Key Question Four:
How should schools identify the needs of gifted and talented students and provide for an appropriate range of services to meet those identified needs?

RECOMMENDATION 4.1.
EARLY CHILDHOOD EDUCATION
Early childhood education programs should be structured, and teachers in these programs trained, so that talents are nurtured and exceptional abilities are recognized as early as possible.

RECOMMENDATION 4.2.
IDENTIFICATION
The process used to identify students in need of special services must be on-going (extending from school entry through grade twelve), flexible, free of bias, and open to students from all backgrounds.

RECOMMENDATION 4.3.
RANGE OF SERVICES AND EDUCATIONAL OPTIONS
In order to provide the most appropriate and optimal education for students exhibiting a variety of exceptional abilities and outstanding talents, a range of services and educational options must be available.

RECOMMENDATION 4.4.
APPROPRIATELY CHALLENGING CURRICULUM AND INSTRUCTION
Schools should ensure that all students are provided with demanding curricular material, but that gifted and talented students receive instruction that goes beyond the regular school program.
RECOMMENDATION 4.5.

MATHEMATICS AND SCIENCE CURRICULUM
A rigorous and challenging curriculum in mathematics and science should be provided for all students, including gifted and talented students who are capable of exceptional performance in these areas, beginning in elementary school and continuing through high school.

RECOMMENDATION 4.6.

ACCELERATION OPTIONS
Any instructional or administrative barriers to appropriate acceleration options, including early entrance to school or college, should be removed. In addition, pre-assessment procedures should be routinely used in the classroom in all curricular areas to determine what students already know so that enriched and extended learning experiences can occur.

RECOMMENDATION 4.7.

GROUPING PRACTICES
Schools should maintain flexible grouping practices that include homogeneous grouping as an appropriate and necessary option for gifted and talented students while ensuring that inappropriate uses of tracking are eliminated.
Renewing Our Commitment

RECOMMENDATIONS

Key Question Four: How should schools identify the needs of gifted and talented students and provide for an appropriate range of services to meet those identified needs?

EARLY CHILDHOOD EDUCATION

RECOMMENDATION 4.1: Early childhood education programs should be structured, and teachers in these programs trained, so that talents are nurtured and exceptional abilities are recognized as early as possible.

PERSPECTIVE: “Specific services for the gifted and talented, including instructional programs, should begin in early childhood, respond to individual strengths and needs and constantly aim for the realization of the highest potential of each child.”

RATIONALE: Quality instruction should begin in early childhood, respond to individual strengths and needs, and constantly aim for the highest potential for the child. Early childhood programs such as Title I, Extended Elementary Education Program (EEEP) and Headstart, should create awareness of the need to recognize and nurture talent, and MSDE should provide leadership for this change.

Young children need rich, varied learning opportunities and trained teachers who look for strengths and nurture potential. Services to potentially gifted primary children should match their changing developmental needs with emphasis on broad-based knowledge acquisition and problem solving. On the other hand, young children exhibiting advanced mental, social, and psychological maturity should be considered for early admission to kindergarten or grade-level advancement. Ideally, schools should tailor access to unique learning opportunities to match the strengths and needs of each child.

As schools engage in preschool screening for kindergarten, Headstart, and other preschool programs, staff should be alert to early recognition of students’ strengths. While noticing students’ deficits is very important, early signs of academic potential such as an interest in reading, advanced mathematical understanding or possession of a large fund of knowledge, should also be noted. Early Childhood programs must create a balance that makes provisions for students with advanced skills who need academics early while, at the same time, providing for students with unusual potential who demonstrate problem solving skills but require a more developmental approach to reading and mathematic instruction.

Early identification of gifted students, K-3, is frequently recommended, but seldom implemented. Most gifted services begin in the upper elementary grades. Delaying identification compounds problems associated with finding gifted minority students, especially those students from disadvantaged backgrounds. If such children are not found early, they are unlikely to receive appropriate instruction and may develop a poor academic self-image.

The greatest untapped talent in the nation “lies among the disadvantaged minority populations” (Torrance, 1970; 1977). These students come to school less ready to profit from school experiences. Poverty, lack of early enrichment experiences and differences in language and culture often prevent them from refining and extending their skills. Rich early childhood opportunities can reverse the delays and provide occasions for outstanding gifts and talents to be recognized and nurtured (Gregory, Starnes, & Blaylock, 1987).

"To compete on an equal footing with the rest of the world, we must start our children down the path to excellence when they are very young. Learning is cumulative; all students including the gifted, develop to their full potential only when their special strengths are identified and supported throughout their lives. This is particularly true for economically disadvantaged children because they often face so many impediments to success."

National Excellence: A Case for Developing America’s Talent
ON-GOING AND FLEXIBLE IDENTIFICATION

RECOMMENDATION 4.2: The process used to identify students in need of special services must be on-going (extending from school entry through grade twelve), flexible, free of bias, and open to students from all backgrounds.

PERSPECTIVE: "Identification of gifts and talents must occur as an on-going process extending from school entry through grade twelve. To ensure that students from the full range of backgrounds and talents are identified, schools should consider a variety of indicators of talent and ability."

RATIONALE: If appropriate educational experiences are to be provided, students' needs must be identified. For some students the identification process will be quite easy and the special need obvious. But this is not the case for many other students. For a variety of reasons, students from a number of subgroups are often overlooked and underserved.

In a special issue of The Journal for the Education of the Gifted, Gallagher (1987) referred to the subgroup of gifted children who are poorly recognized and insufficiently supported by services for the gifted and talented as the "gifted underserved." In addition to ethnic minorities, economically disadvantaged, preschool, learning disabled, gifted females and underachievers, this group included all children who suffer neglect because of insufficient conditions and opportunities to nurture, stimulate, and guide them to their full potential. This includes highly able students whose disruptive behavior may prevent them from being recognized as "gifted."

The Jacob K. Javits Gifted and Talented Students Act of 1988 was created to "give highest priority" to gifted students who are traditionally underserved. These underserved students have been described in several studies.

* Gay (1989) and Ford & Harris (1990) determined that as many as 50% of low SES gifted students enrolled in public schools are not identified by current identification procedures. Tyler-Wood (1992) suggests that the primary reason low SES students do not meet criteria for gifted services is low test scores on verbal subtests.

* Recent studies (Frasier, 1991) have documented the ratio of non-ethnic/minority students to ethnic/minority students receiving gifted programming as approximately 5:1, a ratio that has persisted since the early 1970's. Relying solely on the performance of a single standardized test offers little understanding of talent among our most capable Black students (Ford & Harris, 1990; Patton, 1992).

* Tomlinson and colleagues (1993) lament the failure to implement a uniform and consistent procedure for identifying mathematical and scientific abilities among female students at all grade levels.

* According to Daniels (1983) and others (Fox, Brody, & Tobin, 1983), there exists a group of students who can legitimately be called gifted and yet at the same time be labelled learning disabled. This group remains largely unidentified and insufficiently served (Brody & Mills, in press).

Special strategies that can be used to inform and motivate referrals of all the "gifted underserved" must be evaluated and considered. Furthermore, staff must be adequately trained to recognize talent in these groups. Educators should be provided with the skills needed to recognize the many kinds of characteristics, strengths, talents, and needs represented in these underserved groups. If students with talent from these groups are never recognized and referred, then they will never be represented at the assessment, classification, and placement stages.
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Key Question Four: How should schools identify the needs of gifted and talented students and provide for an appropriate range of services to meet those identified needs?

Traditional identification methods have resulted in an under-representation of minorities and other underserved groups receiving gifted services. Districts that use IQ scores as the sole criterion in the identification of gifted and talented students are more likely to discover larger disparities among racial and ethnic groups. Ensuring that students from a full range of backgrounds are identified requires the use of multiple sources of information. Few points have received more consistent support from the literature (Clark, 1993; Feldhusen, 1986; Gallagher, 1993; Renzulli, 1986; Sternberg & Davidson, 1986).

The purpose of identification should be to identify students who need curricular and instructional modifications in their educational program because of documented talent, exceptional academic achievement or aptitude, or clear potential to achieve at a high level. It should be a means to an end and not an end in itself.

"Outstanding talent" or "exceptional ability" should be clearly defined as that portion of the student population in a school whose academic needs are clearly not being met by the regular classroom instruction and curriculum. Specific criteria and procedures should be outlined to assist teachers, administrators, and parents in deciding whether a particular programming option is most appropriate for a particular child or group of students.

Identification should not be viewed as a way of conveying special status on students (i.e., simply placing the "mantle of giftedness" upon students). Likewise, identifying students for "gifted programs" any student could benefit from is not defensible. The identification process adopted by a school should be designed to document academic need and followed by an educational response that can be easily justified as necessary to meet that need.

While definitions may vary somewhat in their emphasis, the identification process should be:

* **Ongoing.** Developmentally appropriate procedures to recognize talent and unusual potential should begin as early as the preschool years, be integrated with preschool programming, and should be on-going throughout the secondary school years.

* **Accommodating of variety** - Identification should be designed to look throughout a range of disciplines for students with diverse talents.

* **Reliant on a variety of assessment measures.** The identification process should consider multiple indicators of talent with information obtained from many sources. Teachers and staff who are trained to look for indicators of talent and exceptional ability can be an invaluable component of the identification process.

* **Free of bias.** Identification should provide students from all backgrounds with equal access to appropriate academic programming.

* **Non-exclusionary.** Single test scores should not be used to exclude students from services if other indicators point to a need. On the other hand, the option of using test scores for documenting the need for special programming should be available. Highly able students who have been insufficiently challenged often underachieve in the classroom and may lose the motivation so often equated with gifted behavior. For many of these students, aptitude test scores may be the only indicator of exceptional ability.
Key Question Four: *How should schools identify the needs of gifted and talented students and provide for an appropriate range of services to meet those identified needs?*

* Sensitive to achievement differences. Identification must recognize those students with observable achievement who are most obviously in need of curricular and instructional modification. It is also important, however, to recognize those students with talent and ability who are not yet achieving to full potential. The appropriate services and programming for these two groups of students may, however, be quite different.

* Matched with an appropriate range of services and programs. Just as an identification process should include a variety of assessment instruments and many sources of information, so should the programmatic responses to identification be varied. Identification should not only support programming efforts, but should be integrated into curriculum initiatives. Most importantly, programmatic options should be carefully matched to identification so that an optimal match can be obtained between identified need and the educational response.

* Integrated with identification of students with other educational needs (i.e., special education). No student should be excluded from needed services in one area because of documented need in another. Students who are gifted and have a learning disability are in need of services that span both special education and gifted education.

"...talent is best viewed as a developmental rather than as an all-or-nothing phenomenon. It is a process that unfolds over many years rather than a trait that one inherits and then keeps unchanged for the rest of life."

Csikszentmihalyi, Rathunde, and Whalen
*Talented Teenagers: The Roots of Success & Failure*
RANGE OF SERVICES AND EDUCATIONAL OPTIONS

RECOMMENDATION 4.3: In order to provide the most appropriate and optimal education for students exhibiting a variety of exceptional abilities and outstanding talents, a range of services and educational options must be available.

PERSPECTIVE: "Educational services should be locally selected and implemented on the basis of the identified characteristics and needs of students whose unique talents and abilities go beyond those of their peers. Gifted and talented students should not be confined by age-level expectations in their learning progress. These students should be permitted to begin instruction earlier and advance at a faster pace."

RATIONALE: A comprehensive approach to facilitate the development of programming for gifted learners will uncover, encourage, and nurture their talents. Since there is no one best way to meet the needs of highly able students who may have very different talents and abilities, the following exemplary educational strategies for meeting the needs of advanced learners are suggested:

* **Flexible Pacing** - allowing students to advance as they master content and skills.

* **Acceleration** - allowing students to be placed at the level of a discipline that is appropriate to their talent and knowledge, which may include:
  - early entrance to kindergarten or the first grade;
  - grade skipping;
  - advanced placement in a subject (without being assigned to a higher grade, the student is placed for part of the day with students at more advanced grade levels for one or more subjects);
  - **concurrent enrollment** in elementary/middle school, middle/high school, high school/college;
  - **summer school acceleration programs**
  - **curriculum compacting** (the student is given reduced amounts of introductory activities, drill, and review so that the time saved may be used to move more quickly through the curriculum);
  - **telescoping curriculum** (the student spends less time than usual in a course of study; e.g., completes a one-year course in one semester);

* **Enrichment** - giving students the opportunity to go deeper and wider into subject matter depending on their interest and motivation.
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* **Instructional Strategies and Modification** - focusing on instructional techniques that are open-ended and that create multiple opportunities for students' expression of talents and abilities.

* **Curriculum Modification** - focusing on three variables: the content of the lesson, the process by which students are to learn, and the product the students are to produce.

* **Mentor Programs** - allowing students to pursue advanced-level investigations with a professional at the workplace.

* **Independent Study/Research Investigations** - providing students with opportunities to conduct a research investigation where they identify a real problem or question, use appropriate methodologies to conduct the research, and develop a product to communicate their findings to an authentic audience.

"Teachers are giving up the notion that children can, or should be made to, fit the school, and are turning to the rational endeavor of fitting the school to the needs and capacities of children."

Leta Hollingworth
Problem Children
CHALLENGING CURRICULUM AND INSTRUCTION

RECOMMENDATION 4.4: Schools should ensure that gifted and talented students are provided with demanding curricular material and instruction that goes beyond the regular school program.

PER SPECTIVE: "Students should be provided with appropriately challenging curricula and instruction matched to their abilities, achievement levels, and interests."

RATIONALE: Curricula should be developed and structured to provide rigor and challenge for all students including the gifted and talented. To ensure that highly able students are sufficiently challenged, local systems and the Maryland State Department of Education should cooperatively develop curricular standards that not only raise the "floor" (minimum levels of accomplishment) but also raise the "ceiling" (the highest levels of academic accomplishment).

Emphasis should be placed on the development of integrated curricula (multidisciplinary) using an inquiry approach. The curriculum should include accelerated and enriched content, as well as contexts that promote the application of different thinking processes. The curriculum should allow students to create advanced and novel products, as well as help them to develop productive habits of mind.

Bright students respond to rigorous content and need comprehensive and advanced high-level K-12 learning opportunities. A variety of assessment procedures, based on curriculum standards, that include the use of portfolios, exhibitions, and demonstrations should be developed to measure the accomplishments of highly able students. Establishing academic benchmarks and providing high-level learning opportunities will motivate students with outstanding talents to increase their knowledge, refine their creative abilities, produce works commensurate with their aptitude, and achieve world-class standards.

"The advocacy of a rich and rigorous core curriculum need not ignore the fact that individual students present their schools with distinctive requirements, interests, and problems. Students possess a range of abilities ... We may vary our pedagogy to achieve our educational goals, but we must jealously retain and guard those goals; mastery of a common core of worthwhile knowledge, important skills, and sound ideals."

William J. Bennett
American Education: Making It Work
Renewing Our Commitment

RECOMMENDATIONS

Key Question Four: How should schools identify the needs of gifted and talented students and provide for an appropriate range of services to meet those identified needs?

MATHEMATICS AND SCIENCE CURRICULUM

RECOMMENDATION 4.5: A rigorous and challenging curriculum in mathematics and science should be provided for all students, including gifted and talented students who are capable of exceptional performance in these areas, beginning in elementary schools and continuing through high school.

PERIOD: "A rigorous and challenging curriculum] is particularly critical in the areas of mathematics and science education where our brightest students who are clearly capable of world class performance are not currently performing at a competitive level with the best students from other industrialized nations."

RATIONALE: According to the federal report, "National Excellence," America's most able students do not learn as much as they could and compare unfavorably with students in other countries especially in the areas of mathematics and science. The assumption that America's best students currently measure up to students anywhere is false. International test data in mathematics and science compiled during the last decade clearly indicate that American students are not receiving as challenging an education as students in other nations. For example, a study comparing U.S. seniors taking Advanced Placement courses with top students in 13 other countries reveals that American students placed:

- 13th out of 13 in biology
- 11th out of 13 in chemistry; and
- 9th out of 13 in physics.

In mathematics, the top 1 percent of American students scored very poorly when compared to a similar group of students in 13 countries:

- 13th out of 13 in algebra; and
- 12th out of 13 in geometry and calculus.

The poor performance of America's brightest students continues into college and the professional world. During the last 20 years, graduate school enrollments of American students in mathematics and science have declined while the number of foreign-born students has risen. American corporations such as Texas Instruments and IBM continue to hire people from outside the U.S., especially in research, because of the shortage of mathematics and science graduate students. In order for America to remain competitive in the global market, emphasis must be placed on establishing comprehensive and advanced learning opportunities for students with outstanding talents. Challenging all students by demanding more of them, including America's most talented, will result in a populace that can deliver the high level of skills and expertise needed for successful participation in the global society.

"...gifted and talented children represent a significant resource to any nation and it is profitable to the nation in many ways to invest in their healthy development and their education. Such an investment extends equal educational opportunity to them, just as legislation and public funding have provided such opportunity to other exceptional children."

Lita Linzer Schwartz

"Why Give Gifts to the Gifted?"

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ACCELERATION OPTIONS

RECOMMENDATION 4.6: Any instructional or administrative barriers to appropriate acceleration, including early entrance to school or college should be removed. In addition, pre-assessment procedures should be routinely used in the classroom in all curricular areas to determine what students already know so that enriched and extended learning experiences can occur.

PERSPECTIVE: "The artificial lock-step of education (kindergarten through graduate school in discrete units and in pre-defined progression) should give way to a system in which a child’s progress is determined by differing levels of performance in the particular subject areas."

RATIONALE: Students with outstanding talents require a different instructional approach that is not bound to age-level expectations. Administrative barriers and artificial ceilings that hinder ready access to acceleration options demand attention and removal.

The value of acceleration as an option for meeting the academic needs of highly able students has been well-documented by research (Kulik & Kulik, 1984; Pollins, 1983). Early entrance to kindergarten or first grade should be available to children with demonstrated ability, as should early entrance to college for students who have completed high school requirements. In addition, schools should remove any artificial barriers preventing access to college-level courses to any student with the ability and skills needed to be successful in such courses. Although there are no regulations preventing these kind of acceleration options, many schools still refuse to allow talented students these much-needed opportunities to be challenged.

In addition, instructional programs should provide vehicles for pre-assessment to determine what students already know. With this knowledge teachers can compact or eliminate and replace that part of the curriculum with extended and accelerated experiences that allow for more in-depth curriculum, as well as the examination of topics related to, but not included in, the regular classroom curriculum. Pre-assessment procedures should be available in all curricular areas, implemented upon request, and teachers assisted in translating this information into classroom practice. Teachers, however, should also be encouraged to watch for students who have mastery of material before instruction begins.

"Gifted and talented elementary school students have mastered from 35 to 50 percent of the curriculum to be offered in five basic subjects before they begin the school year. Most regular classroom teachers make few, if any, provisions for talented students."

National Excellence: A Case for Developing America’s Talent
GROUPING PRACTICES

RECOMMENDATION 4.7: Schools should maintain flexible grouping practices that include homogeneous grouping as an appropriate and necessary option for some students at some time while ensuring that inappropriate uses of tracking are eliminated.

PERSPECTIVE: "Flexible grouping options for the purposes of providing appropriately challenging instruction to gifted and talented students have been found to be highly effective in meeting these students' educational needs."

RATIONALE: It has been shown that grouping students with intellectual peers so that appropriate pacing of instruction can occur is an appropriate, viable, and necessary strategy for maximizing talent development and responding to the needs of highly able students (Kulik & Kulik, 1991; Kulik, 1992; Mills & Durden, 1992; Slavin, 1990). While rigid grouping practices such as early and comprehensive tracking based solely on a single IQ score are clearly inappropriate, as are less than appropriately challenging material for any group of students, it is equally unreasonable to preclude a variety of flexible grouping options as a strategy for meeting the needs of highly able students.

Clearly, homogeneous grouping by ability and/or achievement allows for more appropriate, rapid, and advanced instruction matched to the rapidly developing skills and capabilities of highly able students. A balance needs to be achieved so that talented students have the opportunity to work in homogeneous groups, in heterogeneous groups, and individually depending on the content area and task involved.

"Under today's practices, high-ability students are forced to spend more time than they need on a curriculum developed for students of moderate ability. Many become bored, unmotivated, and frustrated. They become prisoners of time."

National Education Commission on Time and Learning
Prisoners of Time