



Department of Education

GIFTED AND TALENTED STUDENTS

A Resource Guide for Teachers

**Educational Services Division (Anglophone)
Revised 2007**

Acknowledgements

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INTRODUCTION

All students require opportunities to learn, grow, and be challenged to strive for excellence. Students with exceptional talents and learning potential have needs that require specific knowledge and attention. With careful nurturing and appropriate education, gifted students have the potential to make a unique contribution to their communities and the world. Without this, the price we and they pay is “lost academic growth, lost creative potential and sometimes lost enthusiasm for educational success and eventual professional achievements and substantial contributions to society” (Davis & Rimm, 2004).

Note: The terms gifted and talented can be a source of confusion. There are explanations of how they differ but no widely accepted one. For this reason the term “gifted” will be used throughout this document.

In the larger community and even within schools there are many misconceptions (some false and some half truths) about gifted students. Six of the more common appear below:

1. Gifted students are high achievers.

It is true that some gifted students are high achievers but not all are. One of the biggest issues today in both gifted and regular education is underachievement (McCoach & Siegle, 2003). Often the reasons are complex and have more to do with issues outside of school such as stress, instability, family situations and societal values. Nonetheless, the power of the school to turn this around can be very significant.

2. All children/people are gifted.

Although all students are unique, have a valuable contribution to make, have relative areas of strengths and deserve an education that allows them to reach their potential (whatever that may be), not all students are gifted (Coleman & Cross, 2005).

3. Gifted students will do fine with or without special programming.

Some gifted students will do fine in spite of an unchallenging school experience. This is particularly true if their parents provide enriching activities outside of school. However, some turn off, never develop good work habits and motivation, and for all intents and purposes their giftedness “dies”.

4. Gifted students come from advantaged homes.

Some gifted students, and many of those who are identified as such, do come from advantaged homes but there are many gifted students from less advantaged backgrounds who do not stand out as gifted. The challenge is proper and comprehensive identification (Coleman & Cross, 2005).

5. Co-operative learning or other forms of group work are an effective way to meet the needs of gifted students.

The advantages of co-operative learning are well documented and while it is important for all students to learn to work with others of differing abilities, heterogeneous, co-operative learning should be used sparingly and judiciously with gifted students. Often such experiences provide no intellectual challenge; the gifted student does a disproportionate, or sometimes no, work; and the total experience is negative (Robinson, 2003).

6. Gifted students have trouble getting along with peers.

Generally speaking this is not the case (Pufal-Struzik, 1999). Often gifted students are leaders, both in and out of school, and throughout their lives. The exception may be those who are “profoundly gifted” and may have little in common with age mates in terms of interests (Terman & Oden 1935; Gross, 1993). However, even with this population this is not always true.

DEFINITIONS

Thirty and more years ago when “giftedness” was defined by an IQ score, a school district simply set an arbitrary score (usually in the 130 range) and a student either did or did not “make the cut”. Although it is no longer accepted today in academic circles, it is still used by many school districts, no doubt, because it is simple and not entirely without merit.

Now that the concept is generally more broadly conceived than before, there is no single accepted definition of giftedness. Correspondingly, there is no dearth of definitions either!

Before considering some of the current definitions in wide circulation today, it may be appropriate to go back momentarily to the IQ based one. Although a high IQ may have fallen out of favor as a measure to define giftedness, the fact remains that, if a student has a very high IQ, it is significant indicator, indeed the single most important one, of a student’s academic potential (Gross, 2004). It is not meaningless or trivial. Correspondingly, if a student scores highly on an IQ test, but performs at an average or below average level academically, this warrants further investigation.

Several of the more common definitions in use today are presented below:

- In 1972 Sidney Marland, then the U.S. Commissioner of Education proposed the following:

Gifted and talented children are those identified by professionally qualified people, who by virtue of outstanding abilities are capable of high performance. These are children who require differentiated educational programs and /or services beyond those normally provided by the regular school program in order to realize their contribution to self and society. Children capable of high performance include those with demonstrated achievement and /or potential ability in any of the following areas, singly or in combination:

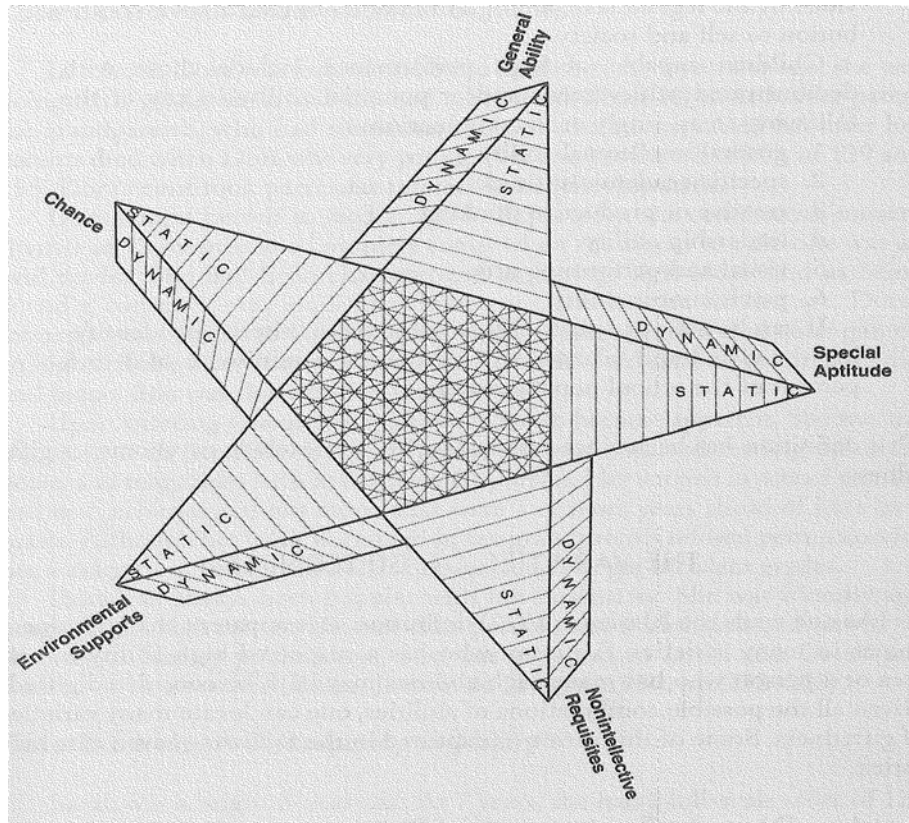
- **general intellectual ability**
- **specific academic aptitude**
- **creative or productive thinking**
- **leadership ability**
- **visual and performance arts**
- **psychomotor ability (later removed in 1997)**

This would be termed an “omnibus” definition (Getzels & Dillon, 1973) because it specifies a broad range of areas of giftedness, as well as potential, in each. Although it is more than 30 years old, and is seen by some as problematically broad, it remains popular and has been adopted, as is or slightly modified, by many jurisdictions in North America.

- Another omnibus definition (Getzels & Dillon, 1973) is that of Abraham Tannenbaum (2003) who states that:

“Giftedness in children denotes their potential for becoming critically acclaimed performers or exemplary producers of ideas in spheres of activity that enhance the moral, physical, emotional, social, intellectual, or aesthetic life of humanity”.

Whether a child actually develops her potential and develops into a stellar producer or performer depends on a number of factors and life circumstances. Tannenbaum (2003) depicts these factors in the form of sea star. (See below)



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Until time runs its course, the most that can be said using this model (and several others) is that a child has the potential to be gifted.

- Another well known definition and model is Renzulli’s three ring conception of giftedness which he depicts as three concentric rings representing above average ability, task commitment and creativity.

Giftedness is an interaction among three basic clusters of human traits: above average ability, high levels of task commitment, and high levels of creativity. Gifted children either possess or are capable of developing these traits and applying them to any valuable area of human performance (Renzulli, 1986).

Davis and Rimm (2004) wisely note that this does not imply that a student must possess all of the three rings to be considered for inclusion in a program for gifted students. For example, a student may be included without knowing his IQ. Correspondingly, a student may be known to have a high IQ, but may not work up to potential.

- Most teachers, indeed even people outside the field of education, are familiar with Howard Gardner's **Theory of Multiple Intelligences** (Gardner, 1983, 1993, 1999). Gardner believes that each of these have a neurological basis; have a unique set of core operations; each has its own symbol system, for example, language, numerals, musical notation; while some are correlated with others (math and music), most have low correlations. The intelligences are as follows:
 1. **Linguistic - Ability to learn and use language effectively**
 2. **Logical-mathematical - Skill at mathematics, numerical patterns and logical reasoning**
 3. **Spatial - the ability to think in pictures, to perceive the visual world accurately, and recreate (or alter) it in the mind or on paper**
 4. **Musical - the ability to understand and create music**
 5. **Bodily-kinesthetic - the ability to use one's body in a skilled way, for self-expression or toward a goal**
 6. **Interpersonal - an ability to perceive and understand other individuals - their moods, desires, and motivations**
 7. **Intrapersonal - an understanding of one's own emotions**
 8. **Naturalistic – the ability to recognize and classify various elements of nature, or to create something that is valued in one or more cultures**

Gardner's MI theory has been widely accepted by educators, probably because it "makes sense" and is consistent with people's experience in their personal interactions, both in and outside of school. For example, a teacher meets a "so-so" student several years out of school who is a highly successful jazz musician. It is also consistent with our desire to see giftedness in all students, or as one author (Gottfredson, 2003) put it, "Mother Nature is egalitarian after all." However, it should be emphasized that Gardner himself (1997) does not claim that all students are gifted.

Gardner's theory has come under criticism, however, on a number of counts. More than ten years after it was introduced, it has yet to be firmly grounded in research (Berk, 2005). Some claim it is faddish (Callahan et al., 1995). Deslisle (1996) believes that it does not explain the person who is not merely good at this or that intelligence but rather is able to conceptualize at a high level across most, if not all, of them (what psychologists have termed the "g factor" which is short for "general mental ability factor" (Sattler, 1999). Indeed Carroll, (1993) concludes that four of the intelligences (linguistic, logical-mathematical, spatial and maybe musical) really represent broad abilities, and the others belong under different rubrics, such as personality or emotion.

An interesting phenomenon, relative to the gifted (especially the highly gifted) is noteworthy. While lower ability students tend to be low in all mental abilities, high ability students are not as likely to be uniformly high (Moreland & Feldman, 2003). The higher the ability, the more likely this is to so. Thus, Einstein, while a great mathematician, was not a playwright; nor was Shakespeare a great scientist.

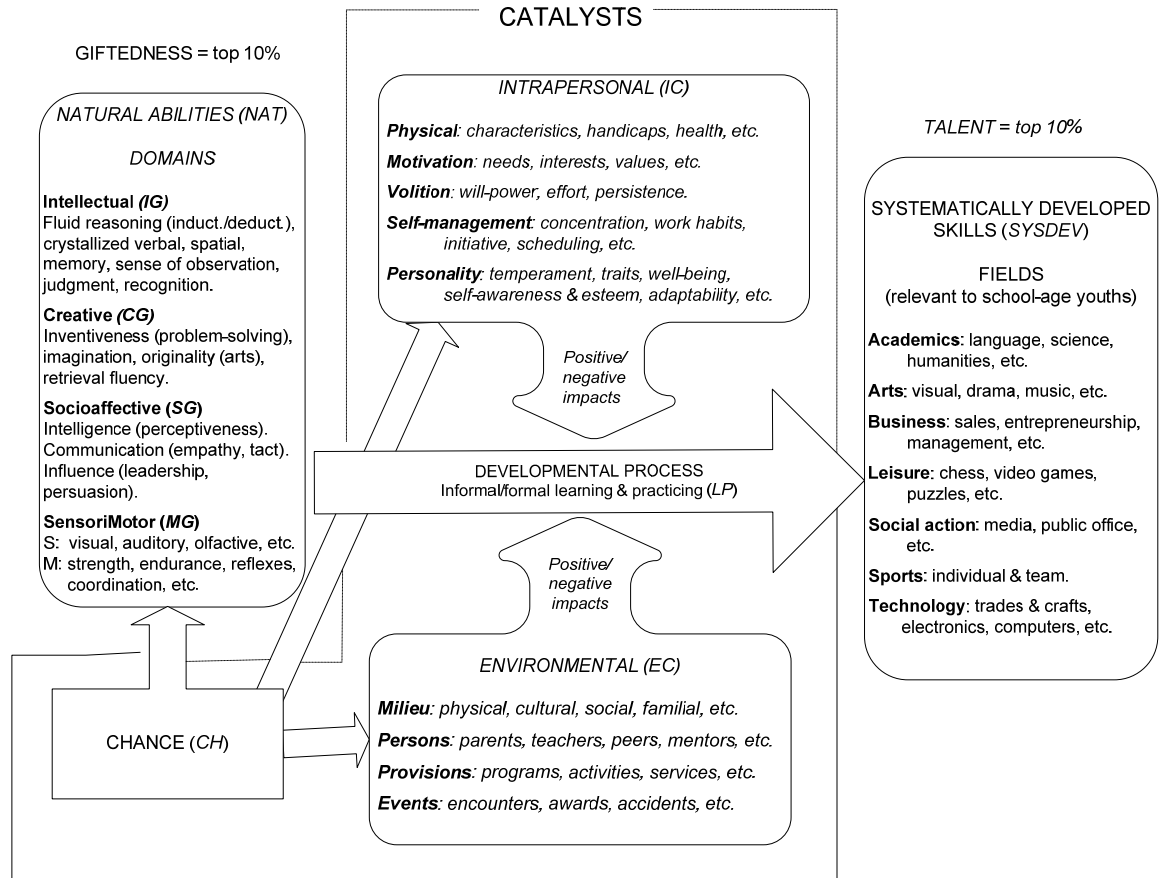
Whether abilities exist independently or not, schools will never be able to address their development equally or adequately. Indeed we struggle sometimes with just the first two. What schools can do, though, is expose students to others, create awareness and appreciation and play an advocacy role for students with particular talents in areas such as fine arts, or athletic ability.

- A final definition is Francoys Gagne's (1995) model of giftedness, which he terms **The Differentiated Model of Giftedness and Talent (DMGT)**. Gagne's definition is distinct in that it clearly distinguishes between giftedness and talent.

Defined by Gagné (2003), giftedness is the possession and use of untrained and spontaneously expressed natural abilities, in at least one ability domain, to a degree that places an individual in at least the top 10 percent of age peers. He identifies 4 domains representing giftedness: intellectual, creative, socio-affective and sensorimotor.

Talent designates the superior mastery of systematically developed abilities or skills and knowledge in at least one field of human activity to a degree that places an individual at least among the top 10 percent of age peers who are active in that field. These skills include: academics, arts, business, leisure, social action, sports and technology. Catalysts (either positive or negative) for their development include milieu, people, provisions and events.

Gagne's Differentiated Model of Giftedness and Talent



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Gagne (2003) believes a prevalence estimate is integral because, by doing this, a scholar specifies the boundaries separating those who belong to the category from those who do not. As well, the size of the population further clarifies the meaning of the concept. Finally, he concludes that exceptional talent is very rare indeed, while more “garden variety” giftedness is not.

CHARACTERISTICS

There are many qualities that may characterize gifted learners but two are key. One is **precociousness**. Simply put, gifted students learn more quickly than their peers. The second one is **intensity**, which may be seen in both the emotional and cognitive realms (VanTassel-Baska, 2003).

In recent years, the work of psychologist Kazimierz Dabrowski has been widely used to help in understanding the intensity dimension of giftedness. Gifted students are apt to display these intensities in five areas: (Dabrowski, 1989).

1. **Psychomotor**—*energetic, often physically active and may have difficulty unwinding at bed time.*
2. **Sensual**—*great sensitivity to input from all five senses; also encompasses aesthetic awareness.*
3. **Imagination**—*vivid and detailed imagination; often “thinks in pictures;” strong reaction to dreams.*
4. **Intellectual**—*loves academic challenges, learning new things; intensely curious.*
5. **Emotional**—*responds to virtually all emotions in an intense manner, which can also make the student susceptible to depression.*

Obviously what Dabrowski has termed “**overexcitabilities**” can be a two-edged sword. For example, what is presented in school can cause intense interest and enthusiasm or result in withdrawal or acting out behavior. Further he believes that these are not merely psychological characteristics, but have their roots in the central nervous system (Dabrowski, 1989).

Although there are many lists of characteristics of giftedness (one of which follows), Winebrenner (2001) has developed a very “user friendly” short list of five:

1. *Learns new material faster, and at an earlier age, than age peers.*
2. *Remembers what has been learned forever, making review unnecessary.*
3. *Is able to deal with concepts that are too complex and abstract for age peers.*
4. *Has a passionate interest in one or more topics, and would spend all available time learning more about it if possible.*
5. *Does not need to watch the teacher to hear what is being said; can operate on multiple brain channels simultaneously and process more than one task at a time.*

**Summary of Categories of Giftedness and
Corresponding Observable Student Characteristics**

Categories of Giftedness	Observable Student Characteristics
General Intellectual Ability	<ul style="list-style-type: none"> • Unusually advanced vocabulary for age • Large storehouse of information about a variety of topics • Quick mastery and recall of factual information • Rapid insight into cause-effect relationships • Makes valid generalizations about events, people, and things. • Keen and alert observer • Great deal of independent reading • Readily sees logical and common sense answers
Specific Academic Aptitude	<ul style="list-style-type: none"> • Demonstrates inordinate strengths in a given area • Able to grasp underlying principles in the talent area • Persistent in talent area and motivated internally • Prefers to work independently • Can relate to older students in the talent area
Creative or Productive Thinking	<ul style="list-style-type: none"> • Displays unusual curiosity about many things. • Generates a large number of ideas and/or solutions to problems. • Uninhibited in expressions of opinion. • High risk taker. • Demonstrates intellectual playfulness. • Displays a keen sense of humour and perceives humour in unlikely situations. • Sensitive to beauty. • Nonconforming. • Criticizes constructively
Leadership Ability	<ul style="list-style-type: none"> • Carries out responsibility well • Demonstrates self-confidence • Is well liked by classmates • Expresses ideas well

-
- Adapts readily to new situations
 - Enjoys being around other people
 - Tends to dominate others
 - Participates in most social activities at school
 - May excel in athletic activities
-

**Visual and Performing
Arts Ability**

Visual:

- Enjoys art activities
- Displays interest in other students' art work
- Elaborates on ideas from other people
- Tries a variety of media
- Is critical of own work

Performing Arts

Music:

- Sustains interest in music
- Readily remembers melodies
- Displays keen awareness and identification of a variety of sounds heard at a given moment
- Perceives fine discriminations in musical tone
- Plays a musical instrument

Drama:

- Volunteers to participate in classroom skits and plays
 - Tells stories or renders accounts of experiences
 - Uses appropriate gestures and formal expressions to communicate feelings and thoughts
 - Handles body with ease and poise
 - Holds the attention of a group when speaking
 - Creates original plays or plays from stories
-

Kinesthetic Ability

- Demonstrates good control of body movements
 - Has excellent eye-hand coordination
 - Manipulates objects and puzzles with ease
 - Able, with ease, to complete complex mazes and word searches
 - Learns new gross motor activities readily
 - Has good sense of rhythm
-

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IDENTIFICATION

With an expanded definition of giftedness has come a greater challenge in identifying gifted students. Delisle and Lewis (2003) list six common pitfalls to avoid:

Pitfall 1: Creating a definition that isn't inclusive

The “excluded” can include those who are economically disadvantaged students, from minority racial or ethnic groups; “troublemakers”; those with disabilities; and young children.

Pitfall 2: Creating a definition that suggests that all kids are gifted

Although the belief that “all kids are gifted” is well intentioned, it is not the case. Although there are many dimensions to giftedness and it is not limited to high intellectual ability, it is the level and intensity relative to age mates that sets gifted students apart.

Pitfall 3: Treating identification as an event and not a process

Identification is not a one time event. As students mature and go through school, often previously unknown or undeveloped gifts emerge. The identification process should be ongoing throughout the school years. One should be open to talking a “second look” at a student at any point.

Pitfall 4: Once in a program always in a program (and vice versa)

Sometimes students lose interest in the focus of a program, particularly as they mature. Or sometimes the focus changes and it is not appropriate for a particular student.

Pitfall 5: Using limited methods of identification

The best advice given is usually to use “multiple criteria” and “reliable and valid measures”. However, few people agree on what these criteria should be and whether they are all of equal value. As well, there are few standardized instruments that are reliable and valid for gifted students.

Pitfall 6: Failing to match identification criteria to programming

These should be meshed as nearly as possible. For example, a student who is gifted in math may not be particularly interested in a language-based enrichment program. The goal should be to have something in place to address an area of giftedness, even if this involves going beyond the walls of the school. Additionally, there is little value in identification if there are no services or programming.

How, then, should the process of identification work? The process should be in place on a regular basis as there is a developmental component to the blossoming of many gifts and talents. As well, the composition of the student body is always in a state of flux. Written guidelines, regarding the identification of students, should be developed by school districts, and should match the available programming and services (Richert, 2003).

There is no formula to identify gifted students. Ultimately teacher knowledge, insight and wisdom are even more important than the results of standardized testing. This is particularly true with students whose first language is not English, those with disabilities, and those from different ethnic and cultural backgrounds. Some of the following sources of information should be used as part of the identification process:

- *Results of standardized tests in the areas of cognitive ability, general achievement, and creativity*
- *Teacher observations, including anecdotal reports and informal assessments. Sometimes just a simple anecdote or one example of student writing, problem solving, or artistic production is sufficient*
- *Various checklists and inventories*
- *Nominations by parents, peers, and self*
- *Interviews of students and parents (may be important as many areas of giftedness are most evident outside of school)*

In addition, a high level of interest and task commitment in a particular area of learning should be given strong consideration. Some students have the ability, commitment and creativity to eventually become, not only consumers, but producers in the domains of knowledge, or the visual or performing arts. Without identification, and sometimes at a young age, this potential may never be realized (Renzulli, 1986).

PROGRAM PLANNING

MODELS

Many of the models appropriate for gifted students can be used or adapted for all students. One of the most widely recognized is Renzulli's **School Wide Enrichment Model (SEM)** (Renzulli & Reis, 1997), which was developed in the mid-seventies and which continues to be refined. Central to this model is the *Enrichment Triad Model*, designed to provide challenges and engage all students, allowing them to engage in meaningful learning and problem solving to the extent they are able (Friedman, 2005). It also creates a substantive role for parent and community involvement. The Enrichment Triad Model is comprised of three elements, which culminate with the student as producer of knowledge.

The Enrichment Triad Model

This is at the heart of the **School Wide Enrichment Model** and is comprised of three types of enrichment:

Type 1

This provides enrichment outside the regular curriculum for all students. Common examples of Type 1 Enrichment are drama or music performances, field trips, demonstrations, visiting authors or mini courses. These can be organized for a whole school, a certain age group or on the basis of interest. It may be possible early in the school year to enlist parents and others in the community to plan a Type 1 calendar of events early in the school year.

To make this the most valuable learning experience possible, it is important to prepare students through discussion, reading or demonstration before the actual event. Renzulli & Reis (1997) also suggest giving presenters teaching tips appropriate for the age group they are addressing. For example, wearing a uniform if one normally does, or bringing props or equipment used on the job.

On occasion, it may be appropriate to have an **“advanced Type 1”** for students who are particularly interested in, and already know something about, a topic. An example might be a field trip to a building which uses some alternative energy source for students who already know something about, and are interested in, alternative energy.

Type 2 Enrichment

The focus of this type of enrichment is on the development of “learning how to learn” skills. Examples include:

- (1) Learning how to use library data bases
- (2) Engaging in exercises to develop creativity or critical thinking skills
- (3) Learning how to conduct an interview

- (4) Learning various research methodologies
- (5) Improving written and/or oral communication skills
- (6) Sometimes Type Twos can also involve developing social and personal skills such as how to listen, work effectively in groups, and set goals. Many students can benefit from these kinds of experiences, although the level may differ for different students.

Type 3 Enrichment

In Type 3 investigation, the student becomes the producer of knowledge or product, often based on interest generated from a Type 1 experience. Examples are: conducting a science experiment to answer a question, creative writing, designing a set for a play, creating learning materials for other students, solving a community problem, or developing a pamphlet for a target audience. *It is essential that the Type 3 be self, not teacher, chosen; that the student use primary, rather than secondary, sources in doing research; and that the student have the opportunity to present his/her product or findings to an audience in some meaningful form (Renzulli, 1997).*

Feldhusen's Three Stage Enrichment Model

The focus of this model is on creativity but it also encompasses other aspects of thinking and learning, such as convergent problem solving, research and independent learning.

- **Stage 1** - Divergent and Convergent Thinking Abilities focuses on the content and skills as well as on creativity exercises.
- **Stage 2** - Development of Creative Problem Solving Abilities includes more complex creative thinking techniques and programs, such as Odyssey of the Mind and Future Problem Solving.
- **Stage 3** - Development of Independent Study Skills involves independent learning and problem solving (Davis & Rimm, 2004). Although this model could be used with an entire class, it is particularly well-suited to pull out programs for groups of students.

Programming at Four Ability Levels—Treffinger and Sortore

Although the authors do not call this program a model, it certainly can be used for planning, programming and organization. It consists of four levels (Treffinger and Sortore, 1992).

- **Level 1: Services for All Students** - is intended for all students and incorporates some activities to challenge even the most gifted. These include thinking skills training, independent projects, and exploratory activities similar to Renzulli's Type 1 of the Enrichment Triad Model.

- Level 2: **Services for Many Students** - include activities such as participation in academic competitions, clubs, performing and visual arts and curriculum compacting.
- Level 3: **Services for Some Students** - includes such thing as advanced classes, individual training in fine arts, and participation in special programs at universities, such as Shad Valley.
- Level 4: **Services for a Few Students** - includes independent studies and professional mentorships.

Edward deBono's Thinking Skills Training

This is a structured program for age 8 and up, in which students are taught thinking skills in a series of sixty structured lessons designed to be used over a two year period. Each lesson has an acronym, for example CAF for “consider all factors”. In this example students are asked to determine whether it would or would not be a good idea to pay students for attending school, and to explain their reasons. All lessons are lively and interesting. DeBono's program is not meant exclusively for gifted students, but it beneficial to them as well as to students of any age and ability level (deBono, 1986).

A Taxonomy for Learning, Teaching and Assessing: (A Revision of Bloom's Taxonomy of Educational Objectives)

Benjamin Bloom published his framework for categorizing levels of abstraction of questions back in 1956. The developers of the taxonomy's revision do not see the current one as supplanting the original, but rather regard it as updating (given the many changes in society and education in the intervening years) as well as attempting to refocus educational attention on the original (Anderson & Krathwohl, 2001).

Some of the most relevant changes are: a focus on usefulness in planning curriculum, instruction and assessment; an emphasis on teachers as the intended audience; and some renaming and changes in order (Anderson & Krathwohl, 2001).

The revised cognitive taxonomy is:

Bloom's Original Taxonomy	Revised Taxonomy
Knowledge	Remember
Comprehension	Apply
Application	Evaluate
Analysis	Understand
Synthesis	Analyze
Evaluation	Create

STRATEGIES

Enrichment Clusters

Enrichment clusters provide an opportunity for students to work in small groups with a teacher or facilitator over an extended period of time on a topic of interest. An example might be a cluster on quilt making, which would meet once a week over a two month period. This cluster could include basic principles of geometry and design, history and sewing. Another might be birding where students learn about bird recognition, calls, habitats and migration patterns.

Although clusters involve a fair amount of planning, they are, and have been, used in New Brunswick elementary schools. Typically they are used in the fall term and involve an hour to an hour and a half each week. Facilitators can be teachers, but to keep the groups small it is necessary to use outside facilitators as well. These can be parents, artisans, university students or any person from the community with a particular interest or hobby. When using facilitators who are not teachers, it is a good idea to keep the group small.

Curriculum Compacting

Curriculum Compacting is part of Renzulli's School Wide Enrichment Model (Renzulli & Reis, 1997). It has a two-fold purpose: first, to eliminate teaching of what students already know; and second, to buy time to work on an independent study/project, learn new material, be accelerated in a particular subject area or work with a mentor. It involves several steps (Renzulli, Smith & Reis, 1982):

1. Determine the learning outcomes or goals of a unit or part of a unit.
2. Pretest students, either all students, or in some cases, students who may be likely candidates for compacting. Identify an area of strength or mastery. An example might be a math concept or operation.
3. Document mastery.
4. Provide an opportunity for students who reached the predetermined level of mastery to learn any concepts they may not know
5. Provide alternative learning opportunities, such as independent study, for these students. Student interest should be taken into account.

Compacting is most easily used in subject areas where learning is discrete and easily assessed, for example math and spelling. However, it can be modified for use in any number of ways. For example, one teacher used it in teaching middle school French as a second language with students who had previously been in French Immersion. Students who were proficient "worked" in French speaking environments one day a month. This proved to be a boost for their often battered self confidence and also improved their general level of motivation and attitude toward school.

When using compacting, it is a good idea to obtain permission from both administration and parents. Parents are sometimes puzzled when they perceive that their children are missing instructional time, but are invariably pleased when compacting is explained to them.

Learning Activity Packages

These can be used at any grade level and for any subject area. The learning activity package includes objectives, materials, directions, and evaluation criteria. Some are commercially available but they can, of course, be teacher-made and re-used. They can be used as a prelude to independent studies, as they are relatively structured but at the same time provide an opportunity to learn independently. Chuska (2005) lists several functions:

1. A substitute for a regular teaching unit
2. Extension of regular work
3. Areas of interest not included in the regular curriculum.

Although Learning Activity Packages can be used with a variety of students, they are particularly appropriate for gifted students who often have a high degree of initiative and motivation and who may prefer to work individually. A variation suggested by Chuska (2005) is to allow students to design packages for other students, allowing them to use their skills for planning, organizing material, identifying resources, sequencing activities and evaluating materials.

Learning Centers

Learning centers can be used for any subject area and grade level. They can be used to teach, or to provide enrichment in a subject area such as math, science, foreign languages, music, and social studies. However, at least some of the activities should be differentiated on the basis of complexity or difficulty. Activities can also be differentiated on the basis of interest or learning style.

Fine Arts Fairs

Fine Arts Fairs can be wonderful opportunities to demonstrate and celebrate talents in the fine arts that are only a small part of the curriculum of most schools. These are usually middle and high school events and are held in the evening with several events going on simultaneously. Parents and guests, who may include local professional artists, musicians, and dancers, then have the opportunity to visit many venues in the course of the evening.

Frequently, refreshments are available and student performers are often happy to provide background music for this part of the evening. For students, an occasion like this is a wonderful opportunity to share their often impressive talents, to increase their confidence and to become increasingly motivated to persevere in developing themselves in often unappreciated areas. For teachers, it can be a moving experience to witness and appreciate the many talents, sometimes unknown, of their students.

Independent Study

Independent studies are closely related to Type 3 investigation. The student chooses, often with some teacher assistance, an area of study to be completed in a certain time period. There are many advantages to this type of learning. (Chuska, 2005) lists several:

- Takes advantage of students' intrinsic motivation
- Avoids student boredom
- Students learn to think beyond the text book and course objectives
- Students learn that initiative is rewarded
- Promotes autonomy and independence
- Gifted students are often independent and prefer to work alone

Clark (2002) raises a valuable caution though about teacher expectations, pointing out that, although gifted students may have a great deal of curiosity, interest and motivation, these are not synonymous with skills. Skills such as employing appropriate methodology, learning how to organize and evaluate data, and forming conclusions are not things even the brightest child "comes with". These skills need to be explicitly taught. Sometimes an older or more experienced student can function as a mentor for a younger or less experienced one.

Parke (1989) offers guidelines for conducting an independent study with gifted students:

1. Limit the topic to an area that can be easily studied. Particularly with young children, choose topics about which information is readily available, but not so much that the student is swamped. The topic of computers is too large for a student of any age – information is endless and the student will have trouble deciding what is germane to the study. Computer languages, choosing software, or computerized simulations are topics that will lead the students to the information they seek.
2. Complete a planning form with the student. This form should include the topic to be studied, questions to be answered, resources to be used, ways to report the data, and methods to evaluate. This can be referred to during follow-up meetings to see if revisions are necessary.
3. Put a time limit on the study; do not allow it to go on indefinitely. Six weeks is too long for a first-grade student to be studying a topic on her own. For younger

children and others who are not experienced in this type of program, it is best to keep the time frame relatively short. As students become more accomplished, the studies can become more complex and extensive in length.

4. Assist students with locating and accessing various resources; e.g., people to interview and audio-visual aids. Before they start, help students to plan the resources that can be used. Developing the strategies needed to procure information is one of the outcomes of this program, thereby making it an excellent way to teach students how to learn.
5. Keep the students thinking about a product for their study. Encourage divergent products that go beyond the usual report and picture or map.

Mentoring

Mentoring is a time-honored practice going back at least as far as ancient Greece (Davis & Rimm, 2004). In the context of the school system, it is most commonly used with high school students, but it does not need to be limited to this age group. However, it is particularly appropriate for gifted students who can meet curricular outcomes with substantial speed, and who often display a precocious interest in a career area. Mentoring is also effective for students whose area of giftedness is not likely to be addressed in school; for example, in one of the fine arts, such as sculpting. As well, aesthetic gifts make their presence known at an early age, with most people aware of this by age five and some as early as age three (List, Hatford and Renzulli, 2000). Without a mentor, these children are apt to feel isolated in school and apt to stifle their creativity in order to be like peers.

Mentors can be professionals, trades' people, retirees, other teachers, university students, or older students in the school. Mentoring can take place either in or out of school or even online. An email program that helps students get in touch with experts is <http://mentor.external.hp.com>. A website that helps set up international tele-monitoring is www.telementor.org. It is important to note that, whether online or in person, it is not enough to merely "throw two like minded people together." The following guidelines are important:

1. Mentors and students must be carefully matched.
2. There must be a clear statement of purpose and clear expectations for both parties.
3. Monitoring the process is important.
4. Evaluation criteria should be provided, for both mentor and student.

Mentoring has the potential to be one of the most significant of life experiences. In the words of Weinberg (1990), ideally, mentoring is a dynamic, transformative relationship between two people in which attitudes, passions and traditions are shared and internalized.

Co-operative Learning

Co-operative learning has become an integral part of teaching and learning. In fact, one scholar (Robinson, 2003) has compared it to a sausage. It is cheap and can be tasty if the diner does not think about what's in it; on closer inspection, however, not all of its questionable ingredients should be ingested.

Features of co-operative learning, such as heterogeneous grouping and interdependent rewards, which have been deemed crucial by co-operative learning advocates, need to be examined more critically, particularly in light of emerging evidence that teachers do not implement the models strictly. It is also possible for students to appear engaged, even if, at times, their interactions are not necessarily productive. This may be particularly true in the case of gifted students. Many do not like heterogeneous co-operative learning and find it frustrating (Winebrenner, 2001). Conversely, the presence of gifted students in a group may be intimidating to other students. Perhaps the best advice is to use heterogeneous co-operative learning judiciously, and sometimes permit gifted kids to work in homogenous groups or by themselves if they prefer this option.

Acceleration

Acceleration is any strategy that results in advanced placement or advanced credit. Strategies that supplement or go beyond standard grade level work but do not result in advance credit or placement are enrichment (Davis & Rimm, 2004). Although the concepts are different, they are not exclusionary. In fact, acceleration and enrichment are intrinsically linked, and students who have been accelerated will still require enrichment strategies. For students who are candidates for acceleration, "skipping a grade" is never enough of and by itself.

Acceleration can take several forms:

Grade Acceleration - the student skips a grade, usually at the elementary or middle school level.

Content Acceleration - the student moves through a subject area at a rate commensurate with his/her intellectual ability and capability to proceed.

Examples of acceleration include:

- Advanced Placement and International Baccalaureate (These university entrance programs provide academic challenge through acceleration and enrichment.)
- Early graduation

- Early enrolment in university (Traditional entrance requirements are waived in special circumstances.)
- Dual enrolment (A student may take university courses while in high school, high school courses while in middle school, or middle school courses while in elementary.)
- Credit by examination (A student may challenge for credit by demonstrating appropriate prior learning. In addition to knowledge outcomes, students must show mastery of outcomes relating to social issues, processes and values. The student obtains a course credit and moves into another course or into an independent study program.)
- Advanced courses through distance education
- Subject acceleration (A student takes a subject at a higher level than his/her grade level.)
- Telescoping (This reduces the amount of time a student takes to cover the curriculum. For example, a student may complete two grades of a subject in one year.)

Acceleration programs for the gifted must consider the following:

- The emotional needs of gifted students
- The need for peer interaction
- Reorganization of the curriculum to include higher level skills and concepts
- Subject matter organized according to structure and/or theme
- Diversity of teaching strategies and learning experiences

In general, both the public and some professionals support enrichment, but many may take a dim view of acceleration. There is a widely held perception that acceleration is harmful to development even though the results of decades of research have been consistently positive (Kulik & Kulik, 1991). Over the years, researchers have studied different types of acceleration for students at different ages and have concluded that there are not discernable negative effects in either the academic or social realms (Schiever & Maker, 2003).

However, decisions about acceleration (especially grade acceleration) are best done on a case by case basis and should include the following considerations: (Davis and Rimm, 2004)

- *Intellectual precocity*
- *An individual intelligence score of 130 and above is recommended for early admission (Feldhusen, 1992)*
- *Social and emotional maturity*
- *The student should not have serious adjustment difficulties. On the other hand, it is important to differentiate between this and students who may have behavior problems because of an inappropriate grade placement*
- *Reading and math readiness, if acceleration is being considered for young children*
- *As reading and math are at the heart of the early grades, it is recommended that students who start school early be advanced in these areas*
- *Overall health. Frequent ill health is likely to result in missing school which may place too much stress on even a highly-gifted student*
- *If a school has a large number of very bright students, the regular fare may provide sufficient challenge*

Differentiation

Differentiation is teaching key concepts by varying the level of abstraction, complexity and open-endedness (Heacox, 2004). In the past ten years, it has become recognized as a central strategy to meet the needs of gifted students in the widely diverse classes found in schools today. It has the potential to transform more traditional teaching, but at the same time it is challenging to master.

Differentiation occurs along three distinct curriculum dimensions: content, process and product (Tomlinson, 2003).

Content *refers to what a student should know, understand or be able to do.*

Process *refers to activities or ways for a student to understand information and concepts. In the case of a gifted student, this might involve providing the student with more independence, open-endedness and less structure.*

Product is the student's demonstration of what he or she has learned; for example, an essay, construction of a model, or a piece of art. In the case of a gifted student, this may involve solving real problems and high levels of innovation or transformation.

Curriculum can also be differentiated on the basis of: **interests** (drama, computers, science, music etc.); **instructional preferences** (lecture, discussion, independent study, apprenticeship); and **learning environment** (Tomlinson et al, 2003).

Examples of Differentiation for Gifted Students

Language Arts

Students may create a puppet show of a story; write a different ending, read another book of the same type or by the same author and compare/contrast the two (Winebrenner, 1992). Additional examples might include

Science

A nutrition lesson on Canada's Food Guide may present an opportunity for students to research the history of the guide and reasons for changes to it (Winebrenner, 1999). Alternatively, students may compare the Canada Food Guide with the US Food Pyramid. Further, students may determine what vitamins and minerals would be missing in a diet with no fruits and vegetables and prepare an interesting newscast with this information.

Social Studies

On a unit on immigration looking at causes and consequences, students may reconstruct a conflict situation, evaluate beliefs, values and points of view of all parties involved and what might be done to resolve the issue (Heacox, 2004).

Homework

Tomlinson (1999) suggests differentiating homework. For example, some tasks assigned might be for all, while other tasks for different groups of students.

Guidelines for Differentiation

Differentiation can be challenging, depending on the level of complexity attempted, and almost certainly takes a number of years to fully master. Tomlinson (1999) makes the following suggestion for teachers who are starting the differentiation process:

1. *Start small.*
2. *Be organized.*
3. *Practice activities with the whole class.*
4. *Put directions on an overhead or flip chart.*
5. *Settle the class with a familiar activity.*
6. *Have base seats for the start and finish of each day.*
7. *Make yourself “off limits” at certain times, particularly at the start of an activity, so that students will be encouraged to figure things out for themselves.*
8. *Don’t try to grade everything.*

CREATIVITY

There is an increasing recognition today that a key component of giftedness is creativity. It is not sufficient to simply know a lot of “stuff” regardless of the discipline. Rather, it is what we do with what we know that is important, particularly how we are able to come up with new solutions, products and applications. Despite an increasing awareness of the importance of creativity, a number of fallacies continue to circulate. Below are a few of the most common, followed by the corresponding fact:

1. **Fallacy**-- Some people are naturally creative and some are not.
Fact--Although some people are naturally more creative than others, everyone has some degree of creativity. Further, creativity can be developed and even increased through a combination of effort and experience (Davis & Rimm, 2003).
2. **Fallacy**-- Creativity is mostly associated with the Fine Arts.
Fact-- Creativity can also involve problem solving in any domain such as science, math, societal and world issues.
3. **Fallacy**--Creativity correlates strongly with measures of intelligence.
Fact--There is some correlation between IQ and creativity up to a certain point. Beyond that there is not. Thus, it is unlikely to find a very creative person who is not at least of high average cognitive ability but one does find people with high IQ scores and limited creativity.
4. **Fallacy**-- Creativity is a free-flowing gift that manifests itself spontaneously and without great effort.
Fact--Creative production requires self discipline, practice, overcoming obstacles and planning. In the words of psychologist Jerome Kagan, “Creativity is not an unconstrained expression of ideas that acknowledges no boundaries and addresses itself to no particular problem” (Kagan, 1978).

Definition

There is no universally accepted definition of creativity. However, Simonton (1999) defines it as production of a product that

- (1) must be original, and
- (2) must prove adaptive in some sense.

This is similar to Kagan’s (1978) definition where he states that a creative intellectual product must be a constructive and appropriate solution to a problem which fuses known elements into a new and coherent synthesis.

In children, the creative process is likely to be expressed broadly as they are likely to have a broad range of interests and have not settled in to a specific domain of interest. Creativity in children can be evaluated by comparison to age peers. As one becomes

more experienced and committed to various areas of knowledge, the manifestation of creativity is likely to become more domain specific (Coleman & Cross, 2005).

Creative Abilities

There are a number of sub-abilities that seem to relate to creative potential. The first four listed are from the work of Torrance (1995) and Guilford (1967) and are well known, but there are numerous others listed by Davis and Rimm (2004). Some of these are listed and briefly described below:

Fluency

The ability to produce many ideas in response to a problem or question

Flexibility

The ability to take different approaches to a problem, to think of ideas in different categories, or to view a situation from several perspectives

Originality

Uniqueness

Elaboration

The ability to add details to, embellish, and implement a given idea

Problem finding, problem sensitivity, problem defining

An ability to *comprehend* the “real” problem, see a problem more broadly, and discern missing information

Visualization

The ability to picture things in one’s mind and to mentally manipulate images

Ability to regress

The ability to think like a child whose mind is less cluttered by habits, rules and traditions

Analogical thinking

The ability to borrow ideas from one context and adapt them to another, or the ability to borrow a solution from one problem and transfer it to another

Evaluation

The ability to think critically and to evaluate the “goodness’ or appropriateness of an idea, product or solution

Analysis

The ability to separate parts of a whole

Synthesis

The ability to see relationships, to combine parts into a workable, perhaps creative, whole

Transformation

This includes the ability to adapt something to a new use; to see new meanings, implications and applications; or to creatively change one object or idea into another.

Extend boundaries

The ability to go beyond what is usual

Intuition

The ability to make mental leaps, make references or see relationships based on limited information

Predict outcomes

The ability to foresee results

Resist premature closure

The ability to defer judgment and not jump to the first idea that comes along

Concentration

The ability to focus on a problem for long periods of time, free from distractions

Logical thinking

The ability to deduce reasonable conclusions, and to separate relevant from irrelevant

Aesthetic thinking

Sensitivity to, and appreciation of, beauty in art, design and nature.

Characteristics Related to Creativity

Winebrenner (2001) cautions that many creative thinkers do not do well in school. At the same time, people who have made the most significant contributions to humankind generally exhibit the characteristics of giftedness. It is often these non-conformers who have profoundly affected our lives. Winebrenner (2001) lists the following characteristics:

- Displays original ideas and products
- Is fluent in idea generation and development
- Is able to elaborate on ideas
- Demonstrates flexibility of ideas and points of view
- Experiments with ideas
- Has a good sense of humor
- Is impatient with routine and predictable tasks
- Has a tremendous capacity for making unexpected assumptions

- Challenges accepted assumptions
- Says what he thinks without regard for consequences
- Has a great imagination; daydreams often
- Dresses in nonconformist ways
- Can persist at one task to the total exclusion of others
- Is a brilliant thinker but absentminded
- Is passionately interested in a particular topic or field of endeavor
- May be talented in the fine arts
- May do better on standardized tests than class work leads the teacher to expect

Clearly, in the classroom, the creative child can be both a joy and a challenge or some combination of the two. Not infrequently, a teacher is called upon to make wise judgments about when conformity is reasonable and necessary and when it will needlessly impede and frustrate a student. Knowledge about the nature of creativity, personal empathy and experience all help to develop this wisdom. Two very interesting characteristics that are very solid indicators of creativity in secondary students or adults are having an **imaginary playmate** as a child and **involvement in the theater** (Davis, 2003).

Albert (1998) listed a number of cross-cultural personality traits that are indicative of creativity. Included in these are:

Impulsivity

Attraction to complexity and unconventional ideas

Moderate rebelliousness

High ego strength

Passion

Strategies to Enhance Creativity

There are many strategies that teachers can use to promote creativity in students, which also have the added benefit of increasing a teacher's personal creativity! Some are specific to school and some are more general.

School Strategies

The following strategies are suggested by a group of teachers and quoted in Fleith (2000):

- *Cluster groups based on student interest*
- *Providing options*
- *Drawing*
- *Brainstorming*
- *Open ended activities*
- *Hands on activities*
- *Creative writing*

Others include:

- *Mentoring with a creative person or professional*
- *Recognizing and valuing creativity in students*
- *Allowing “incubation time” for students to formulate answers to divergent questions*
- *Encouraging risk-taking as well as modeling it*
- *Being enthusiastic*

Developing General Creativity (Teachers)

- Keep a creativity journal—personal efforts to be creative, observations about others’ creativity, creative ads, ideas etc.
- Make oneself do something different every day - even small things like taking a different route to school or ordering something different from a menu.
- Set goals, both personal and professional, or in the case of students, school related.
- Travel to different locales which provide one with a different perspective as well as a wealth of “raw material” for creative production.

In addition, there are numerous websites and books devoted to creativity, which appear in appendix of this document.

SOCIAL EMOTIONAL DEVELOPMENT

Although students who are gifted can be viewed as having certain advantages, they are subject to the same life experiences, peer pressure and societal influences as their peers. In addition, by reason of being gifted they are “different” which can result in feelings of isolated or attempts to diminish their giftedness in an effort to fit in. When a group of grade 7 and 8 students was asked to rank their concerns, the following ten emerged in order of priority:

1. Establishing and maintaining positive relationships with peers
2. Dealing with oversensitivity to what others say and do
3. Making appropriate career choices
4. Developing the ability to relax and relieve tension
5. Maintaining the motivation and desire to achieve
6. Developing positive leadership skills
7. Getting along with siblings
8. Developing tolerance
9. Dealing with striving for perfection
10. Avoiding prolonged periods of boredom (Strop, 2002).

Early in the last century, it was believed that early intellectual giftedness culminated in adult disaster and disintegration in the form of psychosis, or at least an inability to cope with the stresses of life. Thanks to the work of Terman (1947) and others after him, (Coangelo & Davis, 2000) we know that this is not the case. However, there is some disagreement about the extent to which the degree of giftedness may affect social development. Some believe that this is of no consequence while there are others who believe that the moderately gifted are likely to be better adjusted than those who are highly gifted and have a smaller peer group.

Some, especially slightly older students, may experience “existential depression”, a realization of the problems of the world, such as HIV-ADS, destruction of forests, religious and ethnic wars, or other social issues. Web (1993) added to this the fact that the student often cannot see how he/she can make a difference and realizes that peers do not experience the same level of concern.

A very common problem associated with giftedness at all ages is **perfectionism**. In the words of Clark (2002), “When observed as an obsession and preoccupation inhibiting the gifted child from trying new experiences for fear of failing, perfectionism is a serious and limiting problem.” Perfectionism may also manifest itself as believing that you can never fail and that even if you come in second you are a loser (Delisle & Lewis, 2003). Parents can sometimes inadvertently contribute to the problem by “overpraising,” which can imply that the student is only valued for superior achievement. According to Clark (2002), the first step with high school students is to acknowledge and clearly affirm what is happening. This can be done in way that is not seen as scolding or judging. Other suggestions, proposed by Seigle (2000), to help at all ages include:

- *Set realistic goals and high, but realistic, standards.*
- *Encourage risk taking but also model it.*
- *Accept and laugh at your mistakes.*
- *Reframe failure and mistakes as learning opportunities.*
- *Teach relaxation techniques.*
- *Encourage a playful attitude toward work.*

Others recommendations include:

- *Encourage journaling, which is often cathartic (Delisle & Galbraith, 2002).*
- *Permit some choice in assignments (Delisle & Galbraith, 2002).*
- *Help students learn to laugh. Use cartoons, puns.*
- *Make the classroom a human place where everyone can laugh (Delisle & Galbraith, 2002).*
- *Encourage students to pursue leisure activities for pure enjoyment.*
- *Read biographies about famous people, noting their many failures!*
- *Teach children that every task is worth a relative degree of perfection.*
- *It may be helpful to discuss with parents ways in which you can work together.*

Some specific POSITIVE characteristics, related to social/emotional development, that gifted students are likely to have include:

1. High energy level
2. Leadership ability
3. Independent thinking
4. High social status among classmates
5. Idealism
6. Strong sense of justice and fairness

Some NEGATIVE characteristics they may have include:

1. Tendency to exaggerated self criticism
2. Perfectionism
3. Belief they must hide their giftedness to be accepted by peers (Davis & Rimm, 2004)

In some instances the “negatives” associated with giftedness, which can be coupled with other challenges and problems, can necessitate therapy from a well-trained professional who is versed in the needs of this population. In fact because of their often strong verbal skills and level of introspection, “talk therapy” is often very effective.

SCHOOL BASED STRATEGIES/ACTIVITIES TO HELP SOCIAL/EMOTIONAL DEVELOPMENT

There are many school and community based strategies that are especially useful for gifted students. These include:

MENTORING

Mentoring involves a student meeting regularly with a professional or older student. Although we often associate mentoring with the secondary level, it can also be used very effectively with younger students.

Purpose

1. To make students more aware of career and educational options
2. To give students the opportunity to learn specific technical skills and concepts, communication and social skills, as well as creative and problem solving skills
3. To provide students the opportunity to learn beyond the limits of the school and curriculum
4. To provide students with access to professional and leadership role models in the community

Guidelines

1. Match mentors and students carefully.
2. Have a clear statement of purpose. It is not enough to “throw two people together”.
3. Record and monitor what is going on.
4. Provide evaluation criteria for both mentor and student.

Ideally, mentoring is a dynamic, transformative relationship between two people in which attitudes, passions and traditions are shared and internalized.

Bibliotherapy

Bibliotherapy is a program that uses books and other reading materials as tools to aid children in solving their problems, whether personal or educational (Clark, 2002). Through guided reading and discussion, students learn to understand themselves and their environment, build self esteem, meet the developmental challenges of adolescence, and develop coping skills (Delisle & Galbraith, 2002). Bibliotherapy includes 3 components: a reader, a book, and a leader; and 3 processes: identification, catharsis, and insight. It is up to the leader to frame questions that will explore and expand on these elements. Although bibliotherapy can be used with all students, it has particular advantages for the gifted, as it uses their intellectual strengths, such as the ability to generalize, conceptualize and think abstractly, to support other areas of their development (Clark, 2002).

An analysis by Walberg, Williams & Zeisner, 2003 shows that the biographies of eminent men and women indicate that accomplished adults and young people share common traits. They are intelligent, hard working, and persistent, and generally follow through despite difficulties. Many are inquisitive and original enough to question conventions. It is interesting that most of these traits can be traced back to early in life.

According to Schroeder-Davis (1994), for many students in junior and senior high school, being gifted and talented is a double-edged sword. While their inner lives and academic worlds can be exceedingly rich, the social stigma and peer resentment that often accompany outstanding ability and achievement can be extremely painful. Books can fill a void for these highly able children and their advocates.

A valuable resource for those considering bibliotherapy is '*Some of my Best Friends are Books*' (2nd edition) by *Judith Halstead*. This book is modestly priced and provides over 300 titles and reference materials to support gifted children. Indices by grade level (K-12), author, title and theme make finding appropriate titles easy, and discussion topics are provided for most titles. Halstead also describes how to use the books to support emotional and intellectual development.

DRAMA

Many gifted students are strongly attracted to drama, as it tends to be a confidence builder and allows them to use their strong verbal ability. In addition, it can lead to students to increased self awareness, development of empathy, and an opportunity to "escape" the reality of their own lives and experience that of another. This alone can be a powerful experience. Students also experience the joy and frustration of working toward a common goal as part of a large and diverse group.

Drama opportunities include such activities as role plays, interviews with historical figures, improvisation, and puppetry, studying the history of drama, visiting rehearsals, writing or re-writing scripts, musical productions, readers' theatre, and many others.

FINE ARTS

The fine arts provide numerous advantages and are often very attractive to gifted students, even those whose primary "gift" may not be in the fine arts. (It is noteworthy how many scientists and mathematicians are attracted to music as a leisure activity.) Engaging in fine arts can reduce stress and anxiety, increase self awareness and insight, develop "right brain" talents, and provide opportunities for socialization with like-minded peers.

LEADERSHIP DEVELOPMENT

Closely akin to Renzulli's "social capital" concept is fostering leadership potential. As is the case with many personality characteristics, leadership is both innate and capable of development. Not all gifted people are leaders; indeed some are neither leaders nor followers, but choose to march to their own drummer. However, many leaders are gifted.

Renzulli (2001) list the following criteria upon which student leadership can be evaluated:

1. Carries responsibility well and can be counted on to do what has been promised
2. Is self confident with both age mates and adults
3. Is well liked
4. Is cooperative, avoids bickering, and is generally easy to get along with
5. Can express him or herself clearly
6. Adapts to new situations, is flexible in thoughts and action, and is not disturbed when the normal routine is changed
7. Enjoys being around other people
8. Tends to dominate, usually directs activities
9. Participates in most school activities, can be counted on to be there
10. Excels in sports

Tannenbaum (2000) looked at **social leadership** as the ability to help a group reach its goals while bettering human relationships within a group.

There are a number of **strategies** and experiences that develop **leadership** in students:

1. **Mentorships** (see above)

2. **Teacher-Student Seminars** (Chuska, 2000)

These are invitational problem solving committees whose members (teachers and students) meet regularly to discuss school related situations, concerns or problems.

3. **Involvement in Community Projects** (Magoon, 1980)

Students work to improve some aspect of community life or to solve some community problem. The focus can be relatively small, such as a small beautification project, or relatively large, like establishing an after school program for younger students.

4. **Simulations, such as Model Parliament**

5. **Volunteer experience**

This can take any number of forms and can involve work in after school programs, such as sports or drama productions, fund raising, or tutoring.

Other approaches to leadership development, such as Karnes and Chauvin's (2000) Leadership Development Program look at the study of leadership itself and ways to develop critical components e.g. organizational ability, communication skills, and goal setting. (Further information on this program is available from Great Potential Press, Scottsdale AZ).

UNDERACHIEVEMENT

Underachievement is defined as “a discrepancy between the student’s school performance and some index of actual ability, such as intelligence, achievement, or creativity scores, or observational data (Davis and Rimm, 2004). It is wide ranging and pervasive and found across all ability levels, including the gifted. In the words of Reis (1998), “Student performance that falls noticeably short of potential, especially for young people with high ability, is bewildering and perhaps the most frustrating of all challenges both teachers and parents face.”

The characteristics of underachieving gifted students are varied, but the most commonly mentioned are low self concept, lack of motivation and disinterest in academic activities. Poor study habits, immaturity, lack of persistence, dependency, and impulsiveness are also often part of the picture. Students frequently appear not to have “gotten” the relationship between success and effort. Sometimes they can also be hostile and angry (Clark, 2002).

Recently, Ruban and Reiss (2006) found differences in the study strategies used by high and low achievers at the university level. These differences are believed to have originated much earlier in students’ academic careers. High achievers are “deep processors” who transform, synthesize, and integrate knowledge. When studying, they monitor comprehension, have an organized system of note taking, outline and reorganize material, write summaries, and create concept maps and diagrams. In contrast, low achievers tend to be “surface” processors of knowledge. When they study, they rely on strategies such as re-reading, memorizing, and writing information on flashcards.

We would like to believe that ultimately maturity takes hold and by the time these students are mature young adults they “catch fire” academically and go on to great things. This does occur approximately twenty-five percent of the time, at least to the extent that these students complete university and maintain a respectable GPA (Peterson, 2000). However, underachievement is easiest to reverse in elementary school and more resistant to later intervention (Clark, 2000). It is not wise to “wait it out”. The fact remains that, generally, the best predictor of future performance is past performance.

The causes of this phenomenon are complex and can involve societal, school, family and individual factors, or more often, some combination of these.

Societal

We live in a society that places limited value on academic achievement. To the extent that it is valued, it is often seen as a means to an end, often a material one. In addition, we live in a society that demands instant gratification and seemingly an ever shortening attention span. A recent British consumer study of cell phone shows found that participants rated any show longer than three minutes as too long (Kennedy, 2006).

School

Rimm (2003) lists the following school related contributions to underachievement:

- An anti-intellectual school atmosphere that sets high priorities for athletics or social status, but not for intellectual achievement
- An anti-gifted atmosphere that considers gifted programming elitist
- A rigid classroom environment that encourages all children to study identical materials at similar speeds and styles. Gifted students may teach others, but they are not provided challenging curriculum (Gallagher, 1997; Reis, 1998; Rimm, 1995; Winebrenner, 2000)
- Teachers who rigidly fail to see the quality of students' work because of different values, personal power struggles or racial prejudice (Davis & Rimm 1998)
- An unidentified learning disability or disorder, such as ADHD, which can mask giftedness
- An unchallenging curriculum. Reis and Purcell (1993) found that gifted students in elementary school have already mastered 35% to 50% of the skills they will be taught in a specific grade before even they have entered it

Family

The role that families can play in underachievement is complex and almost unlimited. A thorough discussion is beyond the scope of this document. However, Clark (2002) presents a list of some characteristics that are likely in families of underachieving students:

- Children are dependent on mothers.
- Fathers tend to be rejecting and domineering and provide little warmth or affection.
- Parents set unrealistic goals for their children.
- Parents allow achievement to go unrewarded.
- Children do not identify with their parents.
- Deep social and emotional problems are present in the family.
- Parents are not active in school.
- Children's achievements present a threat to parents.
- Parents do not share ideas, trust or approval.
- Parents are restrictive, severe, or inconsistent in disciplining their children.

If the neighborhood can be considered an extension of the family, Clark (2002) also notes that it can devalue education.

Personal Characteristics

The main pressures that gifted student feel, according to Rimm (2002) are:

- The need to extraordinarily intelligent, perfect or “smartest”
- The wish to be extremely creative and unique
- The concern with being admired by peers for appearance and popularity

Under less than ideal circumstances, these pressures can result in any, or several, of the following: perfectionism, procrastination, loss of confidence, denial of giftedness, an “I could care less” attitude, or outright hostility.

Strategies for Prevention and Reversal

First, it must be stated that because the causes are so complex and inter-related, reversal of underachievement can be very difficult and does not always succeed. Using the well researched and intensive Trifocal program that is described below, the success rate is around 80 % (Rimm, 1995). Because the stakes are so high for the student, family, school, and society at large, the effort is worthwhile.

Rimm’s Trifocal Model consists of six steps, which are briefly described below:

Step 1 - Assessment of Skills, Abilities and Types of Underachievement

An individual IQ test is highly recommended, as it provides valuable information about a student’s general intellectual ability, and areas of strength and weakness, and can provide valuable information about how a student approaches problem solving. In addition, creativity and achievement tests are recommended.

Step 2 - Communication

This should involve parents and teachers. If parents are unwilling or unable to be partners, the school can choose a “child advocate” from within the school.

Step 3 - Changing the Expectations of Important Others

Convincing everyone involved (student included) of appropriate expectations is critical here. Often test results and anecdotal information can provide convincing evidence of abilities.

Step 4 - Role Model Identification

Rimm believes this is a critical turning point for the underachieving student and that other interventions pale in comparison with it. Ideally, this will be a parent, but can be an

appropriate mentor, sibling, coach, or teacher. What is of most importance is not the title, but the match.

Step 5 - Correcting Skill Deficiencies

The underachiever almost always has skill deficiencies (unless they are very young) because of poor work habits. Tutoring should be goal-directed and of a specified duration.

Step 6 - Modification of Reinforcements at Home and School

It is important to set long and short term goals that ensure success. Often some type of external reinforcement can be helpful in the initial stages. However, by itself, step 6 is not sufficient.

Other Interventions

There are other interventions that are less comprehensive, and probably not as effective as the Trifocal Model, but still worthwhile when professional resources are not available. As suggested by Emmerick (1992), these include:

1. The teacher cares for and sincerely likes the student as an individual.
2. The teacher is willing to communicate with the student as a peer. The student feels they can “really talk” to the teacher about topic of concern or interest.
3. The teacher is enthusiastic and knowledgeable about the subject taught. Students report instances in which they were motivated by a teacher’s love for a subject and as a result they performed well even in subjects they did not like.
4. The teacher is perceived as not being mechanical. Student participation is welcome and teachers incorporate a wide range of resources and teaching strategies.
5. The teacher is perceived as having high, but realistic, expectations for the student.

DEVELOPING ‘SOCIAL CAPITAL’ AND LEADERSHIP

Closely akin to leadership development, but broader, is the idea of ‘social capital’. In recent years, there has been a flurry of interest and publications (Renzulli, 2003) about developing students who have the potential to “use their knowledge for their own selfish or even destructive ends.”

As he approaches the end of his career, Renzulli in particular is currently studying this dimension of social responsibility and commitment, both as an area of giftedness, as well as an area to be promoted and developed in all students. Renzulli has termed this **“Operation Houndstooth”** (Renzulli, 2003). (Houndstooth refers to the pattern representing the personal attributes that form the background of the three ring model of giftedness).

The propose of Operation Houndstooth is to determine how and why some people (even children) transform their gifted assets into socially constructive action to promote the development of what he terms “social capital,” in contrast to economic capital which drives the growth of the economy. Renzulli (2003) defines social capital as **“a set of intangible assets that address the collective needs and problems of other individuals and of our communities.”** One could certainly include the global community in this as well.

Some present day leaders who are developing social capital might include Stephen Lewis, who has devoted himself to the HIV/AIDS crisis particularly in Africa; Nelson Mandela, the father of current day South Africa; Bill Clinton, through the work of his Foundation; and Bill and Melinda Gates, who have a passionate commitment to the work of their foundation. As well, there is the extraordinary example of young Craig Kielberger who founded “Free the Children,” which works to eliminate the exploitation of children worldwide. On a local and community level, we can all think of less well known people who have similar empathy, effectiveness, and commitment.

Renzulli has postulated six attributes that characterize people who are developers of social capital. These are:

- *Vision/Sense of Destiny - a sense of destiny about future possibilities that becomes an incentive for present behavior.*
- *Optimism - characterized by hope, and positive feelings from one’s hard work*
- *Courage - the ability to face difficulty or danger, be it physical or psychological. Further, Renzulli (2000) states that “integrity and strength of character represent the most salient marks of those creative people who actually increase social capital.”*
- *Romance with a Topic or Discipline - passion that provides motivation for long term commitment.*

- *Sensitivity to Human Concerns - the ability to understand another's plight and to translate this understanding into productive action.*
- *Physical/Mental Energy - this quality needs little explanation, other than to say that charisma and curiosity are often correlates.*

While no one knows precisely how these components are developed in the context of school, and what works may well differ from person to person, this is part of ongoing research. Renzulli (2002) does present some possibilities and some recommendations:

What does not work? (although often tried!)

- Direct teaching: Although efforts in this regard may create awareness of a problem, they have not been successful in developing the complex behaviors, beliefs and commitment necessary for change. As an example, the “just say no” approach to preventing drug use may create awareness but does little else.
- Legislated community service: Without true commitment, students often do little more than simply “go through the motions.”

What does work?

- Exploring students' interests, learning styles and modes of expression
- Exploring areas of potential involvement through “dynamic experiences.” This might involve powerful presentations or visits to places where an activity is taking place, which may include such things as visiting an animal shelter or a recycling site, or similar activities.
- On a more individual level, books, debates and interviews can serve this purpose.

GIFTED STUDENTS WITH SPECIAL NEEDS

Years ago, people did not associate giftedness with disabilities. At first glance, the concepts appear contradictory. However, with a broadened definition of “giftedness,” as well as more awareness of the abilities of those with disabilities, has come a realization that they are not mutually exclusive. Although practically any disability can co-occur with giftedness, three of the most common ones will be addressed below:

Learning Disabilities and Giftedness

The incidence of learning disabilities in the gifted populations is at least as high as the incidence in the general population, which is estimated to be between 10% and 15% (Silverman, 2003). Students with learning disabilities are characterized by overall average or above average intelligence but a discrepancy (often wide in the case of LD/Gifted) in areas of academic performance. For example, a student may be outstanding in math and science but average or below average in language-related subjects or vice versa. Occasionally, students may be strong in all but just one isolated area, for example, writing. Such a student may be well read, creative, and very strong in abstract thinking ability, but just cannot seem to “get it down on paper”. This can be very puzzling and frustrating to the student, teachers and parents.

Not surprisingly, such students can present an enigma when it comes to identification. In years past, no doubt, some of these students left school feeling frustrated, discouraged, and sometimes angry. Even with our current knowledge they are not easily identified and tend to fall into three categories (Baum, 2004).

First, there are those who are not identified as having learning disabilities but are recognized as gifted. In this case, giftedness hides the learning disability, although sometimes these students may appear to be underachievers.

Second, are students who are labeled as having a learning disability but are not seen as gifted. The learning disability may be so severe or in a critical academic area, such as reading, that it “hides” whatever gifts the student may possess.

Third, are students who appear as neither—almost as if the giftedness and learning disability “cancel each other out.” Often these students are thought of as average.

Not surprisingly, these students can be challenging to identify, to fully understand, and to teach. Sometimes a psycho-educational assessment may be necessary to fully understand an individual profile of strengths and corresponding weaknesses.

Attention Deficit Hyperactivity Disorder and Giftedness

Contrary to popular perception, many experts believe that the hallmark of ADHD is **impulse control**, and not hyperactivity (Barkley 1997, 1998; Willcut et al., 2001). This probably results in the condition being both under-diagnosed as well as over-diagnosed. It is quite possible to have a quiet and compliant student (more likely to be female) go through school without be suspected of having the disorder. At the same time, it is possible for a gifted student who may be unchallenged by school work, and have a high energy level, to be misidentified and “treated”. To further complicate the situation, and to make identification challenging, there is a high correlation between ADHD and LD (Forness & Kavale, 2002), meaning that some of these students are three times exceptional—they are gifted, learning disabled and have ADHD! It is now also widely accepted that ADHD is not something that youngsters outgrow—indeed for most people with the disorder it is it is a lifelong challenge (Farione & Doyle, 2001).

Asperger’s Syndrome

Asperger’s Syndrome (AS) is one of a number of conditions that falls under the umbrella of Autism Spectrum Disorders. People with Asperger’s Syndrome have average and often above average ability, but have some degree of the social deficits that characterize autism. Gifted children with AS often show verbal fluency, superior memory, early fascination with letters and numbers, and passionate enthusiasm for particular topics of study that are also seen in normal gifted students. Despite these similarities, the autistic like qualities of the behavior can be used to diagnose AS. Early intervention is important because it enables the child to get the help needed to develop social skills (Neihart, 2000). Without this intervention, students with Asperger’s are very likely to be the victims of bullying, which may result in their academic performance being compromised, and their lives being potentially quite miserable.

Interventions

First, and most important, it is essential to address the area of the student’s giftedness and not focus exclusively on the disability, which will probably never go away in any case.

Other strategies include:

- Teach study and organizational skills; for example, note taking, what time of day and place to study works best for the student, skimming a chapter before reading it, goal setting, breaking large assignments into parts etc.
- Make use of multiple teaching strategies such as demonstrations, graphic organizers, diagrams, appropriate technology, small group discussion, options in terms of assignments, learning contracts.

- Teach social skills where needed. Many students with these disabilities have difficulty with perspective taking and reading nonverbal signals. They need to be taught what comes naturally to most students.

GENDER

The challenges and stresses that are integral to the lives of gifted boys and girls are more similar than different. These include:

1. A culture in the North American mainstream society that some have characterized as “anti intellectual’. By themselves intellectual pursuits and high achievement tend not be highly valued in this society, unlike in some other cultures (Howley et al, 1995). Thus, we hear unflattering terms like “geek”, “nerd”, and “brainiac” used and applied to both genders.
2. Members of both sexes are also apt to experience feelings of being different, which can lead to social isolation (Bachtold, 1978).
3. Both deal with an often unchallenging curriculum and subsequent boredom in school (Coleman & Cross, 2003).

However, some challenges tend to be more gender specific. In an effort to highlight these differences, it is important not to pit one sex against the other and to bear in mind that we want to maximize opportunities for ALL students.

When considering the education of girls, there is a great deal of “good news” (Davis & Rimm, 2003), such as:

1. Grade 8 girls have caught up with boys in math.
2. Girls are taking challenging biology, chemistry and physics in the same numbers as bright boys.
3. In high schools, the effort to encourage girls to assume leadership positions has been successful.
4. There are more women athletes of high status, both at the school and professional levels.
5. More than 50% of students in university are female.
6. At least 50% of students studying law and medicine are women, a remarkable achievement as only a few decades ago these were male domains.

Nonetheless, there is still work to be done. Davis and Rimm, (2003) cite the following examples:

1. Gifted girls tend to lose confidence at adolescence.

2. There is still a dearth of females in the physical sciences, computer science and engineering.
3. At the very top levels of math, science and social studies males are dominant.
4. Young women tend to lower their career goals while in university.
5. Women are more likely to follow boyfriends/husbands and give up leadership positions.
6. Female students tend to have lower self confidence than their male counterparts.

In the case of boys, there is increasing concern about the low level of academic achievement provincially, nationally and internationally. The reasons are complex and not fully understood, but some may relate to school being less “boy friendly” as proposed by Kerr & Nipcon (2003):

1. Preponderance of female teachers at the elementary level, but increasingly at upper levels as well.
2. Less focus on literature and reading material that is appealing to boys.
3. Lack of sufficient opportunity for physical activity and movement.
4. Gifted boys between the third and fifth grade begin to underachieve when they realize it is not cool among their peers to be the best student in the class.
5. Rigidity in terms of appropriate rolls and professions for males e.g. boys may not choose careers that may be perceived as “unmanly,” such as creative arts, teaching younger children, or nursing.

In addition, boys face cultural hurdles:

1. Play, for boys, is more restrictive. They do not have the same scope for androgynous interests.
2. Many boys are sensitive and caring, but they may be reluctant to display this for fear of harsh social consequences (Pollack, 1998).
3. The increase in girls in leadership positions during adolescence has had the unfortunate consequence of boys detaching, because they fear the stigma of participating in girl-dominated groups (Fiscus, 1997).
4. Gifted boys, especially those without fathers or mentors, are likely to become alienated and depressed at adolescence (Kerr & Nicpon, 2003).

What can we do?

1. Ensure that teachers and parents are aware of the need for gender equity and are committed to addressing the needs of both sexes.
2. Although there is overlapping in the way individual boys and girls learn, there are general differences between them (Gurion, 2003). Teachers can find valuable information in the New Brunswick handbook “Boys and Girls Learning” (2006).
3. Just as girls need to be comfortable in the physical sciences and related careers, boys need to be comfortable in fine arts and helping professions.
4. Explore the use of same sex classes in some subject areas.
5. Write letters to parents recommending that their daughters (or sons) take “non-traditional” advanced classes.
6. Provide opportunity for students to work with professionals in their area of interest. This is always recommended, but is particularly important if the student’s area of giftedness is a nontraditional one.

TECHNOLOGY AND THE GIFTED

Computer technology, with its vast range of applications from simple word processing and email to graphic design, music composition and, of course, the internet, is now an integral part of education. As a powerful tool for enrichment, this technology has opened unprecedented opportunities that were almost beyond imagining a mere twenty five years ago. Some specific uses for highly capable students include:

1. Electronic mentorship or some combination of face-to-face and electronic communication between mentor and student.
2. Email, which enables students widely separated by distance but close in interests to communicate on a regular basis. LISTSERVs serve a similar purpose for groups, in addition to providing the opportunity to work together in areas of mutual interest.
3. Online courses, which continue to grow in number and availability. For example, some Advanced Placement courses are now available online.
4. There is an overwhelming amount of information available regarding career development. A good starting point is www.yahoo.com , a popular search engine to career education sites (Pryt, 2003).

Despite all its uses and advantages, computer technology also has what (Pryt, 2003) has termed a “dark side”. He lists the following issues:

- The need for a strong insistence on ethics and integrity in utilizing technology. Of ten the perpetrators of computer crimes have been both young and “gifted”.
- There is much on the internet that, at worst, is dangerous and, at best, is a waste of time. Most of us have, at one time or another, lost sight of our focus while using the internet and wasted valuable time!
- Not all valuable or necessary information is on the Internet. Libraries, travel, and personal experiences are still valuable sources of learning. As well, there is an affective dimension of living and learning that requires positive human interaction. Although human communication can be enhanced through electronic communication, it cannot replace the ‘real thing.’”

RURAL SCHOOLS

Many students in NB live in rural areas, which Statistics Canada defines as “sparsely populated lands lying outside urban areas” (Statistics Canada, 2001). This presents both advantages and challenges in meeting the needs of gifted students. Some advantages are small school size, low dropout rates, strong community support, and opportunities for students to participate in many activities. In fact, there is a movement currently to try to capture these advantages by creating “schools within schools”, or even creating new high schools that are small in size.

However, there are negatives as well, particularly for gifted students who live in rural areas. They may be relatively isolated and far from resources such as cultural events, universities, large libraries, and may lack access to professionals and be less likely to have a cohort who share the same interests (Colangelo et al 2003). In NB, they are also more likely to be taught certain subjects by faculty teaching outside their areas of expertise.

There are creative ways to address each of these challenges; however, each requires the interest and commitment of at least one teacher, especially if parents are unable or unwilling to provide support and advocacy. As well, flexibility is essential at both the teacher and administrative level (Colangelo et al., 2003). Strategies include:

- Mentoring
- Independent study
- Online courses (see section on technology). Of particular interest to New Brunswick students at the high school level, some Advanced Placement courses are now online.

PARENTS

Although most parents “take the news” that their child is gifted quite well, having a gifted child presents its own challenges. The challenges depend on a number of factors, but often the degree of giftedness and the personality of the child are key ones. Understandably, highly gifted children are apt to have more difficulty than those who are moderately gifted (Feldman, 1986), and intense perfectionists have a harder time than those who are cheerful and relaxed. Some of the specific challenges parents face are: meeting social and emotional needs; sibling relationships; and school relationships.

If there is a generalization to be made, it is probably that the keys to parenting the gifted child are parental maturity and perspective balance. For example, in some instances, the realization that their child is gifted can propel parents into a relentless search for educational opportunities, which can distort family relationships (Coleman & Cross, 2005.) Some of this pressure may be tied to misconceptions about early experiences and later eminence. Lost opportunities do not lead automatically to lost abilities, and parents are not responsible for all that their children become (Coleman & Cross, 2005). At the same time, of course, parents do have a responsibility to seek out and provide opportunities for all of their children.

Social/Emotional Development

Before reading this section, it may be helpful to read the section of this document on the characteristics of gifted students. In particular, the section on Dabrowski’s “overexcitabilities” may be helpful in understanding the nature of the intensity, reactions, and emotions that a gifted child is apt to experience. These overexcitabilities must be handled with understanding, respect, and sensitivity, but also with firmness. For example, no matter how much a young child might like to stay up well into the night painting, he or she cannot. Again, the keys are parental wisdom and balance.

Giftedness is a way of being different and although some gifted children have many friends and are natural leaders, but this is not always the case. One likely reason may be that their interests are out of sync with those of their peer group; examples may include a middle school student who is fascinated with provincial politics, or a seven year old who is passionate about algebra. It can be very hard for some children to understand the disinterest or scoffing of peers.

Another reason for difference may be that the child is neither a leader nor follower, but prefers his own company much of the time. This may be difficult for parents to understand, particularly if they are people oriented, but it is not evidence of pathology. At the same time, everyone needs some friends. Email and other communication technology can play a supplementary role, but it cannot replace human contact. The role of parents in this situation is crucial, and includes respecting and accepting their child “as is,” supporting the child in his interests, helping him understand differences, and finding opportunities and friends for their child. Such venues may include school clubs, summer camps, youth

orchestras or other appropriate activities. Several years ago, a sixteen-year-old boy attended Shad Valley, a month long summer program for high school students with a strong aptitude for science and math. It was a liberation and life changing experience for him to find other, indeed many other, like-minded peers!

Because gifted children are apt to be advanced verbally and cognitively, parents can be led to hand over too much responsibility and decision making to them. High cognitive ability and good arguing skills do not necessarily translate into good judgment. Sometimes the consequences can be tragic. Davis and Rimm (2003) present the true case of a seven-year-old girl who attempted to set a cross-country flying record. The plane she was flying had to be modified to allow her to reach the pedals and to see over the instrument panel. The plane crashed minutes after take-off, killing her and the two others aboard. Although this is a sad and extreme example, it does illustrate how important it is that parents are, and must remain, the responsible adults in charge and unafraid to set appropriate limits and provide guidance.

Many gifted children are perfectionists, which can create an enormous amount of stress for the child as well as deprive him or her of many worthwhile and fun experiences. For example, the perfectionist child often will not attempt to play a sport or learn a skill because he/she does not think he/she can master it to their standards of perfection. The following suggestions for parent are adapted from Winebrenner (2001):

- Separate the child from his or her accomplishments. One way to do this is not to over-praise, as well as to praise effort alone some of the time, not always perfection.
- Look for signs of perfectionism in your own life. Model setting priorities and letting go of less important tasks. It may even be helpful to explicitly tell your child that “every task warrants a relative degree of perfection”. Laugh at your mistakes and don’t be afraid to “be a beginner” who is just learning a new skill and who is far from perfect. It is a powerful lesson for children to see that their parents are not always perfect, and even more, are capable of enjoying their less than perfect performance!
- Encourage your child to compete against herself. It may be wise to start with activities that can be done noncompetitively, such as swimming, gymnastics, skating or running.
- Let your child do his own homework, especially if your goal is to make it perfect.

Siblings

In some families, only one child is gifted; in some, several or all children may be gifted; and in some, although all are gifted to some degree, one is exceptionally so. Rimm and Davis, (2003) articulate an underlying principle for the care and handling of all children:

Each and every child in a family should be provided the most ideal opportunity for intellectual and creative development for that particular child. The needs of the gifted child need not be ignored in the interest of equality. At the same time, other children, gifted or not, need to have their needs addressed as well. It is also important to celebrate and praise each child for his/her individual achievements. At the same time, it is important to keep academic expectations appropriately high for all children.

Of equal importance is insuring that members of the extended family treat each child as an individual and not provide preferential treatment. This can lead to sibling rivalry and worse. Sometimes even well meaning teachers will comment on the stellar performance of an older child, which can be understandably daunting. However, usually teachers will be sensitive to the differences in siblings.

Gifted children should also be expected to play by the same rules and have the same shared responsibilities as all other children in a family. Children may need to attend to their household jobs at different times, but no one is exempt from household chores.

School Relationships

Despite the chronic problem of limited resources, the vast majority of schools and teachers are eager to help all students reach their potential. Having said that, it is all too true that the demands on individual teachers are much larger than parents or the public generally realizes. Parental advocacy and support are critical. What follows are some suggestions adapted from Winebrenner (2001) for working with schools:

1. Don't be afraid to advocate for your child and let the school know about what your child is able to do. At the same time, avoid using language like "best," "brightest," or similar superlatives that may be taken to mean that your child is more important than others.
2. Maintain regular contact with your child's school and teacher. Before making requests, offer something positive such as telling a teacher about a school activity that your child has enjoyed. Present yourself as a partner and, if at all possible, offer to help the teacher. This can be in the classroom, through locating information, or working on materials at home. Most teachers are very grateful for this sort of assistance.
3. Recognize that advocacy will probably be needed throughout your child's school career. This is an instance where once will never be enough. At the same time, show appreciation for efforts made to meet your child's educational needs.
4. Do not criticize or denigrate your child's teachers or school in her presence. This is unfair to the child, who spends a good proportion of the day in school, and can lead to serious problems with behavior and achievement. If you are "going nowhere," contact the district supervisor responsible for gifted students.

5. Join local and national advocacy groups. The Association for Bright Children, which is based in Toronto, has groups all over the country.
6. Advocate at a provincial level for funding, teacher education, and resources for gifted students.

Finally, "giftedness" is just that, a "gift." It is important for parents to believe in their hearts that "better at" does not mean "better than." If parents believe that their child is "better than" others, they cannot help but communicate this. Such an attitude can have tragic consequences for their child in his or her relationships with others. It is not an exaggeration to claim that this one factor can determine whether their child has an unhappy and lonely life or a happy and fulfilling one.

Parents of Young Gifted Children

Simply put young gifted children develop ahead of their peers. Although this often occurs in areas such as motor and social development, it is most noticeable in the early development of language and sometimes in early reading. In fact, unusual skill in both reading and math can emerge as early as two years (Jackson, 2003). It is interesting that early reading may sometimes foretell an unusual talent in some other area that uses another symbol system such as math, music or computer science (Jackson, 2003). However, early reading is not universal. There are gifted children who learn language at the usual, and sometimes even later, age. Einstein is one such example! Also a child who is a self taught early reader will not necessarily be destined for a career in this area.

Babies and young children learn primarily through one-to-one contact with adults they know and trust. "Brainy Baby" products such as the Baby Einstein Series are unsubstantiated; in fact there is even a certain irony to the name Baby Einstein, as in his early years the real Einstein was anything but precocious. It is easy for parents to be manipulated by half truths; for example, the claim that many neurons die in the pre-school period. This is true, but the brain has far too many neurons at birth; in fact billions more than it needs. Nature intended them to die. Cell death is actually part of the way the nervous system develops and refines learning circuits (Quart, 2006).

Although it is important to encourage young children's interest in books and reading, as well as to encourage and support them if they do learn to read early, it is not wise to provide early instruction in reading and other academic areas (Jackson, 2003). When parents do this, there can be a number of undesirable outcomes: children may perceive that they are only valued for their precocious accomplishments; the effects typically do not last (Hyson & Hirsh-Peck, 1991); and, not infrequently, children will find a way to "pay their parents back," even if it is years later.

Aside from early language and reading there are a number of other developmental characteristics as well:

- Good memory
- Abstract thinking
- Curiosity
- Long attention span
- Active imagination
- Mature sense of humor
- Preference for older playmates

Parents of preschool gifted children are often on their own as services for children of this age are pretty well non-existent. Nonetheless, there are many things parents can do to optimize development during this period.

Guidelines for Parents of Young Gifted Children:

1. *Expose your child to many different learning experiences and opportunities. Encourage your child, but do not attempt to create a prodigy. This puts enormous pressure on a child and conveys the message that the child is valued not for him/her self, but for what he/she can do.*
2. *Read to your child. Talk about what you are reading. For example, ask your child what he/she thinks will happen next. Point out occasional words, such as names of characters. Do not try to teach your child to read in a formal way but do respond to questions he/she may ask you, or observations he/she may make about reading.*
3. *If your child learns to read spontaneously teach your child some writing skills. Five minutes a day is sufficient and you can use a simple workbook from a department store. The reason is that the discrepancy between knowing how to read but not write can create anxiety for a young child (Davis and Rimm 2004).*
4. *Talk to your child at a level slightly above his/hers. Research has shown that toddlers and young children learn the most when the language used relates directly to what they are interested in at the moment. For example, if a small child is looking at a large dog, the parent might say, "What a big dog that is. I bet he eats a lot of food. I wonder what he likes best?"*
5. *Provide materials such as blocks, paint, writing materials and appropriate toys to stimulate imaginative play.*
6. *Limit TV viewing to a couple of hours a day—if that! There is some evidence (Healy, 1990) that TV viewing can be "neurologically addictive" and may change how the brain functions. Further, Healy believes that TV watching may*

- impair listening, problem solving, and sustaining attention. When your child watches TV, try to watch with your child, commenting and asking questions on what you are both viewing to make it a more interactive and less passive experience.*
- 7. Provide opportunities for your child to interact with peers in a high quality preschool program. Some components to consider, specifically related to gifted students, are: sensitivity to the needs of very bright children and the encouragement of creative expression (Davis & Rimm 2004). However, if available programs are not of high quality, it is probably better to keep the child at home and look for other activities where your child can interact with peers.*
 - 8. Many parents have a tendency to over-program their children's lives, even at a young age. Allowing some alone time is good, as it encourages independence and imagination. In fact, creative people of all ages often thrive on "down time" (Davis & Rimm 2004).*
 - 9. When it is time to start school, let your child's teacher know that he/she has shown unusual ability as a preschooler. Be as specific as possible and provide some examples.*
 - 10. Join the Association for Bright Children (ABC)
http://www.sjfn.nb.ca/community_hall/A/asso4180.html*
 - 11. Hoagiesgifted.org is an excellent website, with much valuable information and many resources for parents and teachers alike.*

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WEB SITES

Association for Bright Children

www.abontario.ca

David C. Baird's Gifted Children Web Site

www3.sympatico.ca/daba/gifted

Education Consulting Service

www.susanwinebrenner.com

Eric EC Digests on Gifted Education

ericec.org/gifted/gt-diges.html

Gifted and Talented (TAG) Resources Home Page

www.eskimo.com/~user/kids.html

The Gifted Child Society

www.gifted.org

Gifted Children

www.gifted-children.com

GT World

www.gtworld.com

Hoagies' Gifted Education Page

www.hoagiesgifted.org

The Homecoming SIG of American Mensa

www.geocities.com/Heartland/9687/SIG.html

International/National Resources for Gifted Education

ericec.org/fact/gt-asso.htm

LD OnLine

www.ldonline.org

National Excellence: A Case for Developing America's Talent

www.ed.gov/pubs/DevTalent/toc.html

National Foundation for Gifted and Creative Children

www.nfgcc.org

Northwest Regional Educational Laboratory

www.nwrel.org/nwedu

Parents' Resources

www.ri.net/gifted_talented/parents.html

Prisoners of Time

www.ed.gov/pubs/PrisonersOfTime

Programs for Gifted Kids

www.ri.net/gifted_talented/programs.html

State Resources for Gifted Education

ericec.org/fact/stateres.html

TAG: Families of the Gifted and Talented

www.tagfam.org