student may become an expert in specific areas of interest when time is provided for individuals to do research projects. The acquisition of expertise through their independent studies enables students who are GT/LD to become valuable contributors to cooperative group projects.

Social Studies

The conceptual framework of social studies is based on content and process. Students are responsible for learning the historical, economic, political, geographic, and cultural content standards. Students are expected to construct understandings through systems of processing information, critical thinking, and problem solving. Thematic units, simulations, hands-on activities and projects, the use of various forms of media, integration of the visual and the performing arts, and extension/enrichment activities work well with students who are GT/LD. Instruction led by textbook reading and focusing on facts rather than understanding the concepts, does not work.

Handwriting

Students identified as GT/LD often have grapho-motor difficulties. Therefore, the occupational therapist may be a partner in their instruction. The goal is legibility. Focusing on form, using mechanical pencils and grips, and using an appropriate handwriting program helps the students who have difficulty writing by hand.

Lengthy handwriting tasks that result in fatigue and expectations that disregard a student's physical weakness or limitation do not work. Assistive technology including a word processor, word-predictive software, or speech-to-text software, is often an appropriate alternative to handwriting.

Evaluation/Assessment

Students and teachers collaborate on the evaluation/assessment methods and tools that will give an accurate picture of student understanding of both content and process materials. Evaluations are based on instruction and reflect the attainment of the key concepts and basic understandings that are the focus of the curriculum.

Providing objectives, study guides, vocabulary, memory strategies, rubrics, and support and clarification for embedded questions aid students in accurately sharing what they know. Models of appropriate responses to prompts are helpful. Differentiation in evaluation/assessments is important. Students, with accommodations, may audiotape responses, use a graphic organizer in lieu of paragraph responses, create a model, or give a speech.

Evaluation/assessments are designed to maximize the students' demonstration of their knowledge of concepts and content. Lengthy essays, penalties for spelling in content areas, time limits, matching tasks, and the like, may not communicate clearly a student's understanding of course material. Attention also is given to the formatting of evaluation/assessments in order to circumvent visual processing difficulties.

What Works—Charts

Climate

WHAT WORKS	LESS-EFFECTIVE STRATEGIES
Understanding of students' unique strengths and needs Promoting self-advocacy skills Comfortable yet challenging classroom where there is a stimulating environment—posters, collections, products Highly visible student/teacher class standards and expectations for performance Student freedom of movement within classroom Interactive participation Flexibility High standards Cooperative groups Individualized programming Active listening instruction Conflict resolution instruction Multimedia resources Technological tools—word processors, calculators, spell checkers	Routine and remedial drill and practice, with focus on students' disabilities Lowering standards Confrontational communication Inflexible expectations that diminish student individuality Disrespect Sarcasm Limiting options and choices Stressing the importance of the weakness Using negative consequences only Using one instructional method Denying access to positive learning experiences
Respect Encouragement Connecting to students through strengths/interests Focusing on strengths, analyzing successes, and applying to areas of weakness Establishing belief in "self" system Teaching self-efficacy Teaching self-advocacy Offering choices Offering alternative ideas and options Extracurricular enrichment activities Teaching students to channel frustrations Easing and removing barriers and planning for the future Using nonverbal strategies to support students	

GT Instruction

WHAT WORKS	LESS-EFFECTIVE STRATEGIES
Studying, knowing, and practicing models for gifted education —Multiple Intelligences, Creative Problem Solving, Bloom's Taxonomy, etc.	Remedial instruction
Activities that focus on student gifts and interests	Rigid task guidelines
Open-ended outlets for the demonstration of knowledge	Belief that GT/LD students can organize their thinking without accommodations or instruction
Differentiated instruction	Perceiving lack of production as a sign of motivational weakness or lower intelligence
Tasks that fit student's learning style	Rote memorization
Multisensory instruction	Forced oral reading
Guided discovery (KWL), especially when introducing new topics	Text-based instruction
Support and clarification for embedded directions, both oral and written	Only teacher-directed activities
Offering students choices	
Alternative product options	
Collaboratively designed rubrics	
Hands-on experiences	
Real-life tasks	
Integration of visual and performing arts	

Thinking

WHAT WORKS	LESS-EFFECTIVE STRATEGIES
Teachers learning thinking strategies	Assuming students know thinking strategies
Teaching thinking strategies	Assuming students can apply thinking strategies without ongoing practice
Modeling thinking strategies	
Practicing thinking strategies in the classroom	
Applying thinking strategies	
Teachers working with GT/LD students to formulate questions; think through logic problems; use the Socratic method; require active participation in the learning process; apply abstract concepts to everyday occurrences; use think-alouds to model the thinking process; develop a thinking language; search for their own solutions	
Utilizing metacognitive skills	
Transfering/applying thinking strategies that work in areas of strength to areas of need	

Writing

WHAT WORKS	LESS-EFFECTIVE STRATEGIES
Establishing writing process through ongoing discussion and practice	Focusing on handwriting instead of content
Assistive technology—portable word processors, computers, electronic spellers, organizational software, word-predictive software	Quantity versus quality
Graphic organizers	Using red pens to denote errors
Mind-mapping strategies	
Extended time for completion of work	
Clearly written expectations for writing tasks	
Writing prompts	
Rubrics	
Proofreading for one type of error at a time	
Highlighters to indicate corrections	
Publication of writing for an audience	

Organization

WHAT WORKS	LESS-EFFECTIVE STRATEGIES
Electronic organizers	Assuming students have the needed organizational skills
Software organization programs	Attributing poor organizational skills to lack of motivation, bad attitude, or laziness
Study guides that assist with locating information and answers	Assigning long-term or complicated assignments without supports for organization
Assignment books and calendars for recording assignments	Expecting students to utilize organizational supports without providing instruction in the use of those supports
Graphic organizers—outlines, webs, diagrams, storyboards, flow charts, etc.	
Teachers working with students to establish specific due dates for short assignments and time frames for long-term assignments	
Breaking up tasks into workable and obtainable steps	
Providing check points for long-term assignments and monitoring progress frequently	
Providing time to organize materials and assignments	
Providing a homework hotline or web page	
Providing a specific location for students to place completed work	
Monitoring students' accuracy in recording assignments and/or providing printed copy	

Reading

WHAT WORKS	LESS-EFFECTIVE STRATEGIES
Emphasis on comprehension, listening, and gaining information	Focusing on word attack errors that do not affect comprehension
Using literature for stimulating reading interest	Reading worksheets
High-interest personal reading material, which may be above grade level	Round robin reading
Programs that build abstract reasoning and comprehension skills	Utilizing only below-grade-level basal readers
Development of expository reading	
Oral discussion using supporting text	
Explicit instruction in phonological awareness, phonics, and decoding	
Accommodations, including books on tape, text-to-speech software, etc.	

Memory

WHAT WORKS	LESS-EFFECTIVE STRATEGIES
Multiple modalities, including art and simulations when presenting directions, explanations, and instructional content	Using only one modality, such as a lecture, to teach a lesson
Multiple Intelligences approach	Expecting students to recall factual information without supports
Providing student with a copy of the information that highlights key facts	Expecting students to utilize mnemonics, visual imagery, technology, or other supports without teaching them how to use these tools
Having students sequence activities after a lesson or event	
Having students teach information to other students	
Having students tape record directions or information	
Providing students with environmental cues and prompts—posted rules, steps for performing tasks, etc.	
Allowing students to use resources in the environment to recall information—notes, textbooks, pictures, etc.	
Relating information presented to student's previous experiences	
Having students outline, highlight, underline, and summarize information that should be remembered	
Telling students what to listen for when being given directions or receiving information	
Associative cues or mnemonic devices	
Teaching visual imagery	

Mathematics

WHAT WORKS	LESS-EFFECTIVE STRATEGIES
Pre-assessment of students' mastery of mathematical categories (e.g., decimal fractions, whole numbers, statistics and probability)	Lengthy assignments
Pre-assessment of students' mastery of mathematical objectives	Repetitive assignments
Focusing on developing conceptual skills and problem solving strategies	Copying from the textbook, overheads, or blackboard
A multidisciplinary approach	Focusing on computation alone
Interactive approach	
Hands-on programs	
Manipulatives	
Untimed tests if indicated	
Reduction in number of problems	
Direct instruction for the use of calculators	

Science

WHAT WORKS	LESS-EFFECTIVE STRATEGIES
Hands-on, interactive experiences	Instruction led by textbook reading
Activities that incorporate problem solving and real-life investigations with a purpose and an end product	Focusing on facts rather than understanding concepts
Thematic approach that allows for students to direct their search for knowledge and answers	
Simulations	
Integration of visual and performing arts	
Focus on science process objectives	
Graphic organizers to support note-taking	

Social Studies

WHAT WORKS	LESS-EFFECTIVE STRATEGIES
Holding students accountable for learning the historical, economic, political, geographic, and cultural content standards Constructing understandings through systems of processing information, critical thinking, and problem solving Thematic units Simulations Hands-on activities and projects Using various forms of media Integration of visual and performing arts Extension/enrichment activities	Instruction led by textbook reading Focusing on facts rather than understanding concepts

Handwriting

WHAT WORKS	LESS-EFFECTIVE STRATEGIES
Focusing on form Mechanical pencils and grips Appropriate handwriting program assistive technology	Lengthy handwriting tasks that result in fatigue Expectations that disregard students' physical weaknesses or limitations

Evaluation/Assessment

WHAT WORKS	LESS-EFFECTIVE STRATEGIES
Student/teacher collaboration on the evaluation/assessment methods and tools Evaluations based on instruction and reflecting the key concepts and basic understandings that are the focus of the curriculum Providing objectives, study guides, vocabulary, memory strategies, acceptable responses, support and clarification for embedded questions Differentiation Audiotape responses Graphic organizers in lieu of paragraph responses Creating a model Giving a speech Use of assistive technology	Lengthy essays Penalties for spelling in content areas Time limits Matching tasks

STAFF DEVELOPMENT

Professional development focuses on the definition of the "twice exceptional student"(Neilsen, Hammond, & Higgins, 1992), identification, and best practices in programming for students who are GT/LD. It includes opportunities to attend county, state, and national conferences or institutes on topics related to the instruction of students who are GT/LD. Professional leave is granted so that educators may participate in these sessions, with the intent of learning the material and implementing it with their students. Professional development also is accomplished through school-based in-service workshops, staff meetings, and team or individual meetings.

During school-based, half-day or full-day training sessions, a variety of topics related to students who are GT/LD are addressed. Administrators, special education staff, counselors, GT committee members, GT liaisons, school psychologists, and grade-level teams collaborate to meet the needs of students who are GT/LD within the school. Based on a needs assessment, in-service workshops are designed to introduce and/or develop instructional resources, materials, and strategies to be used with students. In-service workshops may include topics such as building awareness and sensitivity toward students who are GT/LD; the characteristics, strengths, and needs of the GT/LD population; conflict resolution strategies; strategies for integrating arts instruction into content areas; thinking strategies such as Bloom's Taxonomy and Edward de Bono's Thinking Hats; Howard Gardner's Multiple Intelligences theory; use of mentors; and strategies on how to differentiate instruction. Staff development also includes a review of current best practices in the areas of reading, writing, organization, memory, metacognition, and the use of technology.

Staff meetings are a time for professional engagement. Due to the shorter length of this type of meeting, one concept, strategy, idea, or issue is addressed. For example, keeping up-to-date on current research is important. Therefore, in this forum, a recent journal article related to the GT/LD population is distributed and discussed with staff members. Team or individual meetings also offer excellent opportunities for staff development. The resource teacher shares, with a teacher or team, an effective adaptation or accommodation for a GT/LD student. In this setting, questions, concerns, and plans are focused on individual students and their individual strengths and needs. The immediate transfer/application of training takes place in the classroom.

By using the "what works" and "what doesn't work" suggestions from the field experience of teachers in MCPS as a basis for appropriate training, educators build their knowledge, confidence, educational techniques, and strategies for the successful instruction of students who are GT/LD.

Parents and students also have opportunities to explore many of the same topics covered by staff members. Conferences with teachers, counselors, case managers, and other school personnel are an excellent venue for discussing the positive aspects of a student's program and also are a forum for dealing with obstacles and their solutions. Issues and strategies often are explored in PTA meetings, grade-level team meetings, class meetings, parent meetings, and local and national conventions.

PROGRAMS AND SERVICES

The Montgomery County Public School system is one of the very few school districts in the nation that offers comprehensive programming for students who are GT/LD at the elementary, middle, and high school levels. While a majority of students who are GT/LD are served in their home schools with varying degrees of supports, special GT/LD settings exist in three elementary schools, three middle schools, and three high schools. The special settings provide students with instruction in strategies and skills that are affected by their disabilities as well as the appropriate instructional adaptations and accommodations needed to access gifted instruction.

The special GT/LD settings serve students with documented superior cognitive abilities. These students have demonstrated superior cognitive ability through a variety of measures (individual tests of intelligence, MCPS GT screening measures, observation of ability...). These students also demonstrate significant learning disabilities with academic deficits that are severe enough to drive the need for more intensive supports. Students who are placed in the special settings have not been able to succeed in less-restrictive ones, particularly in light of their exceptional potential.

An instructional specialist for GT/LD services is available to consult with schools, staff, and parents about programming effectively for individual students. The Wings Mentoring program, an individualized eight-week program, also is available to support these students. The Wings Mentoring Program, an individualized eight-week program, also is available to support these students. The Wings Mentoring Program was developed to provide additional support to students with gifts who also have learning disabilities and highly able students who are not succeeding in the classroom. Students realize their creative and intellectual potential when paired with mentors who nurture them by increasing their knowledge and skills in an area of interest. The mentors, who have a background in education and/or experience working with children, are carefully screened and selected based on their knowledge in a specific field and their ability to share their skills with young people. Mentors communicate with classroom teachers so that the successful strategies can be transferred and applied to the classroom setting.

Service Model Components

- Most students who are GT/LD receive access to rigorous instruction in their home schools, while receiving appropriate adaptations, accommodations, and special instruction. Special instruction in the home school may be provided through pull-out programs such as a resource room and/or through plug-in or team-teaching models.
- Students who are GT/LD who cannot access enriched and innovative instruction in their home schools, despite their home schools' best efforts to provide appropriate supports and instruction, may be placed in a special GT/LD classroom setting. This setting provides rigorous instruction in the students' areas of strength, with appropriate adaptations and accommodations as well as instruction in the skills and strategies that are affected by their disability. Students receive their specialized instruction in self-contained and/or team-taught general education classes, typically for a majority of their school day.
- Students may enter or exit the program at any level, from Grades 2–12. An IEP review takes place at least once a year to consider whether the special GT/LD classroom setting continues to be appropriate for the individual student. As students move from elementary to middle school or from middle to high school, staff helps parents understand the program options that may be available for their children. School personnel also are responsible for communicating with the staff in the programs to which students will be transitioning, helping them to understand the students' strengths and needs. The staff also helps prepare students for the transition by scheduling opportunities for students to hear about the expectations of the new program and to visit the new program.

Program Features

Program Placement Process

The instructional specialist for GT/LD services with the Division of Enriched and Innovative Instruction (formerly Division of Accelerated and Enriched Instruction) provides consultation to schools about appropriate programming options for individual students. Students who are GT/LD who, despite efforts at intervention and support, are not able to access accelerated and enriched instruction in their home schools, may be referred for consideration of alternative placement by their school IEP team. An IEP team meeting will be convened to review all available information, including information from the parents, and make a final determination regarding appropriate special education services.

Elementary. Each of three regionally located elementary schools (currently Lucy Barnsley, Wyngate, and Thurgood Marshall) serves as home to two special GT/LD classrooms. Students typically spend a majority of their academic day in these special classrooms; each staffed with one special education teacher and one paraeducator. Class sizes vary, but on the average are from 8–12 students.

The focus of the elementary program is to provide students with instruction in their areas of strength while simultaneously working to improve areas that are affected by their disabilities. Students become familiar with the accommodations, such as computer software programs, that can obviate their disabilities. A multisensory approach allows students to

utilize and recognize their strongest areas of "multiple intelligence."

Students typically participate with their non-disabled peers in physical education and the arts, as well as during lunch, recess, and in other school activities. As students demonstrate proficiency in various subject areas and progress to the point that they can be successful, they may be mainstreamed for part of the day, with appropriate supports and accommodations. When mainstreamed, students are included with their non-disabled peers for the appropriate rigor and challenge.

Middle School. Each of three regionally located middle schools (currently Col. E. Brooke Lee, North Bethesda, and Montgomery Village) serves as home to students who are GT/LD who need special education support for a majority of their academic day. Students may be placed in a special education classroom for instruction in their areas of disability. Most of this includes classes in English and reading, and may also include math. Students typically are placed in the mainstream with their non-disabled gifted peers for social studies and science.

A special educator often provides direct support in these classes, sometimes through a team-teaching approach. Depending on the strengths and needs of an individual student, math may be delivered in either a self-contained, special education supported, or fully mainstreamed setting. An additional period for providing special education instruction may be offered through the secondary resource room. The resource room may provide instruction in areas addressed in an individual student's IEP, such as learning skills, thinking skills, communication skills, technology skills, and interpersonal skills.

Case managers, in these GT/LD settings, have a smaller than typical, staff-student ratio, allowing for more intensive communication with other school staff as well as with parents. Case managers work with students to help them to understand their unique strengths and needs and to increasingly be able to advocate for the accommodations that will allow them access to accelerated and enriched instruction. Students typically spend more and more of their time in the mainstream over the course of their middle school years.

High School. Most students who have participated in the elementary and/or middle school special GT/LD settings are ready to return to their home high schools or to the highly gifted magnet programs, or IB. There they may receive the support of a secondary resource period(s) and case manager support as they take on the challenge of high school offerings, including Honors and/or Advanced Placement courses.

Students who need the more intensive support of a special GT/LD setting, may be served at one of the three regionally located high schools that house the Secondary Learning Center Program (currently John F. Kennedy, Walter Johnson, and Watkins Mill). In addition to the secondary resource period(s), students may receive special education instruction, along with Learning Center students, in a variety of academic course offerings.

The Learning Center classes offer a special classroom setting, with a reduced student-to-staff ratio. There are typically not enough students who are GT/LD to comprise an entire class, so the instruction for students who are GT/LD in these classes must be differentiated for their cognitive level. Students who are GT/LD typically are in the mainstream for the vast majority of their day.

Case managers in these settings have a smaller than typical staff-student ratio, allowing for more intensive communication with staff, parents, and students. There is a special education assistive technology center in each of the schools, staffed by a paraeducator throughout the day. Students or their teachers may arrange for students to receive extra accommodations, including the use of word processors, text-to-speech software, speech-to-text software, or special education assistance in this special center at any time during the school day.

In each of the high school programs, one class is identified in each of the four academic areas—English, social studies, science, and math—at each grade level. One teacher (designated teacher) volunteers to have one period of his or her day designated as a "magnet" class, which includes GT/LD and underachieving GT students, along with typical GT students. In most cases, this class is an Honors class, and in other cases, Advanced Placement. The teacher is one who has shown exemplary skills in utilizing adaptations and accommodations and in nurturing students. The teacher agrees to participate in three one-day trainings on best practices. This would be seen as a pilot program beginning at the ninth grade level in the 2004–05 school year and phasing up one grade level each year. If results warrant, this model could be extended to all high schools at virtually no cost.

WHO'S WHO: ROLES AND RESPONSIBILITIES IN MCPS

.2 GT/LD Coordinator

A teacher in one of the three middle school special settings who allocates 20 percent of their time to coordinate the GT/LD services in the building:

Identifies roles and responsibilities of GT/LD staff; gathers feedback from parents; communicates information to parents; develops and implements a transition plan to improve articulation between ES, MS, and HS; provides information and training for staff; and oversees GT/LD program.

Administration: Principal, assistant principal, student support specialist, etc.

Oversee schoolwide issues, monitor programs, provide instructional leadership, and serve as resources for coordinators and parents.

Designated Teachers (Designated regular educators in one of the three high school special settings)

Volunteer to have a period of their day designated to include students who are GT/LD, utilize adaptations and accomodations to nurture students in Honors or AP classes, participate in three one-day trainings on GT/LD best practices.

General Education Teachers

Serve as masters of content, collaborate with special educators, instruct students in MCPS curriculum, and provide accommodations and modifications.

Grade Level Counselors

Schedule and counsel all students and provide information on resources.

MCPS GT/LD Instructional Specialist

Oversees GT/LD programs in Montgomery County, helps identify and place new students, trains staff, and serves as a resource for information on GT/LD education.

Middle School and High School Learning Center Coordinator

Coordinates entire Learning Center and collaborates with and supports .2 GT/LD coordinators, administration, educators, parents, and students.

Paraeducators (formerly known as special education instructional assistants—SEIAs)

Support classroom instruction, provide accommodations and modifications for students, teach small-group lessons, and assist teachers in any way necessary to ensure a well-run classroom environment.

Related Service Providers: Speech language pathologists, occupational therapists, physical therapists, etc.

Provide related services, administer evaluations, evaluate progress, develop IEPs, and support classroom teachers.

Resource Teacher for Special Education (RTSE)

Coordinates special education services and collaborates with and supports GT/LD coordinators, administration, educators, parents, and students.

School Psychologists

Administer psychological evaluations, consult with school staff, provide instructional recommendations, social skills, and mental health support.

Special Education Teachers

Ensure access to challenging and rigorous MCPS curriculum, work on relevant IEP goals, accommodate and modify lessons, individually plan for and evaluate student progress, and instruct students in strategies and skills necessary to access curriculum.

Teacher Advisor/Case Manager: Point of Entry Contact

Monitors students' overall progress, contacts parents regularly about progress, administers triennial re-evaluations, develops IEPs, consults with classroom teachers, problem solves, and refers unresolved issues to appropriate staff.

CONCLUSION

It is important for educators to keep in mind that the writing, organization, memory, and, often, reading skills of students who are GT/LD are likely to impact their access to rigorous instruction across all subject areas. In planning, it is crucial that the teacher consider instructional methods and strategies that either circumvent students' difficulties or that build in the necessary scaffolding to empower students to be successful with the demands of the assignment.

The following task analysis illustrates the process used by the educators in MCPS as they have created and continue to create challenging and supportive programs for their students.

- Analyze what the roles and responsibilities of the educators are within the school.
- Assign the roles and responsibilities to the educators within the school.
- Set a collaborative climate. Team planning facilitates inclusion of the students who are GT/LD in the regular classroom.
- Collect and study data related to the students (IEPs; tests; GT screening data scores; teachers, staff, and parent observations; students' inventories).
- Focus on students' strengths and interests.
- Analyze curriculum to identify key concepts.
- Collect resources and materials (curriculum guides, programs, and software).
- Choose appropriate resources, materials, strategies, and techniques.
- Plan for alternative learning activities.
- Plan units and lessons.
- Identify appropriate adaptations and accommodations for each student.
- Implement units and lessons.
- Plan for assessments that capitalize on students' strengths and obviate weaknesses.
- Evaluate successful/best practices.
- Schedule team meetings to discuss students. Specific weekly, bimonthly or monthly meeting times allow for ongoing planning and an opportunity to discuss and evaluate student progress. Difficulties are addressed before they multiply and escalate.
- In-service/train teachers on GT/LD characteristics, needs, strategies, adaptations, and accommodations.
- In-service/train students and parents on resources, materials, and strategies when needed.
- Keep lines of communication open among staff, students, and parents.

The goal of education is to provide opportunities for students to build knowledge, skills, and attitudes to become successful, contributing members to a global society. Gifted students with special needs are not to be excluded from this promise. In fact, according to Thomas West in his book, *In the Mind's Eye,* it is these very students who have made and will make some of the most extraordinary contributions to our world.

RESOURCES

Programs and Support for Gifted and Talented Education

Elementary Gifted and Talented School Liaisons. Please contact your local school

Recording for the Blind & Dyslexic. Please contact Faith Hutchinson, Outreach Director, 202-244-8990 or send her an e-mail at fhutchinson@rfbd.org

Special Needs Library (located on lower level of Davis Library). Please contact Charlotte Stinnett, Agency Manager, voice: 240-777-0960 and TTY: 301-897-2217, or visit the Web site at www.mont.lib.md.us/branchinfo/sn.asp

Support and Advocacy Groups

Gifted and Talented Association of Montgomery County, Maryland, Inc. Please contact David McIlwain, Co-president, 301-299-2343 or send him an e-mail at bigmack@erols.com.

John Hoven, Co-president, 301-593-1702 or send him an e-mail at jhoven@erols.com. Hotline: 301-983-5679

MCGATE—The Maryland Coalition for Gifted and Talented Education. Please contact Joan Roache, Co-president. Send her an e-mail at jroache@id52.online.com

National Association for Gifted Children (NAGC). Please contact Peter D. Rosenstein, executive director at 202-785-4268. See Web page at www.nagc.org

PTSA GT Liaison and Montgomery County Council of PTAs Committee Chairperson. Please contact your local school.

Special Education Advisory Committee (SEAC)
http://www.mcps.k12.md.us/departments/specialed/resource.html
MCPS Department of Special Education at 301-279-3135
(Current Cochairs)
Kay Romero—kay2898@aol.com
Jerry Heupel—gheup@emth.com
Joan Sabaka—valntine20@aol.com

Superintendent's Advisory Committee on the Education of the Gifted and Talented. Please contact Virginia Tucker, Director, Gifted and Talented Team, AEI at 301-279-3163

The Gifted with Learning Differences Educational Network. See Web page at www.gtldnetwork.org, or contact administrator at 301-986-1422

Web Sites

All Kinds of Minds. See Web page at http://www.allkindsofminds.org

Association for the Education of Gifted Underachieving Students. See Web page at http://www.aegus.org

Center For Talented Youth, Johns Hopkins University. See Web page at http://www.jhu.edu/~gifted

Children and Adults With Attention-Defict/Hyperactivity Disorder. See Web page at http://www.chadd.org

Council for Exceptional Children. See Web page at http://www.cec.sped.org

Division of Enriched and Innovative Instruction (formerly AEI). See Web page at http://www.mcps.k12.md.us/departments/eii

Please contact Marisa Stemple, GT/LD Instructional Specialist, 301-309-6272, or send her an e-mail at Marisa_Stemple@mcpsmd.org

Educational Research & Information Center (ERIC). See Web page at http://www.ericec.org

Gifted Development Center. See Web page at http://www.gifteddevelopment.com

Greenwood Institute. See Web page at http://www.greenwood.org/resources/resindex.html

GT World. See Web page at http://www.gtworld.org

Hoagies' Gifted Education. See Web page at http://www.hoagiesgifted.org

International Dyslexia Society. See Web page at http://interdys.org

Learning Disabilities Association of America. See Web page at http://www.ldanatl.org

LD Online. See Web page at http://www.ldonline.org

Math LD. See Web page at http://www.dyscalculia.org

National Association For Gifted Children. See Web page at http://www.nagc.org

National Center for Learning Disabilities. See Web page at http://www.ncld.org

National Information Center for Children and Youth with Disabilities. See Web page at http://www.nichcy.org

NLD on the Web! See Web page at http://www.nldontheweb.org

Nonverbal Learning Disorders Association. See Web page at http://www.nlda.org

Parent Encouragement Program. See Web page at http://www.parentEncouragement.org

Schwab Learning. See Web page at http://www.SchwabLearning.org

Smart Kids with Learning Disabilities. See Web page at http://www.smartkidswithld.org

Uniquely Gifted. See Web page at http://www.uniquelygifted.org

U.S. Dept. of Education Advocacy Memo Regarding GT/LD Students. See Web page at http://www.ldanatl.org/bulletins/AC_1_96.html

Wrightslaw Libraries. See Web page at http://www.wrightslaw.com

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