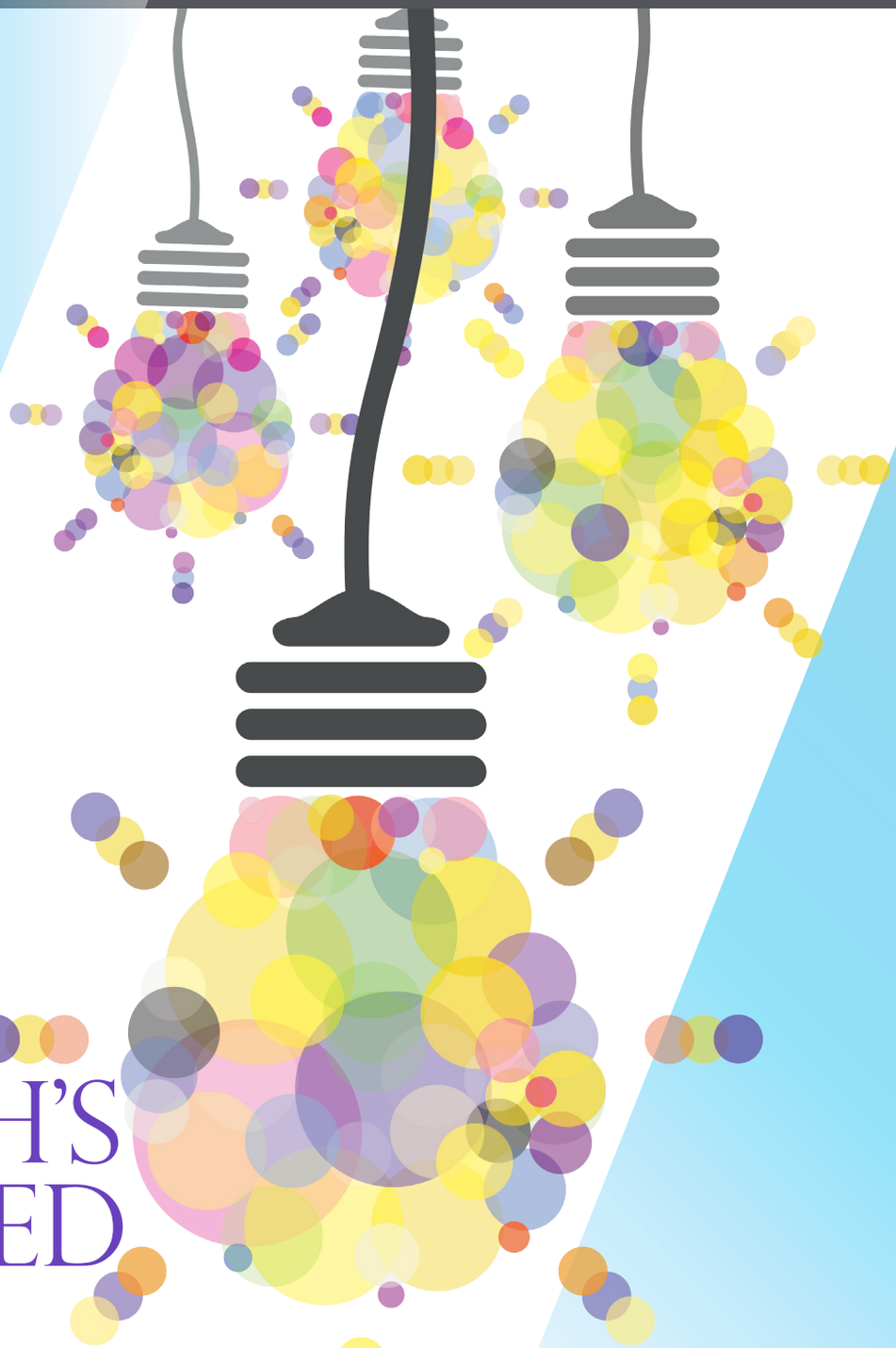
Grades K–12 Handbook



UTAH'S GIFTED AND TALENTED

Utah State Board of Education
250 East 500 South
P.O. Box 144200
Salt Lake City, UT 84114-4200

Sydnee Dickson, Ed.D.
State Superintendent
of Public Instruction

Revised May 2017

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UTAH STATE BOARD OF EDUCATION

250 East 500 South P. O. Box 144200 Salt Lake City, UT 84114-4200
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1/2017

FOREWORD

> *"There are risks and costs to a program of action. But they are far less than the long-range risks and costs of a comfortable inaction."*
>
> —John F. Kennedy (cited in Blaydes, 2003, p. 205)

In 2007, a group of dedicated gifted and talented advocates wrote the first Utah Gifted and Talented Handbook. The purpose of the handbook was to provide Utah educators with information to assist in initiating or improving services for children who are gifted and talented. It is hoped that this new, updated version will provide even more up-to-date information to help districts make decisions regarding their gifted and talented students. New to this version is information about "Curriculum Essentials" (creative thinking, critical thinking, problem-solving, and research), along with information about gifted education and the Common Core Standards. In addition, because the Utah law for gifted and talented education has changed the funding structure for gifted and talented programs, information about the new law is integrated into nearly every section (Utah Administrative Code, Rule R277-707. Enhancement for Accelerated Students Program). Just like the previous version, this handbook is organized to respond to questions that district/charter personnel may have or need to answer regarding gifted and talented education, and may be used to help design and implement best practices for gifted students in Utah's classrooms. This publication is intended to be used as a technical support document only, and does not have the weight of law.

This document is not intended to be comprehensive in nature, but a beginning reference that identifies issues and potential solutions for educators involved in providing services for gifted and talented learners. Educators are encouraged to consult others, including recognized experts in the field, professional organizations, and professional literature resources (see Gifted and Talented Resource List).

The critical topics addressed in this handbook were selected through conversations among State Board personnel, district coordinators, university faculty members, and representatives of the state gifted and talented organization. Although each topic is discussed separately, none of the components can operate independently of the others. Exemplary gifted and talented education practice requires consideration of all components as part of a total plan.

Acknowledgments

The Utah State Board of Education wishes to express appreciation to individuals and groups who gave input or provided comments on this handbook.

The *Utah Gifted and Talented Handbook* was the product of a collaborative effort among the Gifted and Talented coordinators throughout the state, as well as universities, and the Utah State Board of Education. In addition, we acknowledge the contributions and guidance of the original writing team:

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1 FOUNDATIONS

Utah Administrative Rules (see Appendix A) articulate a specific definition of accelerated students and require LEAs to submit an annual evaluation report to the USBE (R277-707-4A).

The Gifted and Talented Students

Who Are Gifted and Talented Students?

Gifted and talented can be defined at three levels: the theoretical, the official, and the operational.

First is the **theoretical level**, in which scholars propose a definition, based on research and their particular psychological or educational bent. Historically, the perspective that has dominated gifted and talented education is the concept of general intelligence. This posited that an underlying intellectual capability serves as a foundation for all other specific abilities.

- Lewis Terman (1925)—The great Stanford University scholar Lewis Terman is usually credited with establishing this perspective. In the Genetic Studies of Genius, today known as the Terman Study of Gifted, he examined the development and characteristics of gifted children into adulthood. Several other scholars have built upon this work which has contributed to the field of gifted education.
- Dr. Joseph Renzulli (1978)—Dr. Rezulli developed The Three-Ring Conception of giftedness. Dr. Renzulli argues that giftedness comes from three clusters of behavior—above-average ability, creativity, and task commitment—that are brought to bear upon valued areas of human endeavor. According to him, gifted and talented children are those who possess or are capable of developing this composite of traits and applying them to any potentially valuable area of human performance.
- Abraham J. Tannenbaum (1983)—Tannenbaum broadened the definition of giftedness to include not only the intellectual ability but also the ability to perform or produce work "that enhances the moral, physical, emotional, social, intellectual, or aesthetic life of humanity" (Tannenbaum, 1986, p. 33). In Tannenbaum's Sea Star model of giftedness, he identified five factors that are essential to the fulfillment of

"Cowardice asks the question '…Is it safe?' Expediency asks the question '…Is it politic?' Vanity asks the question '…Is it popular?' But conscience asks the question '…Is it right?' And there comes a time when one must take a position that is neither safe, nor politic, nor popular, but one must take it because one's conscience tells one that it is right."

—Martin Luther King, Jr. (cited in Gifted Adults, 2007)

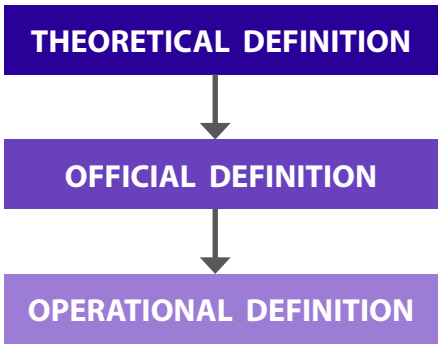
gifted potential: general ability, specific aptitude, non-intellective factors, environment, and chance.

- Dr. Françoys Gagné (2008)—Gagné's Differentiated Model of Giftedness and Talent (DMST 2.0) proposed a clear distinction between giftedness and talent. Giftedness refers to an individual's natural abilities or aptitudes. Talent is the outstanding mastery of systematically developed abilities in at least one field of human activity that places an individual at least among the top ten percent of age peers.
- Robert J. Sternberg (1985)—Sternberg's definition of human intelligence is "the ability to achieve success in life, given one's personal standards, within one's sociocultural context" (Sternberg, 1999, p.293). In Sternberg's Triarchic Theory, he categorizes intelligence into three parts: analytical intelligence (mental steps of components that are used to solve problems), creative intelligence (using experience in ways that offers insights and solutions), and practical intelligence (ability to examine and adapt to the contexts and challenges of everyday life).

Consideration of theoretical perspectives is important for a district, because it has clear implications for the second level of definitions—**the official level.** At the official level, an authorized legal body adopts a specific definition of "gifted and talented."

Obviously, if the theoretical and official definitions are not in harmony, district personnel and patrons will sense a conflict that could impair a district's ability to serve gifted and talented learners.

The third level of definitions of gifted and talented is **the operational level.** Operational definitions consist of the actual procedures and instruments used to identify students as gifted and talented. Identification procedures (or operational definitions) are discussed in section two of this document. The point for now is that all three levels of definition should flow from one to the other (i.e., from theoretical to official, from official to operational), as illustrated below. This flow is imperative if identification practices and programming are going to be defensible.



The most widely used official definition was originally stated in 1971 in a report to Congress (usually referred to as the *Marland Report*) on the condition of gifted and talented education in the United States. The most recent version of this definition was articulated in the federal report *National Excellence: A Case for Developing America's Talent* (usually called the *National Excellence Report*, U.S. Department of Education, 1993), which states:

Children and youth with outstanding talent perform or show the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience, or environment.

These children and youth exhibit high performance capability in intellectual, creative, and/or artistic areas, possess an unusual leadership capacity, or excel in specific academic fields. 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.

Several states, including Utah, adopted the Marland definition, through action by the State Board of Education, as they began initial efforts to qualify for federal dollars to improve their programming for gifted and talented learners.

As defined in Utah Administrative Code: R277-707-2:

(1) "Accelerated students" means children and youth whose superior academic performance or potential for accomplishment requires a differentiated and challenging instructional model

(2) Advanced placement" or "AP" courses means rigorous courses developed by the College Board where:
   (a) each course is developed by a committee composed of college faculty and AP teachers, and covers the breadth of information, skills, and assignments found in the corresponding college course; and
   (b) students who perform well on the AP exam may be:
      (i) granted credit; or
      (ii) advanced standing at participating colleges or universities.

(3) "Gifted and talented programs" means programs to:
   (a) assist individual students to develop their high potential and enhance their academic growth; and
   (b) identify students with outstanding abilities who are capable of high performance in the following areas:
      (i) general intellectual ability;
      (ii) specific academic aptitude; and
      (iii) creative or productive thinking.

(4) "International Baccalaureate" or "(1B)" Program means one of the following programs established by the International Baccalaureate Organization:
   (a) the Diploma Program;
   (b) the Middle Years Program; or
   (c) the Primary Years Program.

(5) "Weighted Pupil Unit" means the basic state funding unit.

(6) "Utah Consolidated Application" or "UCA" means the web-based grants management tool employed by the Board through which LEAs submit plans and budgets for approval by the Superintendent.

The Need for Gifted and Talented Programs

Why are gifted and talented programs needed?

In considering the variety of philosophical perspectives that can be taken, districts will be able to develop a rationale for gifted and talented education. Such a rationale is important for creating defensible programs for gifted and talented learners. Dr. Barbara Clark (2008) has identified several bases that can serve as a foundation.

1. **RIGHT TO LEARN**
   "Giftedness" is a label used to indicate a high level of intelligence; it has a dynamic quality that can be furthered only by participation in learning experiences that challenge and extend the child's level of intelligence, ability, and interest.

2. **EQUAL OPPORTUNITY**
   The school, as an extension of society's principle of equity, purports to provide an equal educational opportunity for all children so they can develop their intellect and talents to the fullest potential. Because all children must, therefore, be educated at their level of development, it is against the principles of a just society to refuse gifted and talented children the right educational experiences appropriate to their developed level of ability.

3. **INDIVIDUAL COST**
   When human beings are limited and restricted in their development, we run the risk of creating both physical and psychological dysfunction.

4. **TALENT DEVELOPMENT**
   Society gains from the greatest advancement of all the abilities and from the highest development of all the talents of all its members, whatever their areas of strength.

5. **INDIVIDUAL DIFFERENCES**
   Gifted youngsters often think differently and have different interests than their agemates. They usually enter school having already developed many basic skills, sometimes to high levels. They have areas of interest that have developed into advanced areas of knowledge.

6. **INDIVIDUAL GROWTH**
   When the needs of the gifted and talented students are recognized and the educational program is designed to meet their needs, these students make significant gains in achievement, and their sense of competence is enhanced.

7. **SOCIETAL BENEFIT**
   Contribute to society in all areas of human endeavor come in overweighed proportion from gifted individuals.

District personnel would benefit from discussing these rationales and determining, based on local values, which perspectives are best suited for establishing gifted and talented education as an integral part of the total educational program their district offers. Having this discussion will assist a district in developing its sense of mission or purpose for gifted and talented education.

Typical Misconceptions About Gifted and Talented Learners

What are some typical misconceptions about gifted and talented learners?

In our society and our schools, we may hold a number of beliefs that make it difficult to develop quality programs for gifted and talented learners. Open and honest discussion about these misconceptions is important for fostering the collaborative efforts needed to properly serve students with gifts and talents.

Misconception #1: All children are gifted and talented.

Points to consider: Everyone accepts that all children are unique, special, important, have personal strengths and weaknesses, and have contributions to make to the classroom and ultimately to their communities and to society. However, the term *gifted and talented* refers to a specific population that has specific educational needs. While almost everyone would agree that every child should have vaccinations to enter a public school, not every child needs insulin injections every day. The latter is based on identified need by a qualified professional. The same would hold true for students with differentiated educational needs.

Misconception #2: Gifted and talented education is elitist.

Points to consider: This misconception comes from the dual nature of the word elite. In one sense the word *elite* refers to differences in performance. This is most often used in conjunction with extraordinary athletic performance, as in "an elite gymnast." Very few would argue against providing such athletes with elite-level coaching and training. The same holds true for those who exhibit gifts and talents in other areas, as listed in the official definition provided earlier in this section. Unfortunately, the word *elite* also refers to differences in class. Individuals from upper classes are often stereotyped as being snobbish—considering themselves to be better than other people. This latter sense of the word, based on class, runs counter to the value American society places on equity. In this sense, gifted and talented education seems to be perceived as maintaining existent inequities. However, in the former sense of the word, based on performance, gifted and talented education fosters excellence, another important societal value in America.

Indeed, elite treatment based on performance has been one important route for oppressed populations (e.g., economically disadvantaged, ethnic and linguistic minorities) to overcome class differences and to achieve equity goals.

Misconception #3: Gifted and talented students can make it on their own.

Points to consider: This misconception is again based on a divergence of opinion about definitions. When "make it" refers to the likelihood that gifted and talented students will meet grade level objectives on end-of-year criterion-referenced tests, it is very likely that they will succeed, meeting minimum criteria for adequate yearly progress. So if "make it" refers to a short-term achievement goal, gifted and talented students often do so "on their own." However, if "make it" refers to a more long-term objective of life success, the misconception simply doesn't hold. Gifted and talented students are just as much at risk as other populations for suicide, mental illness (probably more so among those who are gifted and talented at creative thinking), juvenile delinquency, drug abuse, and dropping out of school. The greatest concern for gifted and talented learners is underachievement.

While estimates vary, most scholars would agree that the majority of gifted and talented students underachieve. The reasons for this are varied and complex—including personal, family, and societal issues. However, one primary cause of underachievement can be laid squarely at the feet of schools—the mismatch between a student's developmental readiness for challenging work and the educational program he or she is offered. This failure to provide learning experiences based on specific needs of specific students frequently results in a failure of the student to "make it," where "make it" refers to the realization of the potential the student brought into the school in the first place.

Misconception #4: Teachers challenge all students; therefore, gifted kids will be fine in the regular classroom.

Points to consider: Although teachers try to challenge all students, the reality is that without training regarding the characteristics and needs of gifted and talented students, regular classroom teachers are often unprepared to provide the depth of knowledge and rigor these students need. In addition, because state and federal regulations ask teachers to focus on students who are scoring below proficiency on core tests: the needs of gifted and talented students are often not met. The National Research Center of Gifted and Talented (NRC/GT) found that 61% of classroom teachers had no training in teaching highly able students, limiting the challenging educational opportunities offered to advanced learners.

In addition, the Fordham Institute found that 58% of all teachers have had no staff development regarding the learning needs of academically advanced students (NAGC, 2008).

Misconception #5: Gifted students serve as good role models so that everyone else in the class is smarter.

Points to consider: The reality is that average or below average students do not look to gifted students as role models. They most often model their behavior on those who have similar capabilities. Comparing oneself to a student who does progressively better on an assignment or activity does little to help average or low-performing students build their self-esteem. Rather, they might not understand the differences in performance and may have little understanding about how to make improvements based on the work done by a gifted student. Similarly, gifted students also benefit most from interactions with intellectual peers who show similar performance levels (NAGC, 2008).

Misconception #6: Acceleration options for gifted students are socially harmful.

Points to consider: Gifted and talented students are often found interacting with students who are older. They may feel these students have interests and abilities more similar to their own. Although acceleration may not be appropriate for every gifted student, it should not be ruled out as an option when designing programs for gifted and talented learners.

According to James A. Kulik of the University of Michigan, "Meta-analytic reviews have consistently concluded that educational acceleration helps students academically without shortchanging them socially and emotionally" (Kulik, 2004). Grade skipping, early kindergarten or magnet school programs may need to be considered to meet the diverse needs of gifted and talented students.

Misconception #7: This student can't be gifted! He/she has such poor grades.

Points to consider: When gifted and talented students already know much of their curriculum they may not see relevance in what they are doing in school. This lack of interest in what is happening in the classroom may lead to underachievement.

Underachievement is a discrepancy between a particular student's performance and his or her ability. Poor grades may be an indication that the student needs a different level of challenge in a particular unit, lesson or activity in order to see value or worth in what he or she is learning.

Misconception #8: Gifted students are happy, popular and well-adjusted.

Points to consider: Like other students, gifted and talented students are most happy in school when their needs are being met, when they feel teachers understand them and when they have opportunities to work with students who are like them. When their needs are not being met, or when they are not in an environment either at school or in their community that supports them, gifted students can show signs of depression or dissatisfaction. They may also differ from other students in terms of their emotional and moral intensity, their sensitivity to expectations and feelings, their tendency to be too perfectionistic and their deep concerns about societal concerns resulting in isolation or being labeled as "too smart" or "nerdy." When school is a negative place, they may feel it is something to be endured rather than celebrated.

Misconception #9: Gifted and learning disabled can't go together.

Points to consider: Gifted and talented students are found in all populations, including those who may have learning disabilities. These "twice-exceptional" students may not be recognized for gifted and talented services because the disability might mask the ability, or because they are already receiving services for their learning disability and hence are not even considered for gifted and talented programs. Twice-exceptional students need to be recognized for their abilities and provided with challenging curriculum and help for their disability.

Misconception #10: AP and IB courses are all a district needs to offer for gifted and talented students.

Points to consider: While Advanced Placement and International Baccalaureate programs do offer advanced coursework, they are not designed as gifted and talented programs.

These programs are designed for college-bound students and do not necessarily provide the depth, rigor, independent study, and content options needed by gifted and talented students.

2 IDENTIFICATION

"Thousands of geniuses live and die undiscovered—either by themselves or others."

—Mark Twain (Cited in ThinkExist, 2006)

Rule R277-707-3.B Enhancement for Accelerated Students states:

> LEAs shall have a process for identifying students whose academic achievement is accelerated based upon multiple assessment instruments. These instruments shall not be solely dependent upon English vocabulary or comprehension skills and shall take into consideration abilities of culturally diverse students and students with disabilities.

Characteristics and Needs of Gifted and Talented Students

What are the characteristics and needs of gifted and talented students?

Any process for discovering gifted and talented students begins with an understanding of their characteristics. These characteristics imply certain needs which, in turn, lead to services that meet those needs, as illustrated below.

The chart on page 22, drawn from the work of Dr. Barbara Clark (2008), provides a sample of some of the characteristics of gifted and talented learners, along with their concomitant needs. (Service options are discussed in Chapter 5 of this document.) In reading this chart, it should be remembered that the list is not comprehensive and that an individual gifted and talented child will likely never display all of these characteristics at any one time. Further, a student may show a characteristic in which he or she is particularly strong only most of the time, rather than all the time

CHARACTERISTICS OF GIFTED AND TALENTED LEARNERS

CHARACTERISTIC	NEED
Extraordinary quantity of information (p. 74)	To be exposed to new and challenging information (p. 74)
Unusually varied interests (p. 74)	To be allowed to pursue individual ideas as far as interest takes them (p. 74)
High level of language development (p. 74)	To encounter uses for increasingly difficult vocabulary and concepts (p. 74)
Unusual capacity for processing information (p. 74)	To be exposed to ideas at many levels and in large variety (p. 74)
Flexible thought processes (p. 74)	To be allowed to solve problems in diverse ways (p. 74)
Ability to generate original ideas and solutions (p. 75)	To be given the opportunity to contribute to the solution of meaningful problems (p. 74)
Unusual intensity (p. 75)	To pursue inquiries beyond allotted time spans (p. 75)
Unusual sensitivity to the expectations and feelings of others (p. 76)	To learn to clarify the feelings and expectations of others (p. 76)
Keen sense of humor (p. 76)	To learn how behavior affects the feelings and behavior of others (p. 76)
Heightened self-awareness (p. 76)	To learn to assert own needs and feelings nondefensively (p. 76)

This is only a partial list. Readers should refer to the Barbara Clark text (see list of resources) for the complete list of characteristics.

Teachers should use checklists of indicators of giftedness to help them identify the students who require differentiated curriculum and instruction in the regular classroom.

More information on this is provided in Chapter 6, "Curriculum, Instruction, and Assessment."

In addition, teachers are usually asked to observe students in their classrooms to make referrals for possible inclusion in specific gifted and talented program services.

Generally when teachers have not had training in the characteristics of gifted and talented children, they tend to refer students who do well on classroom assignments and who have good behavior. *While the characteristics in the chart above are generally stated in a positive fashion, they are sometimes manifested negatively.* Further, each characteristic will often have culturally specific ways in which it is shown. Teachers need to be sensitive to these differences as explained in Chapter 9, "Special Populations."

Principles of Gifted and Talented Identification

What principles or guidelines should govern the gifted and talented identification process?

School districts that are most successful in identifying gifted and talented students are generally governed by the following principles or guidelines:

- Seeking variety in identification by having a clear, inclusive definition of gifted and talented (Callahan, Hunsaker, Adams, Moore, & Bland, 1995; Davis & Rimm, 2004; Richert, 2003).
- Using multiple criteria, not multiple hurdles (Callahan, et al., 1995; Clark, 2008; Davis & Rimm, 2004; U.S. Department of Education, 1993).
- Using unique, separate instrumentation for different areas of giftedness and talent (Callahan, et al., 1995; Davis & Rimm, 2004).
- Basing identification and placement on student need, linking identification to the specific services to be offered (Callahan, et al., 1995; Davis & Rimm, 2004).
- Making identification fluid and ongoing (Davis & Rimm, 2004; U.S. Department of Education, 1983; Shore, Cornell, Robinson, & Ward,1991).
- Recognizing that the purpose of identification is to find and develop exceptional potential (Clark, 2008; U.S. Department of Education, 1993; Richert, 2003).

Stages of a Formal Gifted and Talented Identification Process

What are the stages of a formal gifted and talented identification process?

There are generally four broad stages or steps for identifying students as gifted and talented. The stages described here should be seen as a skeletal outline only. Details of the stages will vary, and perhaps even overlap, depending on local circumstances, including the scope of the identification (e.g., school or district level), the type of program (e.g., pull-out or magnet), and the focus of planning (e.g., child or program). Typically, each of the stages is overseen either by a small committee that includes individuals with expertise in gifted and talented education, test interpretation, or school administration, or by a gifted and talented program coordinator.

Step or Stage 1 consists of referral, screening, or nomination. Referral occurs when teachers observe students in their classrooms to suggest who should be further considered in the identification processes. To do this well, teachers usually need training in the definition of gifted and talented and the characteristics of gifted and talented learners. The referral usually works best when teachers are given a checklist or rating scale on which to report their observations. Screening involves an inspection of census norm-referenced testing done in the district. Generally a cutoff is set (e.g., the 85th percentile), and any student who meets or exceeds the cutoff on the total battery or a predetermined sub-score (e.g., total reading, total math) is automatically advanced in the process for further consideration. Nomination gives an opportunity for non-educators to recommend students for consideration. Four types of nominations are usually taken: self, peer, parent, and community member. Usually the nominator is asked to provide evidence concerning why the nomination is being made. Some schools formalize this process by requiring the nominator to complete a checklist, rating scale, or open-ended questionnaire.

Step or Stage 2 is the data-gathering stage. At this point in the process, the committee or coordinator will review the records of all students whose names were received from Stage 1. Applying a specific set of criteria—usually a preponderance of evidence standard is set; a determination is made about which students will continue through the process.

Parental permission is obtained; then the needed information is gathered through additional testing, observation, or other means. It is important, in the name of fairness, to make sure that the data on each student is as equivalent as possible.

Step or Stage 3, decision making, begins once all the data is gathered. At this stage, the data are usually synthesized in some fashion and a decision is reached regarding services for the child. Several data synthesis methods have been employed by school districts, including matrix displays, case study summaries, admissions formulas, and statistical analyses. Exploring the possibilities mentioned here with experienced gifted leaders or experts is strongly recommended. However, in developing decision-making strategies, it is important to remember that any system used has its advantages and disadvantages.

Step or Stage 4, service planning, requires that a specific course of action be taken relative to the student's participation in various service options. The most basic action taken at this stage is placement in a specific service, such as a magnet classroom or pull- out program. Beyond this, information gained through the identification process should be used to make recommendations to teachers about how a child's learning experiences may be differentiated, regardless of placement. In any case, parents must be informed, usually by letter, of the specific actions to be taken (e.g., placement or not) and, perhaps, of recommendations for differentiation.

Errors in Identification

What can be done about errors that may have occurred during the identification process?

There are two types of errors that can occur in the identification process: false negatives and false positives. A false negative occurs when a student who should have been identified as gifted and talented was not. A false positive occurs when a student has been incorrectly identified as gifted and talented.

The most broadly accepted means of dealing with false negatives is the establishment of an appeals process, usually supervised by an appeals committee or officer. When parents or teachers are notified that a child is not eligible for a specific service, the parents or teachers are often given the right to appeal this decision. The appeal is required to be made in writing, with evidence of why the initial decision may have been in error. The committee or officer reviews the evidence provided to determine whether a compelling case can be made. If the case is compelling, additional information is gathered. This often entails retesting, different testing, or further observation. Once the additional information is gathered, the criteria for eligibility for the specific service are again applied, and parents and teachers are informed of the decision.

A potential false positive comes to light when a student placed in a certain service does not do well within that service, as observed by the student, parents/caregivers, or teachers. The fact of not doing well does not automatically mean that a false positive has occurred. Consultation among the student, parents, teachers, and gifted and talented education leaders

should occur to determine what may be causing the student's lack of performance. Adjustments should then be made to what is required of the student within the program, given that differentiation is just as important within gifted and talented programs as it is in the general education program. For a predetermined period of time, usually dictated by district policy, careful notes of any meetings, adjustments made for the student, and changes in the student's performance are recorded. All the records are reviewed, and a determination is made as to whether or not the student should continue in the program.

Best Instruments for Gifted and Talented Identification

What are the best instruments to use in gifted and talented identification?

While there is no single "best instrument" to use in gifted and talented identification processes, there are some instruments that are more typically used, and there are some general guidelines for selecting instruments. Utah Administrative Rule R277-707-3B states "LEAs shall have a process for identifying students whose academic achievement is accelerated based upon **multiple assessment instruments.** These instruments shall not be solely dependent upon **English vocabulary** or **comprehension skills** and shall take into consideration **abilities of culturally diverse students** and **students with disabilities.** " Thus it is clear that instruments used must be culturally fair, and be used in culturally sensitive ways. Biases in both the instruments and the people making decisions should be minimized. In addition, it **is best practice** that instruments used should be valid (i.e., measuring what they purport to measure), reliable (i.e., being consistent across time, place, and other conditions), and useful (i.e., generating data that can be interpreted in a way that assists decision making). Further, whatever instruments are used within an identification system must be matched to the specific program for which the student is being identified.

Typical **quantitative** instruments used in the identification process include:

- Standardized creativity instruments (e.g., Torrance Tests of Creative Thinking).
- Teacher rating scales (e.g., Scales for Rating the Behavioral Characteristics of Superior Students, Gifted Evaluation Scale).
- Standardized group achievement tests (e.g., Iowa Test of Basic Skills, Stanford Achievement Test 10).
- Standardized group aptitude tests (e.g., Cognitive Abilities Test, Otis-Lennon School Ability Test, Naglieri Nonverbal Aptitude Test).
- Standardized individual achievement tests (e.g., Woodcock-Johnson IV Tests of Achievement).
- Standardized individual aptitude tests (e.g., Wechsler Intelligence Scales for Children V, Stanford-Binet Intelligence Scales, 5th Edition).

In addition, some districts have developed unique protocols that call for more qualitative assessments including:

- Questionnaires
- Interviews
- Videotapes

- Portfolios
- Performances
- Products

Of course, any instrument developed locally should be investigated to determine its qualities of fairness, validity, reliability, and usefulness. Further information about this important topic may be found in the following resources:

Felder, M. (2015) *Increasing Diversity in Gifted Education: Research-Based Strategies for Identification and Program Services*. Waco. Prufrock.

Hunsaker, S. (2012). Identification: *The Theory and Practice of Identifying Students for Gifted and Talented Services.* CT: Creative Learning Press.

Johnson, S. (2005). *Identifying Gifted Students: A Step-by-Step Guide (Practical Strategies Series in Gifted Education)*. Waco. Prufrock.

Johnson, S. (2011). *Identifying Gifted and Talented Students: A Practical Guide. 2nd Edition*. Waco: Prufrock Press.

Lewis, L. C. (2012). *Identifying & Serving Culturally and Linguistically Diverse Gifted Students.* Waco: Prufrock Press.

National Association for Gifted Children. (2008). *The Role of Assessment in the Identification of Gifted Students.* Retrieved January 21, 2017, from National Association for Gifted Children: http://www.nagc.org/sites/default/files/Position%20Statement/Assessment%20Position%20Statement.pdf

Renzulli, J, S. R. (2004). *Identification of Students for Gifted and Talented Programs (Essential Readings in Gifted Education Series)*. Thousand Oaks: Corwin Press.

VanTassel-Baska, J. (2007). *Alternative Assessments with Gifted and Talented Students (Critical Issues in Equity and Excellence in Gifted Education).* Waco: Profrock Press.

3 ADMINISTRATIVE RULE & PROGRAM STANDARDS

"The twenty-first century can be an era where educational possibilities are limitless and the future for gifted and talented childdren will once again be a national priority."

—Jeff Danielian, NAGC

Utah Administrative Rule R277-707 specifies the procedures for distributing funds for "Enhancement for Accelerated Students Program" appropriated under Section 52A-17a of the Utah Code. It outlines the following:

- Definitions
- Authority and purpose
- Eligibility, application, distribution, and use of funds
- Performance criteria and reports

How does this rule define gifted and talented children?

This new rule defines "accelerated" students as "children and youth whose superior academic performance or potential for accomplishment requires a differentiated and challenging instructional model that may include:

- Advanced Placement courses (AP)
- Gifted and talented programs
- International Baccalaureate programs (IB)
- Concurrent Enrollment

What are the major components of this rule?

The major purpose of the Utah Administrative Rule R277-707 is to outline basic requirements for the expenditure of funds appropriated through Utah Code 53A-17a-165 Enhancement for Accelerated Students Program. The intent of this appropriation is to enhance the academic growth of students whose academic achievement is accelerated. As such, the major components are:

1. "Programs for gifted and talented students" means programs to assist individual students to develop their high potential and enhance their academic growth and identify students with outstanding abilities who are capable of high performance in the following areas:
   a. General intellectual ability
   b. Specific academic aptitude
   c. Creative or productive thinking

2. Funds will be allocated for:
   a. Gifted and talented programs
   b. Advanced Placement courses (AP)
   c. International Baccalaureate programs (IB)
   d. Concurrent Enrollment
3. The responsibility for the development and implementation of gifted and talented programs rests with each school district (LEA) however, Utah Administrative Rule 277-707 is not a mandate for gifted and talented programming. All LEAs are eligible to apply for the Enhancement for Accelerated Students Program funds through the UCA (Utah Consolidated Application).
4. LEAs shall have a process for identifying students whose academic achievement is accelerated based on multiple assessment instruments. These instruments shall not be solely dependent upon English vocabulary or comprehension skills and shall take into consideration abilities of culturally diverse students and students with disabilities.
5. LEAs receiving funds shall be required to submit an annual evaluation to the Utah State Office of Education. The report requires LEAs to indicate measurable targets for the expenditures for identified students based on specific performance criteria.

The entire rule is provided in Appendix A.

Essential Components of a Gifted and Talented Program

What are the essential components of a gifted and talented program?

Gifted and talented education professionals from across Utah have outlined five essential components that, when used together with the state rule, provide a framework for a successful gifted and talented program. If any of these components are missing, the likelihood of the program having a positive impact on gifted and talented learners is diminished. The components are:

a. **Identification:** Using multiple assessment instruments (as stated in the Utah Administrative Rule, see Appendix A).
b. **Peer Association:** Allowing identified gifted and talented students full or frequent opportunities to work together to meet their academic and affective needs.
c. **Content Differentiation:** Providing depth, complexity, and acceleration commensurate with the abilities of the identified gifted and talented students.
d. **Differentiated Instruction:** Using a variety of strategies that are recognized as being effective with gifted and talented students.
e. **Pacing:** Appropriately and flexibly altering the rate of teaching, learning, and thinking to meet the needs of identified gifted and talented students.

Gifted and Talented Standards

What standards exist for developing and implementing a gifted and talented program?

A task force representing many constituent groups in gifted and talented education and representing diverse geographic areas of the United States was commissioned by National Association of Gifted Children (NAGC) to develop national standards for gifted and talented programs.

> *"Program standards provide a structure for defining important benchmarks and for identifying practices that are the most effective, in this case, for students with gifts and talents. A common set of standards helps to ensure consistency among schools and school districts so that all students who required advanced services receive quality services. Standards can guide or continual progress toward excellence and equity."*
>
> *—Ann Robinson, 2010, NAGC*

The NAGC standards are based on best practices in gifted and talented education and divided into six categories:

- Learning and development
- Assessment
- Curriculum planning and instruction
- Learning environments
- Programming
- Professional development

Within each criterion a guiding principle is delineated, along with minimum standards requisite for acceptable gifted and talented programs and exemplary standards needed to achieve excellence in programming (https://www.nagc.org). Program standards at both the state and national level help districts understand the qualities of a successful gifted and talented program. Groups of individuals can become knowledgeable of the standards through study by district task forces, planning or advisory committees, and individuals. Evaluating existing programs with the standards gives credibility to a district's program and the knowledge that gifted and talented students are being served in an appropriate way.

Adopting a Gifted and Talented Education Policy

How does a school district develop and adopt a gifted and talented education policy?

Meeting the needs of all students is inherent in most if not all district mission statements. The first step in establishing gifted and talented education policy is recognizing that there are students in our schools and classrooms with advanced cognitive abilities who have different needs, and that meeting these needs is part of meeting the needs of all students. The Utah State Board of Education provides a rationale for districts and school boards to develop a gifted and talented education policy.

Networking with other districts through the state gifted and talented coordinators' meeting provides support for districts getting started in gifted and talented education. Samples of adopted policy statements could be gathered from this group. In general, a good policy statement would define "who gifted and talented children are, why gifted and talented programs are necessary, one or two overarching program goals, and a clear message about the

district's commitment to meeting the learning needs of these students" (Purcell and Eckert, 2006, p. 16). Typically, a draft policy would be prepared by a committee of district educators and patrons. The draft statement would then be submitted to the local board of education using the district protocol.

4 CORE STATE STANDARDS & GIFTED AND TALENTED EDUCATION

What are the standards and how do they affect gifted and talented education?

The Common Core State Standards (CCSS) Initiative began as a state-led effort facilitated by the National Governors Association, the Center for Best Practices and the Council of Chief State School Officers. Initially, the purpose of the project was to provide teachers and parents with common understanding about what students are expected to learn at each grade level. Benchmarks were developed so that regardless of where a student lives, he/she will be exposed to curriculum that is based on best practice.

Initially begun in 2009, the Common Core State Standards) have been adopted by 42 states. They articulate the skills in both language arts and mathematics that students at every grade level should know and be able to do. Utah officially adopted the standards on August 8, 2010, as the Utah Core Standards (UCS) and they are currently being implemented in every school district in the state. The standards not only define the knowledge and skills students need to know, but also:

- Are aligned with college and work expectations;
- Are clear, understandable and consistent;
- Include rigorous content and application of knowledge through high-order skills;
- Build upon strengths and lessons of current state standards;
- Are informed by other top performing countries, so that all students are prepared to succeed in our global economy and society; and
- Are evidence-based (Common Core Standards Initiative, 2011).

While these Common Core standards are rigorous, they don't necessarily meet the needs of all gifted and talented students. One size still does not fit all! Gifted and talented advocates need to be involved so that the needs of these students are considered. The UCS will be the point of departure for all gifted curricula; therefore, it is important that parents and teachers understand the standards so that differentiated curricular opportunities can be offered within this new framework.

Are there similarities between the standards and what we have been advocating for gifted and talented students?

The adoption of the Utah Core Standards provides an opportunity for teachers of gifted and talented students to reflect on how they are currently differentiating curriculum for their students and also how what they are currently doing would need to change and/or be adjusted. In order to do this, it is important that gifted and talented professionals understand the links between the Utah Core Standards and the Pre-K–12 Gifted Programming Standards.

1. **The Gifted Programing Standards (GPS)*** promote demonstrated growth for gifted learners, a facet often lacking in traditional assessment. The Utah Core Standards will offer a growth model that is applicable to gifted learners.
2. GPS promotes gifted learners to develop abilities in domains or areas of interests. UCS requires increasing sophistication and complexity of the task assigned to students.
3. Critical and creative thinking is stressed in the UCS as well as the GPS.
4. GPS focus on transferability of knowledge and the UCS supports this.
5. UCS and GPS support self-efficacy and self-awareness, leading to skills for life-long learning.
6. UCS are equipped for acceleration, complexity, depth, creativity if translated effectively for gifted learners (Mariam, 2012).

The Utah Core Standards will not replace the need for gifted and talented education. Even though the standards are more rigorous and are articulated K–12, students will still exceed even these rigorous standards and will still need gifted and talented programs and differentiated opportunities.

How can the Utah Core Standards be aligned with gifted education programming?

The National Association for Gifted Children organization has suggested the states employ three strategies in aligning a state core standards to the Pre-K Gifted and Talented Standards:

1. Provide pathways to accelerate the UCS for gifted learners.

   Gifted and talented students will still need ways to show they know a particular concept at their given grade level. They may need to accelerate through the various standards or to move to a greater level of depth and complexity in a particular standard to reach a level of new learning.

2. Provide examples of differentiated task demands to address specific standards.

   Standards like the new research standard in English language arts and the data interpretation standard in mathematics lend themselves to differentiation by allowing the gifted and talented student to show greater complexity and creativity when completing a given task.

3. Create interdisciplinary product demands to elevate learning for gifted students and to efficiently address multiple standards at once.

   Gifted and talented educators already know that best practice for gifted and talented learners involves provisions for them to explore concepts, themes and ideas across a variety of disciplines. It is important that, as the Core Standards are implemented, new opportunities to develop interdisciplinary products within the new standards are explored. For example, "research projects could be designed that address the research standard in English Language Arts and the data representation standard in Mathematics by delineating a product demand for research on an issue, asking researchable questions, using multiple sources to answer them, and then representing findings in tables, graphs, and other visual displays that are explained in text and presented to an audience" (National Association for Gifted Children, 2008).

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*2010 Pre-K–Grade 12 Gifted Programming Standards
http://www.nagc.org/sites/default/files/standards/K-12%20programming%20standards.pdf

How are the various programming options effected by the Core Initiative?

Some educators and administrators may feel the level of challenge in the Core Standards sufficient to challenge all learners thus eliminating the need for gifted and talented programming. However, because gifted and talented learners will continue to need a variety of levels of content differentiation (differentiating what is taught in the classroom), the program options for gifted and talented learners should still be offered. Districts need to continue, where possible, to offer a variety of placement options for gifted and talented learners including pull-out classes, magnet schools, and other options. The USBE Four-Tier Model explained on pages 36–37 suggests a structure for delivering differentiated curriculum (Core) to all students grades K–12.

What are the new Core assessments and will they be helpful for gifted and talented students?

As educators differentiate the Core Standards to meet the needs of gifted and talented students, they must also consider how differentiation of classroom assessments can be tailored to support the development of student's language arts and mathematics skills. NAGC points out, for example, that "with the English Language Arts standards' inclusion of literacy development across subject areas, ample opportunities for interdisciplinary and interest-driven learning are possible but require careful instructional design so that gifted and talented students are afforded learning geared to their continued development as assessed regularly by the classroom teacher" (National Association for Gifted Children, 2008).

Further, because assessment is a critical component of teaching and learning, teachers need to become familiar with a variety of assessment tools to measure student knowledge of above-grade-level standards in order to make sure students are learning new material and concepts.

The Common Core Standards present a new direction for both language arts and mathematics instruction. The implementation of these new standards can also be an opportunity for gifted and talented professionals to take advantage of the conversation regarding what is best practice for ALL students

5 SERVICE OPTIONS

Service Options for an Effective Gifted and Talented Program

"Gifted students are part of the developmental continuum of learners, all whom have specialized needs, as well as shared needs."

—Carol Ann Tomlinson, Mary Ruth Coleman, Susan Allan, Anne Udall, and Mary Landrum (2004, p. 5)

What service options are important to consider when developing an effective gifted and talented program?

Local school districts should offer multiple service options along a continuum, since no one single option can meet diverse student needs. A continuum of services is much more complex and challenging than a fixed, "one-size-fits-all" program.

The National Association for Gifted Children (NAGC, 2010) standard on programming states, "Programming refers to a continuum of services that address students with gifts and talents' needs in all setting. Educators develop policies and procedures to guide and sustain all components of comprehensive and aligned programming and services for Pre K-12 students with gifts and talents."

Continuum of Service Options

What continuum of service options could be used in a school or district?

A continuum involves a wide array of services or opportunities that respond to students' unique strengths, talents, and interests. These opportunities need to be organized in a purposeful way. One approach to utilize when describing the continuum is to consider these questions:

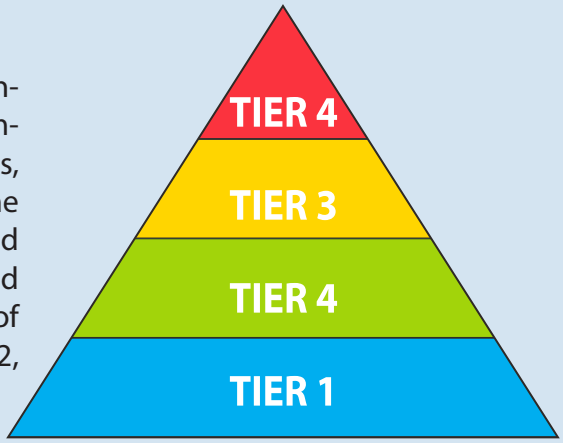
1. What services would be appropriate for all students?
2. What services would be appropriate for many students?
3. What services would be appropriate for some students?
4. What services would be appropriate for few students?

The USBE's Four-Tier Model for Gifted and Talented instruction provides examples of the services that might be incorporated at each stage of this continuum.

TIER 1: Appropriate and challenging content, process, and

Utah's Four-Tier Model for Gifted and Talented Instruction

Utah's Four-Tier Model of Gifted and Talented Instruction provides a process for delivering comprehensive, quality instruction for all students, from kindergarten through high school. The model is designed to provide research-based instruction and targeted interventions that lead to student achievement. The model consists of four tiers, or levels, of instruction: Tier 1, Tier 2, Tier 3 and Tier 4.



products for **all students**. Instruction in foundational knowledge, skills, and tools for thoughtful, self-directed learning (e.g., flexible instructional grouping, open-ended assignments), exposure to a variety of enrichment experiences (e.g., field trips, guest speakers).

TIER 2: Individual or small group exploration within areas of strength or interest beyond the required Core Curriculum for **many students**. Instruction in more complex knowledge, skills, and tools for thoughtful, self-directed learning (e.g., problem-based learning, future studies, debate, competitions), exposure to more focused enrichment or inquiry experiences (e.g., compacting, contracting).

TIER 3: Specialized classes, independent study, specialized programs (offered by the school or outside agencies) for **some students**. Instruction in more sophisticated knowledge, skills, and tools requiring guidance from individuals with specialized training in working with gifted and talented students and/or the specialized content area (e.g., pull-out programs, cluster classrooms, self-contained classroom, honors classes, concurrent enrollment, Advanced Placement, International Baccalaureate).

TIER 4: Targeted, custom-planned or designed responses to the individual student's needs for a **few students**. Individualized instruction through advanced, high-level, sustained services often involving cooperation of multiple educational settings (e.g., radical acceleration, early entrance to high school or college) or connections with community resources (e.g., individual advisement, magnet programs, mentorships, internships). These options must be coordinated by individuals who know the student well, comprehend the academic and emotional demands of the student's areas of interest, and understand the cognitive and social-emotional issues of gifted and talented learners.

At all points along the continuum of services, challenging, worthwhile educational experiences must be tied to the individual student's learning profile. Of course, those who teach at each point along the continuum must be qualified for the type of services they are providing. A regular classroom teacher who has been trained in differentiation for gifted and talented students could provide services such as basic differentiation, flexible instructional grouping, and independent study options. Those whose responsibility may include teaching in a pullout program,

magnet school, magnet classroom, or honors class should hold a gifted and talented endorsement—just as any teacher who teaches a specifically identified subpopulation is expected to hold an appropriate endorsement (e.g., ESL, reading, or special education). A teacher involved in instructing students in AP, IB, dual enrollment or early college enrollment should have received training and be able to demonstrate competencies specific not only to the content of those advanced courses, but to the needs of the students they will be teaching.

The challenge for a district is not necessarily in the selection of specific services, but in asking the five questions posed by Treffinger, Young, Nassab, and Wittig (2004):

1. What services and opportunities do we already have in place? What are our programming positives?
2. What services and opportunities might be added? What is our wish list?
3. Of the services and opportunities now available, which ones might readily be developed? What are our immediate "opportunity areas"?
4. In what ways might we expand our provisions we offer during the next 3-5 years?
5. How might we ensure that we are doing the best possible job of "linking" these options with the students who benefit from them (p. 30)?

Aligning Services with Identification

How are services aligned with identification?

Rather than making sure that services align with identification, the broader issue is ensuring alignment throughout your school's or district's efforts to meet the needs of gifted and talented students. A school or district wishing to begin the process of building or improving a gifted and talented program should start with a needs assessment of the current degree to which student needs are being met. The next step is to clearly articulate a mission or philosophy statement and a definition of giftedness and talent, both of which must be based on current state rules and regulations, theoretical models, and best practices. From this statement and definition, a school or district would then create identification procedures and broad program goals. A continuum of services for student placement based on student identification and program goals would next be designed.

Finally, a program evaluation would be derived from program goals in order to determine if, and to what degree, those goals were being met. A school or district with an existing program should also periodically check for this alignment (i.e., mission or philosophy statements ➡ definition of giftedness and talent ➡ identification procedures ➡ program goals ➡ continuum of services ➡ program evaluation).

The individuals involved in creating or reviewing this type of comprehensive program for gifted and talented learners should represent a variety of stakeholder groups and be qualified with a strong background in both theory and best practices in gifted and talented education.

Programming Options

What programming options should be available for gifted and talented students?

According to NAGC standards, "Gifted educators use a variety of programming options such as acceleration and enrichment in varied grouping arrangements (cluster grouping, resource rooms, special classes, special schools) and within individualized learning options (independent study, mentorships, online courses, internships) to enhance students' performance in cognitive and affective areas and to assist them in identifying future career goals. The NAGC Standards augment and integrate current technologies within these learning opportunities to increase access to high level programming such as distance learning courses and to increase connections to resources outside of the school walls. In implementing services, educators in gifted, general, special education programs, and related professional services collaborate with one another and parents/guardians and community members to ensure that students' diverse learning needs are met. Administrators demonstrate their support of these programming options by allocating sufficient resources so that all students with gifts and talents receive appropriate educational services" (NAGC, 2010).

Differentiation, Enrichment, and Acceleration

What are differentiation, enrichment, and acceleration?

Differentiation refers to the need to tailor instructional practices to create appropriately different learning experiences for different—in this case, gifted and talented—students. The four areas typically addressed through differentiation are content, process, product, and learning environment.

Enrichment refers to program organization that extends, supplements, and sometimes replaces learning experiences students typically go through. The emphasis is generally on keeping students with their age peers, but fostering the development of higher cognitive and affective processes.

Acceleration refers to program organization in which the learner completes coursework earlier or in less time than ordinarily expected. Acceleration might occur as students complete coursework within a specific subject more rapidly, skip one or more grade levels, or move from one school to the next earlier than usual. (In Utah, early entrance into a public school kindergarten is not permitted by law.)

While differentiation, enrichment, and acceleration have been defined as separate concepts, they are closely interrelated. For example, differentiating by permitting a student to independently study a topic of interest will certainly be enriching for that student, but will also likely expose the student to advanced material in the topic area that is normally not studied at that student's age, thus becoming an acceleration experience. In fact, most often the best learning experiences for gifted and talented students will not focus on differentiation, enrichment, or acceleration in isolation, but on using the three in concert

6 CURRICULUM, INSTRUCTION, AND ASSESSMENT

Relationship Between the Utah Core Standards Gifted Curricula

"Not every child has an equal talent or an equal ability or equal motivation, but children have the equal right to develop their talent, their ability, and their motivation."

—John F. Kennedy (cited in Westberg and Archambault, 2004, p. 74)

What is the relationship between the Utah Core and a curriculum for the gifted and talented?

Utah's Core Standards are aligned to scientifically based content standards. They drive high quality instruction through statewide comprehensive expectations for all students. The standards are more rigorous and complex beginning in kindergarten. However, the UCS do not directly address the specific needs and circumstances of the gifted and talented student. It is important, most of all, that gifted and talented students be given appropriate challenges at their level of ability (see Chapter 5, "Service Options"). This means that learning experiences related to the standards may need to be adjusted to meet the specific needs of a specific student. As gifted program service models vary, so do the implementation implications for the UCS. Gifted students receive services within heterogeneous settings, cluster-grouped classrooms, pull-out models, and self-contained classrooms. As gifted service models vary, so does the need for implementation of the standards for these students.

The models of delivery are largely not addressed in the UCS, allowing teachers and schools to implement services based on the needs of gifted students using the UCS as a base. Program needs for gifted students will be driven by these standards, the services will need to be guided by assessment and data gathered on student ability levels.

Basic Principles of Gifted Curriculum

When might a specialized curriculum for gifted and talented learners be needed?

According to Carol Ann Tomlinson, the following are aspects of good curriculum and instruction for gifted learners:

> Good curriculum and instruction for gifted learners begins with good curriculum and instruction. Gifted students need

rich learning experience. This means their learning is organized around key concepts and experiences, not just facts. The content they experience needs to be relevant and connected to their lives thus creating experiences that engage thought processes that cause them to grapple with meaningful problems and process at abstract and high levels. They need classrooms that understand them and guide them through choice and provide them with structure.

In addition, Joyce VanTassel-Baska and her colleagues have stated, "Curriculum for the gifted should be differentiated at all levels of design, including the goals of the lessons, the outcomes required of students, the activities and projects in which students engage, the strategies educators employ, the materials used, and the assessments to measure progress" (p. 80). Thus, teachers should begin with the core objectives for their curriculum; identify potential themes, ideas, or generalizations that can be used as overarching concepts; and then shape the goals, outcomes, activities, strategies, materials, and assessments so they are responsive to each gifted and talented learner's need for challenge.

What are the basic principles of curriculum differentiation?

When gifted and talented students are placed in regular classrooms, a specialized curriculum may not be necessary, but differentiation is still required. Even in a classroom with a specialized curriculum, differentiation is needed.

A differentiated classroom is flexible.

- Classroom elements such as time, space, groupings. Presentation modes and resources are used in ways that make learning as effective as possible.

Assessment and instruction are inseparable

- The teacher knows what to do next when they recognize where students are in relation to the learning intentions/goals.
- Pre-assessment informs the teacher of the student status (knowledge and skill) in relation to upcoming learning intentions/goals, student interests, and the students' preferred ways of learning.
- On-going assessment (assessment for and during learning) is used with fidelity.

All students participate in respectful work

- The teacher's goal is that each student finds his/her work challenging and interesting, and encourages them to transfer to their next stage in learning.
- Differentiation does not presume different tasks for each student, but rather just enough flexibility in task complexity, working arrangements, and modes of learning expression that varied students find learning a good fit much of the time.

Students and teachers are collaborators in learning.

- Students receive guidance to become self-motivated learners, and students are responsible for their learning.

Flexible student grouping options

- Groupings vary depending upon the task.

The teacher is clear about what matters in subject matter.

- The teacher modifies content, process and products in response to student readiness, interest and learning profile.

Necessary Content Modifications for Gifted and Talented Students

What are the necessary content modifications for gifted and talented students?

Curricula for gifted students should focus on developing cognitive learning, research and reference, and metacognitive skills at each grade grouping, using principles of differentiation.

Differentiated instruction is a teaching theory based on the premise that instructional approaches should vary and be adapted in relation to individual and diverse students in classrooms (Tomlinson, 2011). The model of differentiated instruction requires teachers to be flexible in their approach to teaching and adjust the curriculum and presentation of information to learners rather than expecting students to modify themselves for the curriculum (Hall, 2011).

A differentiated curriculum for gifted learners includes the following expectations:

CONTENT: Complex and challenging subject matter that:

- Requires intellectual struggle.
- Utilizes primary documents.
- Integrates research skills and methods.
- Incorporates relevant and real-life experiences.
- Integrates interdisciplinary connections.

PROCESS: Instructional strategies are designed to:

- Emphasize higher-order thinking, problem-solving and communications skills.
- Foster self-initiated and self-directed learning.
- Promote creative application of ideas.
- Model and encourage academic discussion.

PRODUCT: Gifted student products should demonstrate a developmentally appropriate capacity for:

- Self-directed learning.
- Meaningful collaboration.
- Effective problem-solving of challenging and complex issues.
- Effective communication.
- Social and emotional understanding of self relative to community, culture, and physical environment.

ENVIRONMENTAL: Physical setting and work conditions to:

- Change the actual place where students work.
- Allow flexible time.
- Provide opportunities for independent study and in-depth research.

- Provide opportunities for mentorship.

ASSESSMENT: Gifted learners need various methods and opportunities to document mastery of curriculum such as:

- Pre/post tests.
- Self-assessment through rubrics.
- Creation of goal-based checklists.
- Conferencing, commentary, and qualitative feedback (Cobb, 2012).

7 CURRICULUM ESSENTIALS

Creative Thinking

Good curriculum for gifted/talented learners should focus on differentiation that is tied to students enhancing their critical and creative thinking skills. This means that as programs are developed, the initial focus of the program should be on the development of creative thinking, critical thinking, problem-solving, and research skills.

What are creativity skills?

According to Dr. Calvin W. Taylor, "Creativity can be described both as a breakaway and as a break-open-the-way talent. Creative talents break away from the narrow-minded and the lower-level functioning of the academic talents and thereby break open the way into the broader and higher-level functioning of multiple brainpower talents" (Taylor, 1990).

Further, Dr. Joyce VanTassel-Baska shares, "Creativity is the capacity to develop original, high-quality products in a domain that are judged so by the relevant peer group in that field at a given point in time. Yet creativity, with a big C, requires the test of time to assess the overall contribution of any given product" (VanTassel-Baska 2006). E. Paul Torrance and his associates identified specific skills that can be employed in the classroom to help students become creative producers (Torrance, 1966). These include:

Fluency: the generation of many ideas

Flexibility: the ability to think of varied ideas or ideas in different categories

Originality: the ability to generate a "one of a kind," unique response

Elaboration: the skill of adding detail to an existing idea in order to create a unique response

Curricular modifications can be made to include the above skills as part of a particular task, activity, or unit.

Why are creativity skills important?

One can argue that all of the modern conveniences, technology and important societal contributions have been made by those who use their creative production skills. As a society, we define ourselves by those who contribute to our society. Students need opportunities to develop their own creativity skills in the classroom in order to become successful contributors.

What are some specific creative thinking strategies that can be taught in the classroom?

Strategy One: Solicit many diverse thoughts about issues or ideas.

- Use issues or essential questions rather than topics to encourage diverse or more creative thinking.

Strategy Two: Engage students in the exploration of diverse points of view to reframe ideas.

- Help students understand bias and propaganda as they begin to explore diverse points of view.
- Teach students to recognize diverse points of view through a variety of templates or thinking webs (the College of William and Mary Literature Web provides an excellent example of this; see http://cfge.wm.edu/curriculum.htm#literature).

Strategy Three: Provide opportunities for students to develop and elaborate their ideas.

- Help students practice elaborating on others' ideas through story webbing, Socratic thinking activities or problem-solving activities.

Critical Thinking

What are "critical thinking skills"?

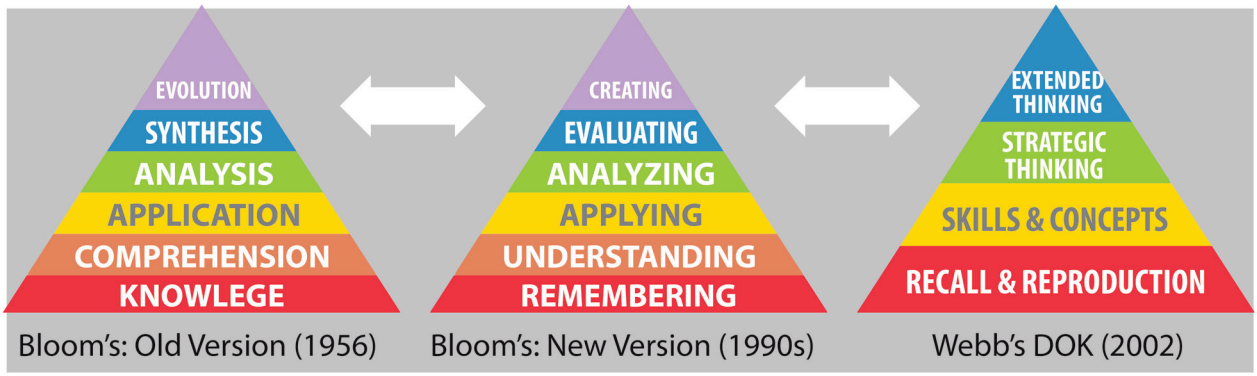
Critical thinking skills, often called higher-order thinking skills, require students to analyze, synthesize and evaluate the work they are doing. Today's gifted and talented educators continue to be concerned as to whether or not high-ability learners are being provided with opportunities to make progress in their learning across those areas in which they are already functioning beyond "proficient" levels.

Gifted and talented students often already know concepts that are at a lower level. It is important that teachers "compact" these students out of curriculum they already know and provide higher level thinking activities for them. They need to be challenged to conceptualize the things they have learned to develop new ideas, new knowledge and new products. This focus, along with an emphasis on excellence in performance, will help ensure that these students are held to rigorous standards.

Critical Thinking and Depth of Knowledge

The "Depth of Knowledge" model was developed in 1997 by Norman L. Webb, from the University of Wisconsin to align standards with assessments. In the DOK model, all curricular elements are categorized based on the cognitive "depth of knowledge" required to complete a particular task or assignment. The depth of knowledge level reflects the "complexity" of the task rather than the difficulty of the task. In other words, the complexity of the task is not determined by a specific verb but by the complexity of the task the student completes in order to show he/she understands the concept. The opinion held by proponents of the DOK model is that students who achieve higher DOK levels, hence more complex thinking, will have increased achievement (Education, 2008). The DOK levels and their connections to Blooms' taxonomy and higher level thinking is displayed in the following chart:

LEVELS OF THINKING IN BLOOM'S TAXONOMY & WEBB'S DEPTH OF KNOWLEDGE



Bloom's six major categories were changed from nouns to verb forms in the new version which was developed in the 1990s and released in 2001. The *knowledge* level was renamed as *remembering*. *Comprehension* was retitled *understanding*, and *synthesis* was renamed as *creating*. In addition, Bloom's top two levels changed position in the revised version.

BLOOM'S TAXONOMY	REVISED BLOOM'S TAXONOMY
KNOWLEDGE	**REMEMBERING**
Recall appropriate information	
COMPREHENSION	**UNDERSTANDING**
Grasp the meaning of material	
APPLICATION	**APPLYING**
Use learned material in new and concrete situations	
ANALYSIS	**ANALYZING**
Break down material into component parts so that its organizational structure may be understood	
SYNTHESIS	**EVALUATING**
Put parts together to form a new whole	Make judgments based on criterai of standards
EVALUATION	**CREATING** (previously Synthesis)
Judge value of material	Put elements together to form coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning or producting.

Norman L. Webb of Wisconsin Center for Educational Research generated DOK levels to aid in alignment analysis of curriculum, objectives, standards, and assessments.

WEBB'S DEPTH OF KNOWLEDGE AND CORRESPONDING VERBS: Some verbs could be classified at different levels depending on application

RECALL AND REPRODUCTION
Correlates to Bloom's two lowest levels.

Recall a fact, information, or procedure

Arrange, calculate, define, draw, identify, list, label, illustrate match, measure, memorize, quote, recognize, repeat, recall, recite, state, tabulate, use, tell who/what/when/where/why

SKILL/CONCEPT Engages mental process beyond habitual response using information or conceptual knowledge. Requires two or more steps.

Apply, categorize, determine cause and effect, classify, collect and display, compare, distinguish, estimate, graph identify patterns, infer, interpret, make observations, modify, organize, predict, relate, sketch, show, solve, summarize, use context clues

STRATEGIC THINKING Requires reasoning, developing a plan or a sequence of steps, some complexity, more than one possible answer, higher level of thinking than previous two levels

Apprise, assess, cite evidence, critique, develop a logical argument, differentiate, draw conclusions, explain phenomena in terms of concepts, formulate, hypothesize, investigate, revise, use concepts to solve non-routine problems

EXTENDED THINKING Correlates to Bloom's 2 highest levels

Requires investigation, complex reasoning, planning, developing, and thinking-probably over an extended period of time. *Longer time period is not an applicable factor if work is simply repetitive and/or does not require higher-order thinking.

Analyze, apply concepts, compose, connect, create, critique, defend, design, evaluate, judge, propose, prove, support, synthesize

Problem-solving

What is problem-solving and why is it important?

Problem-solving is a mental process that involves identifying and defining the problem, employing solution-finding activities, articulating a final solution to overcome any obstacles and, finally solving the problem. Problem-solving strategies give gifted and talented students the opportunity to experience authentic, hands-on learning tied to a subject or idea that is important to them. Through problem-solving, students use their creative and critical thinking as well as their research skills It involves overcoming obstacles by generating hypotheses, testing those predictions, and arriving at satisfactory solutions.

Problem-solving involves three basic functions:

1. Seeking information
2. Generating new knowledge
3. Making decisions

Problem-solving is, and should be, a very real part of the curriculum. It presupposes that students can take on some of the responsibility for their own learning and can take personal action to solve problems, resolve conflicts, discuss alternatives, and focus on thinking as a vital element of the curriculum. It provides students with opportunities to use their newly acquired knowledge in meaningful, real-life activities and assists them in working at higher levels of thinking

Research Skills

What are research skills and why are they important?

Research is the investigation of a particular topic using a variety of resources. The three major goals of research are establishing facts, analyzing information, and reaching new conclusions. When students conduct research they search for information, review the information they find according to its applicability to the topic being studied, and evaluate the information in terms of its effectiveness in solving the problem or gaining new understanding. When gifted and talented students learn necessary research skills they enter college, and sometimes their career, prepared to meet the rigor that awaits them. They are more often aware of the tools and skills needed for effective research, and they understand the expectations of scholarly disciplines. Assignments that teach research tools can help students gain confidence in doing research and also give them a sense for how scholars use resources in a field of study.

What types of topics are appropriate for gifted and talented learners?

Topic selection should be based the on students interest and ability. Available resources and available time for completion of the project are also important considerations. If the topic is more narrow or specific, students will have an easier time conducting their research. Gifted and talented students need to be encouraged to choose topics that are rigorous, that meet the standards of gifted education, and further that give these students opportunity to use their problem-solving skills.

8 SOCIAL & EMOTIONAL NEEDS

National Association for Gifted Children on Social and Emotional Needs

Gifted and talented students may have affective needs that include heightened or unusual sensitivity to self-awareness, emotions, and expectations of themselves or others, and a sense of justice, moral judgment, or altruism. Counselors working in this area may address issues such as perfectionism, depression, low self-concept, bullying, or underachievement.

"Our feelings are not there to be cast out or conquered. They're there to be engaged and expressed with imagination and intelligence."

—T.K. Coleman

NAGC Position Statement

Gifted youth deserve attention to their well-being and to their universal and unique developmental experiences—beyond academic and/or talent performance or non-performance. Gifted education programs, teachers, administrators, and school counselors can and should intentionally, purposefully, and proactively nurture socio-emotional development in these students. Gifted children and adolescents are not only developing cognitively; they are also developing socially and emotionally and in career awareness. Even cognitive development and academic experiences have social and emotional implications.

Five Developmental Differences in Gifted and Talented Students

1. ASYNCHRONOUS DEVELOPMENT
2. OVEREXCITABILITIES (OE)
3. PERFECTIONISM
4. TWICE-EXCEPTIONAL (2E)
5. UNDERACHIEVEMENT

1 ASYNCHRONOUS DEVELOPMENT

What is asynchronous development?

Asynchrony is the term used to describe the mismatch between cognitive, emotional, and physical development of gifted individuals.[1] Gifted children often have significant vari-

ations within themselves and develop unevenly across skill levels. For example, a gifted child may be excellent in math, but poor in reading—or vice versa. Often, intellectual skills are quite advanced, but fine motor or social skills are lagging. Experts do not completely agree, but because asynchrony is so prominent in gifted children, some professionals believe asynchronous development rather than potential or ability, is the defining characteristic of giftedness.[2]

A definition of giftedness that captures the essence of this uneven development was developed by the Columbus Group in 1991:

Giftedness is asynchronous development in which advanced cognitive abilities and heightened intensity combine to create inner experiences and awareness that are qualitatively different from the norm. This asynchrony increases with higher intellectual capacity. The uniqueness of the gifted renders them particularly vulnerable and requires modifications in parenting, teaching, and counseling in order for them to develop optimally.

2 OVEREXCITABILITIES

What are overexcitabilities, and do they affect all gifted and talented students?

Overexcitability is a theory proposed by Kazimierz Dąbrowski, a Polish psychologist, psychiatrist, and physician, that suggests that some individuals have heightened sensitivities, awareness, and intensity in one or more of five areas: psychomotor, sensual, intellectual, imaginational, and emotional.

It is often quite difficult and demanding to work and live with overexcitable individuals. Those who are not so, find the behaviors unexplainable, frequently incomprehensible, and often bizarre. Overexcitable people living with other overexcitable people often have more compassion and understanding for each other, but may feel conflicts when their OEs are not to the same degree. Finding strategies for helping children and adults deal with and take advantage of these innate and enduring characteristics may seem difficult. However, resources may be gathered from varied places: Literature regarding counseling, learning styles, special education, and classroom management; parenting books; even popular business texts. (SENG website)

3 PERFECTIONISM

What is perfectionism, and are all gifted and talented students perfectionists?

Students who exhibit perfectionism may worry excessively about assignments, attempting to do the work over and over to make it more presentable to the teacher, or avoiding the work altogether. These students may suffer a great deal if they feel that they do not live up to the expectations of others, and fear that others will find them inadequate. The focus of their attention is their own imperfections. They may magnify their flaws and overlook their strengths, thereby providing a distorted image of their own existence. The foundation of their self-concept is weak and is easily shaken by external events. They may also have a great need for self-affirmation and validation from others.

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[1] Morelock, 1992.

[2] Webb et al, 2007; The Columbus Group, 1991.

Not all gifted and talented students are perfectionists. The degree of perfectionism that any one individual may manifest varies. Some gifted and talented students are accused of being perfectionists or of being too perfectionistic because their own expectations are not congruent with their abilities. This has often been portrayed as a negative characteristic, and for some students being too perfectionistic may be an impediment to their success in the classroom.

It is important for teachers to understand that not all perfectionism is bad. Striving for excellence sometimes requires a degree of perfectionism. It is when perfectionistic behaviors interfere with children's success in school or affect their social and emotional well-being that action may have to be taken to help the student. Counselors or other professionals may need to provide guidance in helping students understand the difference between wanting to do their best at what they are trying to accomplish and making something *perfect*. Schuler (2002) suggested:

1. Being cautious about viewing perfectionism as unhealthy.
2. Helping gifted and talented students take pleasure in their accomplishments.
3. Assisting them in viewing their setbacks as learning opportunities.
4. Praising them for their efforts and determination, rather than for being smart or talented.
5. Encouraging them to channel their efforts into things they enjoy rather than trying to do everything at a level of excellence.

4 TWICE-EXCEPTIONAL

What is a Twice Exceptional Student?

Twice exceptional, often referred to as 2e, is a term used to describe a student who is both gifted and disabled. These students may also be referred to as having dual exceptionalities or as being gifted with learning disabilities (GT/LD). This also applies to students who are gifted with ADHD or gifted with autism.

Typical Characteristics of Twice-Exceptional Children[10]

STRENGTHS	DEFICITS
Superior vocabulary	Poor social skills
Advanced ideas and opinions	High sensitivity to criticism
High levels of creativity and problem-solving ability	Lack of organizational and study skills
Extremely curious, imaginative, and inquisitive	Discrepant verbal and performance skills
Wide range of interests not related to school	Poor performance in one or more academic areas
Penetrating insight into complex issues	Difficulty with written expression
Specific talent or consuming interest area	Stubborn, opinionated demeanor

Source: Wikipedia

Recommendations Suggested for Addressing the Needs of 2e Students

- Enriched/advanced educational opportunities that develop the child's interests, gifts and talents while also meeting the child's learning needs;
- Simultaneous supports that ensure the child's academic success and social-emotional well-being, such as accommodations, interventions, and specialized instruction;
- Programming should have as its goal dual differentiation—managing the disability while also developing the ability;
- In-service training for general, special, and gifted education teachers on the characteristics and needs of twice-exceptional students. (Missouri Department of Elementary and Secondary Education, 2016)

5 UNDERACHIEVEMENT

What is underachievement, and are all gifted and talented students underachievers?

If underachievement is defined as not performing up to potential, then many if not all gifted and talented children are underachievers, since they are often in classrooms that do not offer the challenge necessary to achieve that potential (Winner, 1996). However, most educators have an image of underachievers as students who dawdle, forget homework, daydream, talk too much to other children, have poor study skills, are slow and perfectionistic, are sloppy and careless, or don't do the work at all (Rimm, 1995). By this definition, not all gifted and talented students are underachievers. Underachievement is considered by many educators to be "a discrepancy between a child's school performance and some ability index" (Delisle & Galbraith, 2002, p. 169). Siegle and McCoach (2005) pinpoint four potential causes of underachievement:

- A physical, cognitive, or emotional issue (e.g., a learning disability or family trauma)
- A mismatch between the school environment and the student (e.g., lack of challenge in the curriculum)
- A student's attitude about himself or herself and school (e.g., a fear of failure or a lack of self-confidence)
- Poor study skills and self-regulation

Counselors often find that underachievement can also relate to a need for attention or a need for control (Colangelo, 2003).

Underachievement is as varied and complex as a classroom of students. Causes of underachievement are specific to the individual child, so intervention and remediation should also be specific to that child. Nevertheless, a study of students who had reversed their pattern of underachievement identified the teacher as being one of the most important factors in motivating them to achieve. Characteristics of the teacher listed by the students as important were as follows: someone who had a genuine caring for the student; someone who was willing to communicate with the student by talking about interests, ideas and personal concerns; someone who was enthusiastic about the subject taught and exhibited a desire to learn more; and someone flexible in his or her teaching style, who used a variety of resources and methods (Emerick, 1992). The National Research Center for Gifted and Talented, in a study on increasing the academic achievement of underachievers, found four

characteristics that students need to improve their achievement:

1. A belief in their ability to do well (known as self-efficacy);
2. A perception that required tasks are meaningful (known as task value);
3. An expectation that success is possible (known as environmental perception); and
4. The implementation of strategies that will lead to successful completion of the task (known as self-regulation) (Siegle and McCoach, 2000).

To begin to help an underachiever, teachers should gain a better understanding of the student through collaboration with parents, focus on the student's strengths and interests, and develop an individual plan for the student based on individual needs. Underachievement in gifted and talented programs should not generally disqualify students, but should be used as an impetus for modification of services, both within and outside the program, that the student should be receiving to increase the likelihood of success. Gifted programs are a need, not a privilege.

OTHER SOCIAL AND EMOTIONAL ISSUES

What are other social and emotional issues gifted and talented students face?

According to Delisle and Galbraith (2002), there are a number of social and emotional issues that many gifted and talented students especially face. These include being more responsive to sensory stimuli (e.g., sound, light, smell), perceiving greater complexity in the world around them (e.g., patterns, beauty), and experiencing greater worry about ethical concerns (e.g., justice, environment). This heightened awareness or sensitivity is a particular concern for gifted and talented students who lack the social or emotional maturity to cope, or do not have sufficient knowledge or skill to develop and implement solutions. When gifted and talented students are affected by these issues, the students should not generally be dismissed from gifted and talented programs. Rather, these issues should serve as a springboard to focused lessons, services, or counseling within the programs.

NAGC Recommendations for Social and Emotional Development for Gifted Children

NAGC strongly recommends that curriculum geared to helping gifted children and adolescents with social, emotional, and career development be part of gifted-education programming both in and outside of the regular classroom. Proactive affective curriculum at all school levels can provide psychoeducational information about the overlay of giftedness on these areas of development. Teachers can make assignments that attend to psychosocial aspects of literature and social science. Semi-structured discussion groups can focus on developmental challenges. Career and talent development, which may be a concern much earlier than in the general population, should be one focus of this curriculum. Even in connection with competitive activities, gifted students can benefit from discussing feelings related to those experiences with an adult who employs active listening skills. Both high achievement and underachievement can be viewed through a developmental lens and approached accordingly. Important also is attention to personal strengths and resilience. Such strengths may be overshadowed by performance or non-performance and not otherwise affirmed. Finally,

these affective concerns should be highlighted when advocating for services, funding, and legislation.

Counselor Preparation

Counselors and support personnel who are trained in gifted and talented education may prove helpful if students need assistance regarding social and emotional issues.

Given the salience of giftedness in social and emotional development and the likelihood that career and academic concerns have implications for well-being, school and other counselors need to be prepared to work with highly able students. Giftedness should be considered in case conceptualizations and treatment plans. Counselors in any venue can use information related to giftedness to normalize sensitivities and intensities, put developmental challenges and transitions into perspective, and make sense of classroom or social difficulties. (NAGC)

Most importantly, teachers and others who are knowledgeable regarding the social and emotional needs of gifted and talented students can share this information with others, so that a support system can be established in the school to help the gifted and talented students succeed. The SENG (Supporting the Emotional Needs of Gifted) program, **www.sengifted.org**, can provide assistance to both teachers and parents as they seek to understand the unique social and emotional needs of gifted and talented students.

9 SPECIAL POPULATIONS

Special Populations That Are Designated as Gifted and Talented

"Gifted and talented students transcend cultural, ethnic, and linguistic ties; conditions that are disabling; sexual orientation; poverty; and geography. In every possible subgroup of students there are those who are deserving, by right, not privilege, of those benefits typically associated with gifted education programming."

—Jaime A. Castellano (2003, p. vii)

Who/what are the special populations that may be designated as gifted and talented?

The term "special populations" is used in the field of gifted and talented education to refer to any group of students for whom additional considerations may be needed to access learning opportunities that will develop their gifts and talents optimally. Some populations (such as students from diverse ethnic or socioeconomic backgrounds) are denied access to optimal learning because of identification procedures. These students are often referred to as underrepresented because the proportion of their membership in gifted and talented programs is well below the proportion in the general school-age population.

Other populations or subgroups of gifted students may currently receive no services or very limited special services, including those who lack general achievement motivation, those who experience early difficulty in acquisition of basic skills, those who lack environmental nurturance of their potential, those with developmental delays, or those with specific learning disabilities. These are often referred to as underserved. Just which populations are special is a matter of some debate. For example, in one text (Booth and Stanley, 2004), the table of contents lists chapters on students from Hispanic, African American, or Native American backgrounds; second language learners; individuals with talent in the visual arts; and young children. Another text (Castellano, 2003) lists bilingual and ESL pupils; learners from Hispanic, African American, Haitian, Native American, or biracial/bicultural backgrounds; females; individuals with disabilities or diverse sexual orientations; and students from economically disadvantaged families. Castellano points out that "certainly, there are more special populations than can be covered in one book" (p. vii). This document will not attempt to address all the categories of special popu-

lations, but will focus on two: gifted and talented individuals with accompanying disabilities, and gifted and talented individuals from culturally diverse backgrounds. The reason for this focus is that specific federal and state programs exist through which some of these learners' needs can be addressed. However, these programs often take a deficiency perspective (Frasier and Passow, 1994), so it seems important to extend these efforts to also address their gifts and talents as well.

Students with Gifts and Talents and Disabilities

What are the characteristics of students with gifts and talents and disabilities?

Students who may manifest a particular ability but also have a disability identified through the Individuals with Disabilities Education Act (IDEA) are sometimes referred to as twice exceptional. They can be grouped into three categories: (1) identified gifted and talented students who have disabilities; (2) unidentified students whose gifts and talents and disabilities may mask each other in average achievement; and (3) identified disabled students who are also gifted and talented (Baum and Owen, 1988).

Some characteristics of the above groups might include the following:

- Wide range of interests not necessarily related to school topics or learning
- Specific talent or consuming interest for which students have exceptional memory and knowledge
- Advanced problem-solving and reasoning skills
- Creativity or high levels of imagination
- Superior vocabulary
- High energy levels
- Discrepant verbal and performance abilities, as indicated on standardized tests
- Auditory and/or visual processing problems
- Problems with long-term or short-term memory
- Frustration with many school-related tasks
- Failure to complete assignments
- Unrealistic self-expectations
- Lack of organizational skills
- Low self-esteem
- Absence of social skills with some peers (Higgins & Nielson, 2000)

What special considerations should be made in the identification of twice exceptional students?

Like all groups of gifted and talented learners, twice exceptional students deserve services based on their abilities and their needs. Identification protocols need to be established that attend to individual differences in both designing programs and finding the students to be served in them. Twice exceptional students need an identification system that gathers data regarding both the students' abilities and their disabilities. In addition, identification of twice

exceptional students' needs to consider data regarding the following:

- What is the evidence of outstanding talent or ability?
- What is the evidence of the disability affecting the performance or ability?

Special education specialists will most likely need to be involved in the identification as well as in the development of the services delivered to the twice exceptional student.

What accommodations should be made to programming or services for twice exceptional students?

Twice exceptional students need services specifically designed to nurture their strengths and abilities while also providing accommodations for their disability. These services or programs vary considerably in both form and content. They may include differentiation in the regular classroom through small-group or independent instruction, pull-out services where students may receive special education services and gifted and talented services, or self-contained classes where twice-exceptional students are grouped together for the entire day. Regardless of the program model that is utilized or the setting in which students are taught, several factors must be considered in designing effective programs for twice exceptional students.

- The program needs to focus on the students' strengths rather than their weaknesses.
- Curriculum should involve a variety of strategies, adaptations, and accommodations to help them succeed (Baum, Owen, and Dixon, 1991).
- Pace of the lesson or activity may need to be modified or adjusted to accommodate the students' disabilities (Higgins and Nielsen, 2000).
- Adaptive technology may be helpful and, in some cases, necessary to assist students in achieving particular goals or tasks.
- Modifications in the amount of work, the types of assignments, and the way students show what they have learned may be necessary in order for them to be successful.
- A cooperative relationship must be fostered between the special education staff and program, the gifted and talented staff and program, and regular classroom teachers in order for the optimum program to be developed for twice exceptional students.

Like other students classified as gifted and talented, students from special populations need social and emotional support in order to be successful. Students who are twice exceptional need support for both their disability as well as for their giftedness and talent. This support may include creating an emotionally safe environment, providing counseling, direct teaching of coping skills and strategies, and assistance in dealing with the frustrations they may experience in school. In addition, twice exceptional students need programs that emphasize their abilities, help them develop self-control, increase their desire to succeed, and assist them in working toward achievable goals (Olenchak and Reis, 2002).

What about involvement by parents or caregivers with twice exceptional students?

As with other populations of gifted and talented students, parental or caregiver involvement is essential. Parents or caregivers of twice exceptional students may be asked to sign IEP forms. In addition, providing assistance to the school in understanding the child's unique character traits and needs is essential to develop appropriate programs or services. This may

often be done through negotiating 504 accommodations. In many communities, parent or caregiver support groups, such as Supporting Emotional Needs of the Gifted (SENG), provide help for parents or caregivers of twice exceptional learners (see Chapter 10, "Parent/Caregiver and Community Relations").

Gifted and Talented Students with Culturally Diverse Backgrounds

What is cultural diversity?

Cultural diversity is a multidimensional concept. It begins with the variables that an individual uses to identify himself or herself as part of the broader national culture. In educational circles, special attention is given to those variables that distinguish an individual from the dominant culture. In the gifted and talented education literature, the variables that are most typically cited when discussing cultural diversity are ethnic or minority status, urban or rural residence, economic status, and particularly disadvantagement and English language ability (Baldwin, 2004). Thus, care should be taken when reading this section not to assume automatically that cultural diversity refers to issues of race alone.

What are the characteristics of gifted and talented students from culturally diverse backgrounds?

Gifted and talented students from culturally diverse backgrounds are often seen from a deficiency perspective that focuses on issues such as the following:

- Underachievement in school
- Familial issues that limit their ability to be involved in gifted and talented programs
- Issues of poverty that prevent their being appropriately identified for services
- Gender, race, or cultural discrimination in their school or community (VanTassel- Baska & Stambaugh, 2007)

Frasier et al. (1995) have suggested that a proficiency perspective should be taken in which educators focus on the strengths students have and the contributions they can make. This can be done by delineating the ways in which the underlying traits, aptitudes, and behaviors that cut across cultures are manifest in a specific cultural group. These traits, aptitudes, and behaviors include motivation, communication, interest, problem-solving ability, imagination and creativity, memory, inquiry, insight, reasoning, and humor.

What special considerations should be given in the identification of students from culturally diverse backgrounds?

School personnel need focused staff development opportunities that alert teachers to the particular manifestations of giftedness and talent in these populations so their abilities are recognized and they become more likely to be referred for gifted and talented program services. Identification procedures and criteria need to be adapted to match the population and specific programs. Multiple measures should be used to get a clear picture of students' abilities. Bias that might stem from cultural, ethnic, gender or other issues should be mitigated in the identification process. Support for families in the identification process is also important. Staff members may need to translate forms or documents into multiple languages, help fam-

ilies interpret scores or data, and help broaden their understanding regarding the program or service offered.

What accommodations are needed in programs and services that include students from culturally diverse backgrounds?

Some of the program options listed for twice exceptional students may be applied to serve students from these populations. In addition, modifications in curriculum, strategies, and support structures may need to be made to help these students develop a sense of success and also a readiness to take on challenging tasks (Callahan, 2007). Further, understandings regarding familial situations, cultural or ethnic backgrounds, diversity, and poverty are important in helping these students be successful in gifted and talented programs. Dr.

Carolyn Callahan points out that crucial to these students' success is the formation of a multiple-pronged support structure that includes the teacher, parent, and a mentor who may be able to provide some outside assistance for the student or his or her family regarding the gifted and talented services being offered.

Further, gifted and talented students who may be underserved or underrepresented in gifted and talented programs need social and emotional support. Specific support strategies and systems may differ depending on the group, but it is important to note that without appropriate social and emotional support, these students won't necessarily be identified and may not be appropriately served. A few general suggestions can be made regarding the social and emotional support these students need. These would include:

- Helping these students create a positive identity so that they can be successful.
- Aiding them in negotiating demands of divergent cultures.
- Assisting them in goal-setting and in time management.
- Providing counseling as needed to help them deal with the challenges that impede their achievement and their success.
- Finding mentors in an area of interest who may provide assistance with goal- setting or future planning (Hebert & Olenchak, 2000).

How might parents or caregivers of students from culturally diverse backgrounds be involved?

Parents or caregivers of students who come from underrepresented or underserved populations may need assistance in interpreting data or in knowing how to help their student. Translations of documents or information may be necessary. Providing outreach activities or workshops where parents or caregivers can ask questions and gain information is also important. Specific questions these parents or caregivers may ask include how to support students' academic work at home, how to locate and access community resources, or what possibilities are available to meet future educational goals. When communicating with parents or caregivers, teachers need to be sensitive to cultural differences and environmental conditions that may affect a student's opportunity to succeed at school (see Chapter 10, "Parent/Caregiver and Community Relations").

10 PARENT/CAREGIVER & COMMUNITY RELATIONS

Research demonstrates that the education of any child is more effective with the involvement of parents, but with the academic interventions that are needed for gifted and talented students, it is essential for parents and teachers to work together for the benefit of that student. (Robinson, Shore, Enersen, 2007).

"Parenting a gifted child is like living in a theme park full of thrill rides. Sometimes you smile. Sometimes you gasp. Sometimes you scream. Sometimes you laugh. Sometimes you gaze in wonder and astonishment. Sometimes you're frozen in your seat. Sometimes you're proud. And sometimes, the ride is so nerve-wracking, you can't do anything but cry.""

—Carol Strip and Gretchen Hirsh (2000, p. 3)

Responsibilities of Parents/Caregivers

"Parents of gifted children are notoriously accurate in identifying their children's abilities, especially if they have some ideas about how children normally develop."

—Robinson, Shore, Enersen, 2007, p. 7

Parents/caregivers are their child's best advocate, and it is their responsibility to be that advocate. It is the parents'/caregivers' responsibility to be involved with their child's education with the school and beyond the school. Research indicates that "the home environment is critical to nurturing giftedness and instilling the values conducive to its full blossoming" (Alvino, 1995, p. ix).

Clear and open communication between the school and the parents/caregivers is very important. Parents should relay their observations of their child's gifts and skills to the teacher in order to work collaboratively in the best interest of the child. Additionally, parents/caregivers should relay their concerns when they sense their child's academic needs are not being met.

"To use the strong evidence that parents' involvement is good for the child and the school, there must be positive and team-like communication between educators and parents."

—Robinson, Shore Enersen, 2007, p. 10)

Rights of Parents/Caregivers

No federal laws have been passed that provide a legal framework for gifted and talented education. The Jacob

K. Javits Gifted and Talented Students Act of 1994 was not established by Congress to protect the legal rights of gifted and talented children, but rather to provide for model programs and projects. Because of this, programs and identification procedures vary state-to-state and even within states. (In contrast, the Individuals with Disabilities Education Act of 1997 does give extensive legal rights to persons with disabilities.)

Parents/caregivers of gifted and talented students have a right to know how the school is serving their child, just as all parents have that right to know about their children's education.

Parents/caregivers should be notified of identification procedures for placement in the services provided by a district in as many ways as possible: newsletters, SEOP conferences, newspaper announcements, flyers, and mailings. Districts generally have a main window for testing for placement in advanced programs. In addition to that main window, districts should have opportunities for interim/late testing for students new to the district or those who otherwise missed the main window of testing.

Parents/caregivers also have a right to timely reporting of identification results. A review process of testing results, as well as an appeals process, should also be in place for parents/caregivers to discuss or dispute results. While school districts may provide multiple pathways to participate in the identification process, because of the time and resources involved, school districts reserve the right to make the final decision regarding the number of students placed in actual services (see Chapter 2, "Identification").

What Parents/Caregivers Need to Know

Although parents/caregivers of gifted and talented children know their children well, they may still have many questions about giftedness and talent. They don't usually have an understanding of characteristics and their impact on their child's behavior, motivation, and social and emotional needs. "Parents must be provided with information regarding an understanding of giftedness and student characteristics" (NAGC, 1998) Information can be gathered from a variety of sources. A beginning resource could be a district's gifted and talented specialist, through whom other resources are often available to parents/caregivers and teachers. Helpful resources are also included in this handbook.

Parents/caregivers need to know what school options or programs are available for their child. Options may include public schools, private schools, charter schools, magnet programs, pull-out programs, clusters grouping, grade acceleration, subject acceleration, differentiation, honors, advanced placement, concurrent enrollment, International Baccalaureate, and early entrance to college (see Chapter 5, "Service Options"). Schools can gather information on internships, mentorships, and scholarships that are available for gifted and talented students.

One of the most important needs of parents/caregivers is to know they are not alone. Parents/caregivers need the support of others who are experiencing the same kind of challenges (Robinson, Shore, Enerson, 2007). Discussions with others who may be having the same issues or challenges can help parents/caregivers manage frustrations and provide a support system. Local affiliates of the state association and SENG groups may be available in some areas. If no support group currently exists, parents/caregivers can consider starting one. The Utah Association for Gifted Children, a local gifted and talented coordinator, or school counselors may help facilitate this if so desired.

Effective Parent Advocacy

Parents/caregivers can be and should be the best advocates for their child. They know their children better than anyone. If a child's needs are not being met, then advocacy may be needed.

Parents/caregivers should understand that positive advocacy is the best approach and will accomplish more than being adversarial, even if their frustration levels are very high.

Advocacy is about building relationships with the teacher, the school, the district, and other parents who have the same goals. Approaching change should not be about criticism, but about improving the education for gifted and talented learners.

A first step for parents/caregivers is to become an active participant in their child's education: meet with the teacher to discuss their child's needs; listen to the teacher's point of view; set goals; and volunteer when possible. Parents/caregivers should learn more about gifted and talented education from websites and publications; persuade others to learn more about gifted education by encouraging gifted and talented book groups or district task forces; and keep communication channels to teachers, administrators, and school boards open by using "good sense, good humor, and good manners" (Warrum and Burney, n.d., p. 79).

Finally, parents/caregivers and educators need to understand the political piece of gifted and talented programs and become involved on the local, state, and national levels in advocating for better support and funding for gifted and talented children. Advocacy can bring change if it is given time, based on a knowledgeable foundation, and done appropriately.

Utilizing Parents/Caregivers in Gifted and Talented Programs

Many, but not all, gifted and talented programs encourage parent/caregiver volunteers in the classroom. Parents can be an excellent resource for the teacher and the students. Parents/caregivers can help in the classroom in a variety of ways, such as assisting with groups, being an expert resource in an area of learning, providing one-on-one time with students, and attending field trips.

Parents/caregivers who cannot be in the classroom during the day can assist by preparing materials, gathering resources for curriculum, responding to student work, and providing mentorship or internships as appropriate. Students in gifted and talented programs learn at a fast pace and often in depth, so parent/caregiver support is essential.

Parent/Caregiver Outreach

As stated earlier, communication with parents/caregivers is a key element in a gifted and talented program. A successful program will be done in partnership with parents/caregivers. Meetings at the district level can present parents/caregivers with information on goals and philosophy, as well as the expectations of the gifted and talented program.

Educators may keep parents/caregivers informed about gifted and talented curriculum, activities, plans, and issues through newsletters, conferences, websites and phone contacts. Inviting parents/caregivers into the classroom before, during, and at the end of the year helps parents/caregivers and students recognize the value of the program.

Additionally, seminars may be organized to educate parents on gifted and talented characteristics, identification, differentiation, social and emotional needs, advocacy, or any other topic thought to be helpful to parents/caregivers. Information about presentations or conferences held by local affiliates, state or national organizations, or universities can also be passed along to parents/caregivers through flyers, brochures, or letters.

Working with Parents/Caregivers to Foster Success

"Parents and educators working cooperatively can make a significant difference in the emotional and intellectual growth of the gifted child" (DeVries, 2003, p. x). A counselor knowledgeable about gifted and talented students can be vital in helping students adjust to their surroundings, whether in a gifted and talented program or in the regular classroom.

Helping students to understand their differences and value their worth needs to be reinforced at school as well as at home. Gifted and talented students may have challenges with perfectionism, isolationism, sensitivity, and emotional intensity that require understanding from all those who work with the student.

Experts in social and emotional needs of gifted and talented students may be brought in for presentations, or a book group or support group may increase everyone's knowledge about working with gifted and talented students. A supportive environment where both the educators and the parents/caregivers are working for the benefit of the student will maximize the chances of his or her success.

Using Community Resources for Programs

"Active participation in the community and the use of its resources are necessary for special programs to achieve service excellence" (Smutney, 2003, p. 127). Finding resources in the community may take some time, but the benefit is worth it investment.

Parents/caregivers can be the first resource in finding what is available for their children. Parent/caregiver occupations, hobbies, and talents may provide new experiences for their children and may help enrich the experiences of fellow students in their children's classrooms.

Gifted and talented students usually have a deep interest in one or more subjects. Resources for these areas of interest can be found at universities, museums, libraries, government agencies, media organizations, and research centers. Giving students an opportunity to see and explore new adventures may help them develop interests that can last a lifetime and one day make a difference in the world. Networking with community resources may also provide students with mentorships in an area of interest such as the arts, sciences, mathematics, communications, or social sciences.

Gifted and talented children often have a deep sensitivity to others. They develop empathy for those less fortunate or concern for the environment around them. Community service provides encouragement to the *"development of gifted students' natural capacity to care, their intense interest in justice, and their tendency toward moral, ethical behavior"* (Silverman, 1993a, p. 226).

Community problem-solving can begin with having the students observe what is around them and look for problems that need to be solved. Community service is more effective when the ideas come from the student or students. It can expand the curriculum and allow

students to use reading, writing, and presentation skills that offer the challenge gifted and talented students need and give them experience in addressing real-world issues. There are many ways to give service, individually or as a group, that allow students to feel accomplishment and fulfillment in improving the local community.

11 LEADERSHIP

"Once upon a time, America sheltered an Einstein, went to the moon, and gave the world the laser, the electronic computer, nylons, television, and the cure for polio. Today, we are in the process, albeit unwittingly, of abandoning this leadership role."

—Leon M. Lederman (cited in Renzulli, 2005, p. 88)

Leadership is crucial to the success of a district gifted and talented education program. There must be support at both the district and school levels, which follows an organized and comprehensive plan for designing, executing, coordinating, and revising services for gifted and talented learners.

Leadership Activities for Quality Gifted and Talentd Programs

What leadership activities are necessary to ensure quality gifted and talented education in districts and schools?

"The presence of authentic instructional leadership can be witnessed in the everyday acts of people who take responsibility for improving teaching and learning in the entire school community, and its effectiveness will be revealed in a variety of measures of student achievement" (King, 2002, p. 63). This statement explicitly identified at least three areas of activity for instructional leaders; creating community, fostering development, and taking responsibility. As for any school program, gifted and talented education requires that educators actively fulfill these functions to ensure success.Making Gifted and Talented Education an Integral

Making Gifted and Talented Education an Integral Part of the Education Community

What does an instructional leader need to do so that gifted and talented education programs are seen as an integral part of the education community?

First, an instructional leader must investigate his or her own beliefs relative to gifted and talented education. As mentioned in Chapter 3, Administrative Rule and Program Standards, when a district or school mission statement refers to growth for all students, is this truly reflected in the messages communicated by the instructional leader? One piece of evidence to consider is whether or not resources are allocated and managed in such a way that the gifted and talented program is supported as any other educational program. Once the leader has honestly dealt with this issue, he or she then needs to involve all school staff in discussions that build a real sense of ownership and responsibility for the learning of all students, includ-

ing the gifted and talented.

Building from these initial discussions, leaders must provide opportunities for continued networking among professionals both within and across educational programs. Gifted and talented students reside in nearly every classroom.

There need to be structures provided within a professional learning community for educators to share, ask questions, and learn together as they strive to meet the unique needs of these students.

Setting Up an Advisory Group

How might the district set up and use an advisory group?

A gifted and talented advisory committee can play an important and necessary role in the development of services for gifted and talented learners in a district. Its members serve as volunteers who meet on a regular basis over time to provide support to the district.

Members offer perspective, expertise, time, and commitment to the development and implementation of a district's gifted and talented plan. Establishing such an advisory committee creates program ownership, increases the likelihood of a high-quality program, and ensures program longevity.

When considering members for the committee, the district should consider the roles represented by the anticipated individuals. A broad spectrum should be represented, including administrators, gifted and talented education teachers, regular classroom teachers, support personnel, professional organizations, parents/caregivers, and the community. The guidance for roles and responsibilities of the committee should be determined prior to its creation. Governance procedures within the committee could also be established before its activation. Advisory committee by-laws can accomplish both of these administrative tasks.

Staff Development

According to *National Excellence: A Case for Developing America's Talent* (1993), professional development is essential in preparing educators to provide the challenging curricula and varied learning opportunities that gifted and talented students must have to develop their potential. The program standard for professional development by NAGC (1998) states, "Gifted learners are entitled to be served by professionals who have specialized preparation in gifted education, expertise in appropriate differentiated content and instructional methods, involvement in ongoing professional development, and who possess exemplary professional traits" (Standard 6, see Appendix E). An ongoing staff development program will increase interest in gifted and talented education and allow educators to develop the skills necessary to meet the needs of gifted and talented learners.

The responsibility for providing appropriate learning opportunities for gifted and talented students should not rest solely with the classroom teacher. Administrators, guidance counselors, specialists, teachers, and other school personnel share responsibility in meeting the diverse needs of gifted and talented learners. Therefore, staff development for gifted and talented education programs must include all educational personnel.

What would a comprehensive program of staff development in gifted and talented education look like?

The National Staff Development Council created a set of standards for professional development (2001). These standards provide professional guidance in planning staff development, from concept to implementation.

Dr. Robert Marzano (2003) discusses the need for teachers to engage in meaningful staff development experiences. However, he cautions that "although many schools have regularly scheduled staff development sessions, much of what is done in these sessions is not necessarily meaningful or useful in terms of impacting student achievement" (p. 65). Therefore, providing staff development or having a plan for doing so is insufficient for influencing teacher effectiveness. Quality components must also be considered in developing a comprehensive plan.

According to Imbeau (2006), the professional development plan that addresses the needs of gifted and talented learners should:

- Be aligned with other district staff development efforts that make systematic change possible and manageable.
- Be an integral part of a deliberately developed continuous improvement effort.
- Be designed and implemented collaboratively by classroom teachers, specialists in gifted education, and administrators.
- Include long-term goals for the district/school program and outline a process for determining appropriate interim steps that would be necessary to achieve the goals.
- Contain content that is viewed by participants as a necessary means to achieve the desired end.
- Be consistent, with recommended strategies of experts in gifted education and staff development.
- Differentiate staff development to address critical differences among participants.
- Include a plan for assessing the effectiveness of the staff development goals (p. 185).

What are the desired outcomes of staff development activities?

The creation of any staff development opportunity should begin with the expected outcomes in mind. All specific outcomes should align with the overarching goal of increasing participants' knowledge, skills, and dispositions to support the learning of gifted and talented students. Some possible outcomes might include:

- To provide for the design and implementation of the district comprehensive gifted and talented education plan.
- To foster strong administrative support and involvement in qualitatively differentiated educational programs.
- To demonstrate respect for the individuality of students.
- To bring educators up-to-date on best practices in gifted and talented education.
- To extend the training of educators in identification, continuum of services, and assessment of gifted and talented learners.

- To provide trainer-of-trainers opportunities for staff development within the local school district.
- To organize a network for sharing strategies and concerns of the gifted and talented education plan.
- To encourage the continual refinement of programs.

Qualifications of Teachers in Gifted and Talented Programs

What qualifications are needed to work with gifted and talented students?

Ideally, teachers of gifted and talented students, whether in the regular classroom, a gifted pull-out program, or a special gifted program, would possess a Gifted and Talented Endorsement. This endorsement is optional in the state of Utah unless a teacher is teaching a class identified as "gifted." As with all specialized teaching assignments, teachers who teach an identified gifted class must hold the appropriate endorsement, or they would not be highly qualified. In teacher preparation programs, undergraduate students are required to pass courses in disabilities but not giftedness. Therefore, the coursework that will prepare them to work with gifted and talented students is usually done at the post-graduate level.

Only since the 20th century has an academic discipline existed to provide training for teachers of high-potential youth. In the United States alone, over 100 universities offer courses and degree or certificate programs. In Utah, several universities offer the coursework required to obtain a Gifted and Talented Endorsement from the Utah State Board of Education. Many local districts work in partnership with these universities to provide these courses at the local level.

NAGC states "that all children deserve the highest quality of instruction possible and that such instruction will only occur when teachers are aware of and able to respond to the unique qualities and characteristics of the students they instruct." Gifted and talented students present a particular challenge and often experience inadequate and inappropriate education. To provide appropriate learning experiences for gifted and talented students, teachers need to possess:

- A knowledge and valuing of the origins and nature of high levels of intelligence, including creative expressions of intelligence.
- A knowledge and understanding of the cognitive, social, and emotional characteristics, needs, and potential problems experienced by gifted and talented students from diverse populations.
- A knowledge of and access to advanced content and ideas.
- An ability to develop a differentiated curriculum appropriate to meeting the unique intellectual, social, and emotional needs and interests of gifted and talented students.
- An ability to create an environment in which gifted and talented students can feel challenged and safe to explore and express their uniqueness.

District Responsibility for Accountability

What is the district responsibility for accountability related to gifted and talented education?

Utah Administrative Code, Rule R277-707 articulates the district accountability related to gifted and talented education (see Chapter 3. Administrative Rule and Program Standards). In addition, the rule explains the funding formula as follows:

a. The designated funds for the Gifted and Talented Program equal 0.62 multiplied by the difference between the funds appropriated for the Enhancement for Accelerated Students Program less the allotment under Section 53A-17a-165(3).

b. Each LEA shall receive its share of funds in the proportion that the LEA's number of weighted pupil units for kindergarten through grade twelve bears to the state total.

Financing Gifted and Talented Programs

How are gifted and talented programs financed?

The Utah Minimum School Program, through the Enhancement for Accelerated Students Program, is the main source of gifted and talented funding for most Utah districts. Specific funding information may be obtained at **http://www.schools.utah.gov.** The chart below shows the items to click on to view a specific district's allocation.

Departments ▶ School Finance ▶ Minimum School Program ▶ Fiscal Year Information ▶ District Summaries–Legislative Estimates

A few districts have passed voted leeways to improve student learning (including gifted and talented services). Other districts include additional monies from a variety of district funding sources to provide for gifted and talented learners. Federal, state, and foundation grants have also been awarded to districts and consortia.

Purposes of Evaluation

What are the purposes of gifted and talented program evaluation?

All evaluation is done primarily to gather information to make decisions. Generally, there are three types of decisions for which evaluation information should be obtained:

(1) Do we need a specific type of gifted and talented program?

(2) How can we improve our existing gifted and talented program?

(3) Is our gifted and talented program meeting its established goals?

These questions correlate with needs assessment, formative evaluation, and summative evaluation. In answering these questions, it is necessary to identify which program components should be evaluated in order to find the best information that will assist in making the needed decision. The components to be considered have been listed in Appendix A: Utah Administrative Code.

(Continued)

Conducting an Evaluation

How should a program evaluation be conducted?

The first step is to identify specific decisions that need to be made with the information gained from the evaluation. Data gathering should be limited to the specific information needed so that important resources are not wasted.

The second step is to determine who should carry out the evaluation. External evaluation often lends credence to the information that an internal evaluator cannot bring. However, external evaluation is expensive. Internal evaluation can usually be done more systematically over the long term, but personnel internal to a program are sometimes too close to the involved issues to take a broader perspective.

The next step is to gather and analyze data. Depending on the information needs, data sources can include students, teachers, parents, administrators, support staff, and community members. Data can be gathered through standardized tests, locally produced tests, rating scales, checklists, inventories, lesson plans, units, questionnaires, interviews, focus groups and observations. Data analysis might include narratives, descriptive or inferential statistics, or category systems.

Next, the information must be reported. Reporting should be done in a format that is accessible to those who must make the needed decisions. Reports can be done with tables, charts, graphs, memoranda, executive summaries, video, PowerPoint presentations, oral reports, and press releases. Usually, unless specific personnel issues are involved, reports of evaluation information are public records and should be made available to all stakeholders.

Finally, the needed decision must be made. While it is appropriate for stakeholders to ask for recommendations from the evaluators, it is ultimately the responsibility of program leaders to make the decisions.

Evaluation information itself, though it may lead directly to certain conclusions, does not often lead directly to a decision to act in one way or another. Decisions must be made using the information in the context of local values, policies, and priorities.

12 GIFTED & TALENTED RESOURCE LIST

Gifted & Talented—General

Annemarie Roeper: Selected Writings and Speeches, A. Roeper. (1995). Free Spirit Publishing.

Best Practices in Gifted Education: An Evidence-Based Guide, A. Robinson, B. M. Shore, & D. L. Enersen. (2006). Prufrock Press.

Critical Issues and Practices in Gifted Education: What the Research Says, C. Callahan & J. Plucker. (2007). Prufrock Press.

Essential Readings in Gifted Education: Volume 1, Definitions and Conceptions of Giftedness, R. Sternberg. (2004). Corwin Press.

Essential Readings in Gifted Education: Volume 2, Identification of Students for Gifted and Talented Programs, J. S. Renzulli. (2004). Corwin Press.

Essential Readings in Gifted Education: Volume 3, Grouping and Acceleration Practices in Gifted Education, L. Brody. (2004). Corwin Press.

Essential Readings in Gifted Education: Volume 4, Curriculum for Gifted and Talented Students, J. Van Tassel-Baska. (2004). Corwin Press.

Essential Readings in Gifted Education: Volume 5, Differentiation for Gifted and Talented Students, C.A. Tomlinson. (2004). Corwin Press.

Essential Readings in Gifted Education: Volume 6, Culturally Diverse & Underserved Populations of Gifted Students, A. Baldwin. (2004). Corwin Press.

Essential Readings in Gifted Education: Volume 7, Twice-Exceptional and Special Populations of Gifted Students, S. Baum. (2004). Corwin Press.

Essential Readings in Gifted Education: Volume 8, Social/Emotional Issues, Underachievement, and Counseling Gifted and Talented Students, S. M. Moon. (2004). Corwin Press.

Essential Readings in Gifted Education: Volume 9, Artistically and Musically Talented Students, E. Zimmerman. (2004). Corwin Press.

Essential Readings in Gifted Education: Volume 10, Creativity and Giftedness, D. Treffinger. (2004). Corwin Press.

Essential Readings in Gifted Education: Volume 11, Program Evaluation in Gifted Education, C. M. Callahan. (2004). Corwin Press.

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Genius Denied: How to Stop Wasting Our Brightest Young Minds, J. Davidson, B. Davidson , L. Vanderkam. (2005). Simon & Schuster.

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Gifted Children and the Law, F. A. Karnes & R. G. Marquardt. (1991). Ohio Psychology Press.

Gifted Children, Gifted Education, G. Davis. (2007). Great Potential Press.

Gifted Children: Myths and Realities, E. Winner. (1996). Harper Collins Publishers.

Growing Up Gifted: Developing the Potential of Children at Home and at School (7th Edition), B. Clark. (2008). Prentice Hall.

In the Eyes of the Beholder: Critical Issues for Diversity in Gifted Education, D. Booth & J. C. Stanley. (2004). Prufrock Press.

Losing Our Minds: Gifted Children Left Behind, D. L. Ruf. (2005). Great Potential Press.

Talented Children and Adults: Their Development and Education, J. Piirto. (2006). Prufrock Press.

Understanding Creativity, J. Piirto. (2004). Great Potential Press.

Programming for Gifted and Talented Students

A Practitioner's Guild to Evaluating Programs for the Gifted, C. M. Callahan & M. S. Caldwell. (1997). National Association for Gifted Children.

Aiming for Excellence: Gifted Program Standards, M. Landrum, C. Callahan, & B. D. Shaklee. (2001). Prufrock Press.

Alternative Assessments for Identifying Gifted and Talented Students, J. VanTassel- Baska. (2007). Prufrock Press.

Building a Gifted Program: Identifying and Educating Gifted Students in Your School, M. R. Leavitt. (2007). Great Potential Press.

Designing and Developing Programs for Gifted Students, J.F. Smutney. (2003). Corwin Press.

Designing and Utilizing Evaluation for Gifted Program Improvement, J. VanTassel- Baska & A. Feng. (2003). Prufrock Press.

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Handbook of Secondary Gifted Education, F. A. Dixon & S. M. Moon. (2005). Prufrock Press.

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In Search of the Dream: Designing Schools and Classrooms That Work for High Potential Students From Diverse Cultural Backgrounds, C. A. Tomlinson, D. Y. Ford, S. M. Reis, C. J. Briggs, C. Strickland. (2004). NAGC/National Research Center on Gifted and Talented.

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Serving Gifted Learners Beyond the Traditional Classroom: A Guide to Alternative Programs and Services, J. Van Tassel-Baska. (2006). Prufrock Press.

The Survival Guide for Teachers of Gifted Kids: How to Plan, Manage, and Evaluate Programs for Gifted Youth K–12, J. Delisle & B. Lewis. (2003). Free Spirit Publishing.

Curriculum

Acceleration Strategies for Teaching Gifted Learners (The Practical Strategies Series in Gifted Education), J. VanTassel-Baska. (2005). Prufrock Press.

Assessment in the Classroom: The Key to Good Instruction (Practical Strategies Series in Gifted Education), C.M. Callahan. (2005). Prufrock Press.

Curriculum Compacting: The Complete Guide to Modifying the Regular Curriculum for High Ability Students, S. M. Reis, D. Burns & J. Renzulli. (1992). Creative Learning Press.

Curriculum Compacting: An Easy Start to Differentiating for High Potential Students (Practical Strategies Series in Gifted Education), F. A. Karnes. (2005). Prufrock Press.

Comprehensive Curriculum for Gifted Learners (3rd Edition), J. Van Tassel-Baska. (2005). Allyn & Bacon.

Content-Based Curriculum for High Ability Learners, J. Van Tassel-Baska & C. A. Little. (2003). Prufrock Press.

Creativity in the Classroom: Schools of Curious Delight, A. Starko. (2004). Routledge.

Curriculum Planning and Instructional Design for Gifted Learners, J. Van Tassel-Baska. (2003). Love Publishing Company.

Developing Math Talent: A Guide for Educating Gifted and Advanced Learners in Math, S. Assouline & A. Lupkowski-Shoplik. (2005). Prufrock Press.

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Excellence in Educating Gifted & Talented Learners, J. Van Tassel-Baska. (1998). Love Publishing Co.

Fostering Creativity in Gifted Students (Practical Strategies Series in Gifted Education), F. A. Karnes & B. Cramond. (2005). Prufrock Press.

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http://www.achievement.org
Biographies and interviews with people eminent in their field

Association for the Education of Gifted Underachievement Students
http://www.aegus1.org

Advocacy for twice-exceptional and underachieving gifted students

Association for the Gifted
http://www.cectag.org
An organization that is a division of the Council for Exceptional Children

Belin-Blank Center
http://www.education.uiowa.edu/html/belinblank
Center at the University of Iowa providing information and opportunities for gifted students

Byrd, Ian
http://www.byrdseed.com
"Byrdseed is all about better understanding our gifted learners. Stick around and you'll learn how to differentiate lessons, teach across the content areas, and appreciate gifted kids' unique social and emotional needs."

Center for Evaluation of Gifted Children
http://www.a-gifted-child.com
Links and information on gifted children

Center for Gifted Education and Talent Development
http://www.gifted.uconn.edu
University of Connecticut

Center for Gifted Education Policy
http://www.apa.org/ed/schools/gifted/index.aspx
Homepage of the American Psychological Association Center for Gifted Policy that generates information and research on children with gifts and talents

Council for Exceptional Children
http://www.cec.sped.org
Special education website with some information on gifted children

Davidson Institute for Talent Development
http://www.davidsongifted.org
Links to gifted information and to the Davidson Academy

ERIC Clearinghouse for Disabilities and Gifted Education
http://ericec.org
Research and articles on gifted and talented students and education

Frances A. Karnes Center for Gifted Education
http://www.usm.edu/karnes-gifted
References and links to information about gifted students

Free Spirit Publishing
http://www.freespirit.com
Publishing specializing in gifted education, emotional needs of all children and service learning

Gifted Child Today
http://www.prufrock.com
Monthly magazine for gifted education

Gifted Development Center
http://gifteddevelopment.com
Site of center in Denver, Colorado and gifted expert Dr. Linda Silverman

GT World
http://gtworld.org
Online support for parents of gifted children

Hoagies Gifted Education Page
http://www.hoagiesgifted.org
Gifted information for parents and educators

International Baccalaureate Organization
http://www.ibo.org
Programs for high quality international education

Kentucky Governor's Scholars Program
http://kygsp.org
A summer enrichment program for high-ability students

Mensa
http://www.mensa.org
A forum for intellectual exchange

National Association for Gifted Children (NAGC)
http://www.nagc.org
Advocacy as well as informational organization for educators and parents

National Research Center on the Gifted and Talented
http://www.gifted.uconn.edu
Research center for the education of gifted and talented students

Pieces of Learning
http://piecesoflearning.com
A leading publisher in supplementary enrichment activity books and videos

Prufrock Press
http://www.prufrock.com
World's largest publisher of materials in gifted education

Sage School
http://www.sageschool.org/
An independent, non-profit school in Massachusetts for gifted and talented students

Summer Institute for the Gifted
http://www.giftedstudy.org/
Summer institutes offered through residential and day programs at various universities

Supporting Emotional Needs of the Gifted
http://www.SENGifted.org
Information on the social-emotional needs of gifted children and adults

TAG Families of the Talented and Gifted
http://www.tagfam.org
Information for parents of gifted children

The Templeton National Report on Acceleration
http://www.nationdeceived.org
Free downloadable copy of the research on acceleration

TIP Program
http://www.tip.duke.edu/
Duke University Talent Search

Uniquely Gifted: Resources for Gifted Children with Special Needs
http://www.uniquelygifted.org
Resources for ADHA, Learning Disabilities and Asperger Syndrome, etc.

University of Utah Youth Academy of Excellence
http://continue.utah.edu/youth/yae
A summer program for students who enjoy thinking deeply and questioning

Utah Association for Gifted Children (UAGC)
http://www.uagc.org
A Utah advocacy and informational organization for parents and educators

Utah History Fair
http://utahhistoryfair.weebly.com/
Information about History Fair with a link to the national site

Utah State Board of Education
http://www.schools.utah.gov/curr/gifttalent/

World Council for Gifted and Talented Children
http://www.world-gifted.org/
An organization to help focus world attention of gifted and talented children

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APPENDICES

APPENDIX A UTAH ADMINISTRATIVE CODE

R277. Education, Administration

R277-707. Enhancement for Accelerated Students Program.

R277-707-1. Authority and Purpose.

(1) This rule is authorized by:
  (a) Utah Constitution Article X, Section 3, which vests general control and supervision over public education in the Board;
  (b) Section 53A-17a-165, which allows the Board to adopt rules for the expenditure of funds appropriated for Enhancement for Accelerated Students Program; and
  (c) Section 53A-1-401, which allows the Board to make rules to execute the Board's duties and responsibilities under the Utah Constitution and state law.

(2)(a) The purpose of this rule is to specify the procedures for distributing funds appropriated under Section 53A-17a-165 to LEAs.
  (b) The intent of this appropriation is to enhance the academic growth of students whose academic achievement is accelerated.

R277-707-2. Definitions.

(1) "Accelerated students" means children and youth whose superior academic performance or potential for accomplishment requires a differentiated and challenging instructional model

(2) Advanced placement" or "AP" courses means rigorous courses developed by the College Board where:
  (a) each course is developed by a committee composed of college faculty and AP teachers, and covers the breadth of information, skills, and assignments found in the corresponding college course; and
  (b) students who perform well on the AP exam may be:
    (i) granted credit; or
    (ii) advanced standing at participating colleges or universities.

(3) "Gifted and talented programs" means programs to:
  (a) assist individual students to develop their high potential and enhance their academic growth; and
  (b) identify students with outstanding abilities who are capable of high performance in the following areas:

https://rules.utah.gov/publicat/code/r277/r277-707.htm

(i) general intellectual ability;
(ii) specific academic aptitude; and
(iii) creative or productive thinking.

(4) "International Baccalaureate" or "(1B)" Program means one of the following programs established by the International Baccalaureate Organization:
(a) the Diploma Program;
(b) the Middle Years Program; or
(c) the Primary Years Program.

(5) "Weighted Pupil Unit" means the basic state funding unit.

(6) "Utah Consolidated Application" or "UCA" means the web-based grants management tool employed by the Board through which LEAs submit plans and budgets for approval by the Superintendent.

R277-707-3. Eligibility, Application, Distribution and Use of Funds.

(1) All LEAs are eligible to apply for the Enhancement for Accelerated Students Program funds using the UCA.

(2)(a) An LEA shall have a process for identifying students whose academic achievement is accelerated based upon multiple assessment instruments.
(b) These instruments shall not be solely dependent upon English vocabulary or comprehension skills and shall take into consideration abilities of culturally diverse students and students with disabilities.

(3) The distribution formula includes an allocation of money for:
(a) Advanced Placement courses:
(i) The designated funds for the advanced placement program equal 0.38 multiplied by the difference between the funds appropriated for the Enhancement for Accelerated Students Program less the allotment under Subsection 53A-17a-165(3).
(ii)(A) The total funds designated for the advanced placement program are divided by the total number of Advanced Placement exams passed with a grade of 3 or higher by students.
(B) This calculation results in a fixed amount per exam passed with each participating LEA receiving that amount for each exam successfully passed by one of its students.
(b) Gifted and Talented programs:
(i) The designated funds for the Gifted and Talented Program equal 0.62 multiplied by the difference between the funds appropriated for the Enhancement for Accelerated Students Program less the allotment under Subsection 53A-17a-165(3).
(ii) Each LEA shall receive its share of funds in the proportion that the LEA's number of weighted pupil units for kindergarten through grade twelve bears to the state total.
(iii) An LEA shall expend Gifted and Talented program funds in accordance with the UCA guidelines.

(c) 1B: LEAs shall have an 1B authorized program to qualify for funds.

(i) Fifty percent of the total funds designated for 1B consistent with Subsection 53A-17a-165(3) shall be equally distributed among all authorized 1B programs in the state.

(ii) The remaining fifty percent of allocation shall be distributed to LEAs with Diploma Programs where students scored a grade of 4 or higher on 1B exams, resulting in a fixed amount of dollars per exam passed.

R277-707-4. Performance Criteria and Reports.

(1) An LEA receiving funds, as set forth in Section R277-707-3, shall be required to submit an annual evaluation report to the Superintendent consistent with Section 53A-17a-165. The report shall include the following performance criteria related to the identified students whose academic achievement is accelerated:

(a) number of identified students disaggregated by subgroups;

(b) graduation rates for identified students;

(c) number of AP classes taken, completed, and exams passed with a score of 3 or above by identified students;

(d) number of 1B classes taken, completed, and exams passed with a score of 4 or above by identified students;

(e) number of Concurrent Enrollment classes taken and credit earned by identified students;

(f) ACT or SAT data, including the number of students participating, at or above the college readiness standards;

(g) gains in proficiency in language arts; and (h) gains in proficiency in mathematics.

(2) The Superintendent shall submit an annual report on program effectiveness to the Public Education Appropriations Subcommittee of the Utah State Legislature consistent with Subsection 53A-17a-165(6).

KEY: accelerated learning, enhancement programs
Date of Enactment or Last Substantive Amendment: July 11, 2016
Notice of Continuation: May 16, 2016
Authorizing, and Implemented or Interpreted Law: Art X Sec 3; 53A-17a-165; 53A-17a-165(5); 53A-1-401

APPENDIX B UTAH STATE GIFTED & TALENTED PLAN

Each year local education agencies (LEAs) must submit a Utah Consolidated Application for Gifted and Talented funds. Because this application my change from year to year, interested LEAs should contact the State Board of Education at 801.538.7505 or http://www.schools.utah.gov/SAS/federalprograms/State-Programs/UCA.aspx for more information.

APPENDIX C HESS COGNITIVE RIGOR MATRIX

TOOL 1

HESS COGNITIVE RIGOR MATRIX (READING CRM):

Applying Webb's Depth-of-Knowledge Levels to Bloom's Cognitive Process Dimensions

Revised Bloom's Taxonomy	Webb's DOK Level 1 Recall & Reproduction	Webb's DOK Level 2 Skills & Concepts	Webb's DOK Level 3 Strategic Thinking/Reasoning	Webb's DOK Level 4 Extended Thinking
Remember Retrieve knowledge from long-term memory, recognize, recall, locate, identify	o Recall, recognize, or locate basic facts, terms, details, events, or ideas explicit in texts o Read words orally in connected text with fluency & accuracy	Use these Hess CRM curricular examples with most close reading or listening assignments or assessments in any content area.		
Understand Construct meaning, clarify, paraphrase, represent, translate, illustrate, give examples, classify, categorize, summarize, generalize, infer a logical conclusion), predict, compare/contrast, match like ideas, explain, construct models	o Identify or describe literary elements (characters, setting, sequence, etc.) o Select appropriate words when intended meaning/definition is clearly evident o Describe/explain who, what, where, when, or how o Define/describe facts, details, terms, principles o Write simple sentences	o Specify, explain, show relationships; explain why (e.g., cause-effect) o Give non-examples/examples o Summarize results, concepts, ideas o Make basic inferences or logical predictions from data or texts o Identify main ideas or accurate generalizations of texts o Locate information to support explicit-implicit central ideas	o Explain, generalize, or connect ideas using supporting evidence (quote, example, text reference) o Identify/ make inferences about explicit or implicit themes o Describe how word choice, point of view, or bias may affect the readers' interpretation of a text o Write multi-paragraph composition for specific purpose, focus, voice, tone, & audience	o Explain how concepts or ideas specifically relate to other content domains (e.g., social, political, historical) or concepts o Develop generalizations of the results obtained or strategies used and apply them to new problem-based situations
Apply Carry out or use a procedure in a given situation; carry out (apply to a familiar task), or use (apply) to an unfamiliar task	o Use language structure (pre/suffix) or word relationships (synonym/ antonym) to determine meaning of words o Apply rules or resources to edit spelling, grammar, punctuation, conventions, word use o Apply basic formats for documenting sources	o Use context to identify the meaning of words/phrases o Obtain and interpret information using text features o Develop a text that may be limited to one paragraph o Apply simple organizational structures (paragraph, sentence types) in writing	o Apply a concept in a new context o Revise final draft for meaning or progression of ideas o Apply internal consistency of text organization and structure to composing a full composition o Apply word choice, point of view, style to impact readers' /viewers' interpretation of a text	o Illustrate how multiple themes (historical, geographic, social, artistic, literary) may be interrelated o Select or devise an approach among many alternatives to research a novel problem
Analyze Break into constituent parts, determine how parts relate, differentiate between relevant-irrelevant, distinguish, focus, select, organize, outline, find coherence, deconstruct (e.g., for bias or point of view)	o Identify whether specific information is contained in graphic representations (e.g., map, chart, table, graph, T-chart, diagram) or text features (e.g., headings, subheadings, captions) o Decide which text structure is appropriate to audience and purpose	o Categorize/compare literary elements, terms, facts/details, events o Identify use of literary devices o Analyze format, organization, & internal text structure (signal words, transitions, semantic cues) of different texts o Distinguish: relevant-irrelevant information; fact/opinion o Identify characteristic text features; distinguish between texts, genres	o Analyze information within data sets or texts o Analyze interrelationships among concepts, issues, problems o Analyze or interpret author's craft (literary devices, viewpoint, or potential bias) to create or critique a text o Use reasoning, planning, and evidence to support inferences	o Analyze multiple sources of evidence, or multiple works by the same author, or across genres, time periods, themes o Analyze complex/abstract themes, perspectives, concepts o Gather, analyze, and organize multiple information sources o Analyze discourse styles
Evaluate Make judgments based on criteria, check, detect inconsistencies or fallacies, judge, critique	"UG" – unsubstantiated generalizations = stating an opinion without providing any support for it!		o Cite evidence and develop a logical argument for conjectures o Describe, compare, and contrast solution methods o Verify reasonableness of results o Justify or critique conclusions drawn	o Evaluate relevancy, accuracy, & completeness of information from multiple sources o Apply understanding in a novel way, provide argument or justification for the application
Create Reorganize elements into new patterns/structures, generate, hypothesize, design, plan, produce	o Brainstorm ideas, concepts, problems, or perspectives related to a topic , principle, or concept	o Generate conjectures or hypotheses based on observations or prior knowledge and experience	o Synthesize information within one source or text o Develop a complex model for a given situation o Develop an alternative solution	o Synthesize information across multiple sources or texts o Articulate a new voice, alternate theme, new knowledge or perspective

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TOOL 2

HESS COGNITIVE RIGOR MATRIX (MATH-SCIENCE CRM):

Applying Webb's Depth-of-Knowledge Levels to Bloom's Cognitive Process Dimensions

Revised Bloom's Taxonomy	Webb's DOK Level 1 Recall & Reproduction	Webb's DOK Level 2 Skills & Concepts	Webb's DOK Level 3 Strategic Thinking/Reasoning	Webb's DOK Level 4 Extended Thinking
Remember Retrieve knowledge from long-term memory, recognize, recall, locate, identify	o Recall, observe, & recognize facts, principles, properties o Recall/ identify conversions among representations or numbers (e.g., customary and metric measures)	Use these Hess CRM curricular examples with most mathematics or science assignments or assessments.		
Understand Construct meaning, clarify, paraphrase, represent, translate, illustrate, give examples, classify, categorize, summarize, generalize, infer a logical conclusion), predict, compare/contrast, match like ideas, explain, construct models	o Evaluate an expression o Locate points on a grid or number on number line o Solve a one-step problem o Represent math relationships in words, pictures, or symbols o Read, write, compare decimals in scientific notation	o Specify and explain relationships (e.g., non-examples/examples; cause-effect) o Make and record observations o Explain steps followed o Summarize results or concepts o Make basic inferences or logical predictions from data/observations o Use models /diagrams to represent or explain mathematical concepts o Make and explain estimates	o Use concepts to solve non-routine problems o Explain, generalize, or connect ideas using supporting evidence o Make and justify conjectures o Explain thinking/reasoning when more than one solution or approach is possible o Explain phenomena in terms of concepts	o Relate mathematical or scientific concepts to other content areas, other domains, or other concepts o Develop generalizations of the results obtained and the strategies used (from investigation or readings) and apply them to new problem situations
Apply Carry out or use a procedure in a given situation; carry out (apply to a familiar task), or use (apply) to an unfamiliar task	o Follow simple procedures (recipe-type directions) o Calculate, measure, apply a rule (e.g., rounding) o Apply algorithm or formula (e.g., area, perimeter) o Solve linear equations o Make conversions among representations or numbers, or within and between customary and metric measures	o Select a procedure according to criteria and perform it o Solve routine problem applying multiple concepts or decision points o Retrieve information from a table, graph, or figure and use it solve a problem requiring multiple steps o Translate between tables, graphs, words, and symbolic notations (e.g., graph data from a table) o Construct models given criteria	o Design investigation for a specific purpose or research question o Conduct a designed investigation o Use concepts to solve non-routine problems o Use & show reasoning, planning, and evidence o Translate between problem & symbolic notation when not a direct translation	o Select or devise approach among many alternatives to solve a problem o Conduct a project that specifies a problem, identifies solution paths, solves the problem, and reports results
Analyze Break into constituent parts, determine how parts relate, differentiate between relevant-irrelevant, distinguish, focus, select, organize, outline, find coherence, deconstruct	o Retrieve information from a table or graph to answer a question o Identify whether specific information is contained in graphic representations (e.g., table, graph, T-chart, diagram) o Identify a pattern/trend	o Categorize, classify materials, data, figures based on characteristics o Organize or order data o Compare/ contrast figures or data o Select appropriate graph and organize & display data o Interpret data from a simple graph o Extend a pattern	o Compare information within or across data sets or texts o Analyze and draw conclusions from data, citing evidence o Generalize a pattern o Interpret data from complex graph o Analyze similarities/differences between procedures or solutions	o Analyze multiple sources of evidence o Analyze complex/abstract themes o Gather, analyze, and evaluate information
Evaluate Make judgments based on criteria, check, detect inconsistencies or fallacies, judge, critique	"UG" – unsubstantiated generalizations = stating an opinion without providing any support for it!		o Cite evidence and develop a logical argument for concepts or solutions o Describe, compare, and contrast solution methods o Verify reasonableness of results	o Gather, analyze, & evaluate information to draw conclusions o Apply understanding in a novel way, provide argument or justification for the application
Create Reorganize elements into new patterns/structures, generate, hypothesize, design, plan, produce	o Brainstorm ideas, concepts, or perspectives related to a topic	o Generate conjectures or hypotheses based on observations or prior knowledge and experience	o Synthesize information within one data set, source, or text o Formulate an original problem given a situation o Develop a scientific/mathematical model for a complex situation	o Synthesize information across multiple sources or texts o Design a mathematical model to inform and solve a practical or abstract situation

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