Chapter 6
Expecting the Unknown: Anticipating Different Levels of Giftedness

> *Most teachers waste their time by asking questions which are intended to discover what a pupil does not know whereas the true art of questioning has for its purpose to discover what the pupil knows or is capable of knowing.*
> —Albert Einstein (Theoretical Physicist). [Online], http://www.azquotes.com/quote/548998, as accessed on 9/6/16.

Abstract While the plane approaches its destination, a passenger's thoughts transition to envision what to expect next. They must be open-minded and willing to adapt to any unusual situations that occur. Teachers also experience feelings of uncertainty when anticipating how to meet the educational needs of different levels of gifted students, especially those who function in the highest range of IQ scores and level of performance learning. The best practices in gifted education recommend that teachers use multiple measures to effectively educate all students and integrate their curriculum with the national and/or state standards for exceptional children. The case study of Highly Gifted Hwan offers insight for providing intervention strategies for gifted students who function at an exceptionally high level of achievement. Intervention strategies are provided for both teachers and parents to create authentic learning opportunities, offer appropriate resources and experiences, and use higher order thinking skills (HOTS) that can be used with all children in the classroom.

Keywords Achieving goals · Authentic learning · Characteristics of different levels · Counseling · Expectations · Higher Order Thinking Skills (HOTS) · Highly gifted · Levels of giftedness · Prodigy · Questioning techniques

6.1 Expectations

While the plane approaches its destination, your thoughts transition as you envision what to expect next. You may feel anxious about retrieving your suitcase. Or, if flying internationally, you may be concerned about passing through customs easily.

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Awaiting the unknown can be unnerving. But, if you are open-minded and willing to make necessary adaptations, you will feel more confident and prepared to understand any unexpected situations that occur.

Teachers also experience feelings of uncertainty when anticipating how to meet the educational needs of all levels of gifted students, especially those who are labeled as highly, exceptional, or profoundly gifted because of a high range in IQ scores of 145–180+. The best practices in gifted education recommend that teachers use multiple measures to effectively educate all gifted students. Some countries have created national standards in gifted education for teachers to integrate into their curriculum for exceptional children. However, writing lesson plans in advance with the intent of never deviating from them offers little chance for students to create something new or learn in different ways. When something goes 'wrong,' and the lesson plan does not follow the curriculum content or pacing as intended, teachers should remain flexible and turn the experience into an opportunity for creating new learning.

Providing experiences to promote creativity and provide challenge beyond the classroom walls increases an individual's intelligence. We know learning depends on the structure of the brain and brain development, which differs from person to person. Brain research affirms no one is born with a predetermined amount of intelligence; intelligence is multifaceted and can be improved upon [1]. The brain is learnable and teachable; it is fluid and not fixed [2]. Thus, it can be implied that creative intelligence can also be developed in an enriched environment that encourages individualization. Because every brain is different, teachers need to teach to the individual. Like the 'One size fits all' concept, it is a misunderstanding to think mildly and moderately gifted child have the same needs as those who are highly, exceptionally, or profoundly gifted.

6.2 Achieving the Goal

A pilot is always mindful that the goal of a flight is for the plane to achieve a safe landing. Understanding how to lower the wheels and adjust the speed helps the pilot to prepare the plane for a full stop when the flight comes to an end. Many factors, including wind speed and weather, must also be taken into consideration. In addition, flight attendants need to anticipate the needs of their many, varied passengers and perform a routine inspection to ensure a safe landing.

The goal of preparing gifted children for their destination as a lifelong learner is not as straightforward as the process of landing an airplane. Lifelong learning is a goal in which a teacher must always be mindful of a child's developmental needs. Teachers must adjust the curriculum so every individual can learn at their own pace and ability level. As argued by Rogers in Chap. 2, teachers need to match the program to the child for meaningful and sustainable learning to take place.

Becoming aware of the unique differences of gifted children and trying to help them to figure out their best pathway of learning is the first step for teacher intervention.

Teachers need to view gifted children as individuals who possess their own particular strengths and weaknesses. They should help gifted children build awareness and acceptance of their potential as exceptional learners. Even though they learn quickly, gifted children also need to know there will be times in which they will struggle. Therefore, encouraging gifted individuals to value effort while achieving harder work will inspire them to develop a growth mindset to evaluate, understand and be able to tackle a new challenge.

If a student believes effort can increase their intelligence, they will begin to understand the value of studying and practicing, and exhibit more motivation when problem solving [3]. It is important that gifted students do not solely rely on their past successes of learning something easily, but are prepared to develop a set of strategies for attacking new and future problems. In this way, they will grow in confidence and be ready to confront more intellectual risks.

Many gifted students come to class with prior knowledge acquired from personal interests, experiences, or talents. Instead of feeling intimidated by the depth of their knowledge, teachers should seize the 'teachable moment' and look for ways to help gifted students to stretch their thinking by developing their strengths and talents.

Teachers can help students approach the unknown through a Socratic method of asking open-ended questions to discover answers. They can spark a gifted student's interest by providing many and varied learning opportunities for enrichment and/or acceleration to help them uncover and extend their passions, i.e., natural interests and talents. Gifted children are not the only ones who are smart. Therefore, teachers can employ higher order teaching strategies to benefit all students in the classroom.

Giftedness needs to be nurtured in all students for a school to be an effective one and for high achievement to emerge [4]. Gifted students usually have high academic self-expectations, and when asked how they like to learn, respond with a preference for self-instructional tasks, games, simulations, or independent studies [5]. Because learning should not be confined to the walls within a school, it is important that teachers collaborate with parents to find a variety of appropriate resources that provide students with a wide range of opportunities in their school and community to encourage personal growth in every child.

6.3 Levels of Giftedness

Before teachers can help high gifted students to learn, a deeper understanding of giftedness is warranted. Teachers and parents need to be aware that different levels of giftedness exist and, therefore, not all gifted children are the same. Although a child may be labeled as 'gifted,' each gifted child is unique. Ruf [6: 51] is among researchers who created a chart to distinguish five levels of intelligence based upon

Table 6.1 Standard IQ ranges for the levels [6: 51]

Level of giftedness	Approximate IQ range	Descriptive designation
One	120–129	Moderately gifted (Moderately gifted 120–124/gifted 125–129)
Two	130–135	Highly gifted
Three	136–140	Exceptionally gifted
Four	141+	Exceptionally to profoundly gifted
Five	141+	Exceptionally to profoundly gifted

IQ scores. Due to limitations of IQ tests, Levels 4 and 5 appear to be the same, but they are not. The difference between the levels is reflected in the individual's behavior [6]. It is important for adults to be mindful that not all gifted children function at the same ability level (Table 6.1).

The developmental milestones for an IQ range of 125–155 reflect a socially optimal level for gifted children to exhibit well-balanced, confident, and socially effective behavior [7]. These gifted children usually have little or no difficulty fitting in socially with peers. On the other end of the gifted spectrum, a child who has an IQ of 160 or greater exhibits notable differences than their peers because of a larger discrepancy in their potential to learn as well as in their depth of interests.

An increased level of intelligence can lead to special developmental problems and social isolation. Sadly, because of their feelings of seclusion, and difficulty in finding others like them, exceptionally or profoundly gifted children have a greater risk of dropping out of school or society. Exceptionally gifted students (IQ of 160–179) can become at risk if schools do not provide a challenging curriculum, and profoundly gifted children (IQ score of 180+) may experience even more of a problem because of their lack of social adjustment [8].

Some gifted children with an IQ of 160–200 suffer severe intellectual frustration and boredom, lack of motivation, social rejection by age-peers, and display significantly lowered levels of social self-esteem [9]. Many gifted children could benefit from the help of an informed school guidance counselor or therapist to provide them with insight and understanding of their position in the world.

6.4 Characteristics of Different Levels of Giftedness

Members of a school district's gifted identification committee are encouraged to conduct research on giftedness before beginning the process of identification and provision. They will learn that there are many differences of opinions and the debate of who is 'gifted' continues.

To provide variation in labeling the five levels of giftedness, let us examine the research of Australian author and scholar, Miraca Gross [11]. The IQ score provides understanding of the fundamental differences in mental processing comparing moderately and extremely gifted individuals. However, similar to Ruf, Gross also

Table 6.2 Classification of giftedness [11]

Level	IQ Range	Prevalence
Mildly (or basically) gifted	115–129	1:6–1:44
Moderately gifted	130–144	1:44–1:1000
Highly gifted	145–159	1:1000–1:10,000
Exceptionally gifted	160–179	1:10,000–1:1 million
Profoundly gifted	180+	Fewer than 1:1 million

designates five levels not solely based upon an individual's IQ score. These levels clearly differ gifted children from their peers in the early acquisition of speech, reading or knowledge, and experience intellectual growth at an accelerated development. Because gifted children are aware of being different than their peers as early as 4 years old, it is important to discern cognitive differences that represent various levels of giftedness to be able to appropriately provide for a gifted individual [10].

Intellectually gifted children can be classified in five levels according to IQ and prevalence in the student population [11] (Table 6.2). Although 'exceptionally gifted' can be characterized by early complex speech and the development of movement in a child less than 8 months old, it is rather surprising that Einstein did not speak until the age of 3. Because of his delayed speech, a learning disability was suspected [12].

6.5 The Prodigy

The highest extent of the 'bell curve' of the gifted spectrum designates an individual with an IQ score of 180+ as profoundly gifted, referring to them as a 'prodigy' or 'genius.' Although this level of giftedness historically was thought to be 'inexplicable,' 'out of the usual course of nature' or 'monstrous,' it has evolved over past centuries and can now be defined as a 'highly gifted or academically talented child' [13]. It should be noted that many researchers use the term 'prodigy' to specify a child younger than 10 years old who performs at an adult level of performance in a demanding given field of endeavor [14]. This definition emphasizes human performance and requires the support of others, especially parents.

In the field of gifted education, ambiguity exists when trying to identify a child prodigy. Subsequently, the concept of a child prodigy is highly misunderstood. There is no consensus for a systematic classification for the behavior of an individual who is considered to be phenomenally exceptional. It should be noted that although prodigies may be average or above average in general academic areas, they demonstrate a powerful and intense inner drive focused on developing their talent in a specific area. Thus, a prodigy is likely to have a domain-specific form of giftedness.

Although there has been little research conducted on child prodigies, it can be stated that few have been identified in fields such as natural science, whereas more have been identified in music. Not surprisingly, more boys than girls have been identified, which is possibly due to a past history of a lack of girls in the fields of math and science. Compared to a savant, a prodigy is not known for memorizing vast volumes of verbal material, e.g., a telephone book, or to correctly recall a correct date in history. It is interesting to learn that parents of prodigies are often involved in the same field of study as their child and may even sacrifice their own career for that of their prodigious child [15].

6.6 Case Study #5: Highly Gifted Hwan

Hi! I am Highly Gifted Hwan. I have an IQ of 180+. My mother is an engineer and my father is a neuroscientist. My parents remember that I began to speak at 6 months and to read at two years old. When I was three, they took me to restaurants where I added up the bill, figured out if any change was due and gave the money to the cashier. At seven, I qualified for Mensa, an internationally recognized organization for people of high intelligence. I was able to skip two grades in school I and entered a university at age fifteen. Because I love math, I enjoy taking courses in algebra and geometry that challenge me.

My goal in life is to work at the Pentagon in Internet Security. I am intrigued with creating codes and programming in C++. I spend a lot of time on the computer networking with other people to share information about developing algorithms. I have gathered hacker programs to analyze and developed my own program to counteract them.

6.7 Neurological Differences

Many highly to profoundly gifted children have been associated with high levels of intrinsic motivation. As high achievers, they usually demonstrate exceptional task commitment for something they want to study because they experience an inner sense of passion, commitment, and persistence. This unique neurological difference of giftedness remains with an individual throughout their entire life. Characteristics of giftedness simply do not go away.

Primarily, it is the highly gifted child who displays characteristics of higher than average responsiveness to stimuli intensity and exhibit sensitivity and overexcitability. Polish psychiatrist Kazimierz Dabrowski's termed it 'Overexcitabilities' and argued the higher an individual's IQ score, the more intense and heightened sensitivities they will experience [16]. It is important that teachers model acceptance for overly excitable and highly sensitive students in class. They need to be

accepting of different behaviors so classmates do not exclude or bully overexcitable children for what appears to be abnormal behavior (see Chap. 10).

It is critical that adults who work with highly, exceptionally, and profoundly gifted children focus on the positive. They need to understand an overexcitable gifted child's distinctive social and emotional needs. Although the gifted child may be more aware, sensitive and/or capable of synthesizing a life experience, they can also feel more isolated and vulnerable at the same time. Just because a gifted child is able to intellectualize an experience does not necessarily mean they have the emotional skills to cope with the situation.

Because gifted students are unique, they require an appropriate education that challenges, stimulates, and motivates them to want to learn new material and information [17, 18]. Like all students, the highly, exceptionally, and profoundly gifted students deserve to have a teacher who inspires and incites them to want to learn more, and presents stimulating choices and meaningful learning to personally challenge them.

6.8 Special Needs

Highly, exceptionally, and profoundly gifted children have special academic, social, emotional, and spiritual needs resulting from their heightened intensity and asynchronous learning development that cause them to stand apart in a crowd. All children deserve to have creative and open-minded teachers and parents who truly understand and like to work with them. In the spectrum of gifted children, teachers and parents must understand the gifted child's unique asynchronous learning styles and specific needs. Unless their high potential and ability are recognized, appreciated, and nurtured, many gifted children may never develop the self-confidence necessary to take their work to the next level and reach their full capacity as a learner.

It is not uncommon for highly, exceptionally, and profoundly gifted children to seek friendship from an adult, e.g., a teacher. Often, a gifted child feels they can communicate better with an adult and use their advanced or technical vocabulary. They may find their peers view it as a negative quality and may make fun of them for using big words they did not know.

6.9 Intervention Strategies for Teachers and Parents

3 Strategies for Addressing Different Levels of Giftedness

1. Create Authentic Learning Opportunities
2. Offer Appropriate Resources and Experiences
3. Use Higher Order Thinking Skills (HOTS)

1. **Create Authentic Learning Opportunities**
   Teachers and parents need to address the appropriate cognition level for mildly, moderately, highly, exceptionally, and profoundly gifted students. By creating authentic learning experiences and encouraging the creation of a product or construction of something in which they can make meaningful connections, a gifted student can become inspired to value what they have accomplished.

   Teachers and Parents
   Although it is much easier for a teacher to deliver traditional content from the curriculum, challenging a gifted student with authentic learning opportunities encourages thinking that is more analytical and meaningful. Involving students in hands-on learning experiences is more effective than simply asking a student to listen to what is being taught. Students will remember what they have learned from their experience as opposed to memorizing exercises, which are forgotten soon after they take an exam. A gifted student becomes more interested in a topic when they are involved in creating an authentic outcome for a real world audience, e.g., another class in their school or members in their local or global community.

2. **Offer Appropriate Resources and Experiences**
   Locating appropriate resources and presenting various real-world experiences foster developmental learning by enriching the life of a gifted child. Suitable resources can include participating in a debate, contest, or competition, e.g., the Future Problem Solving Program International, designed to develop the ability in young people globally to design and promote positive futures through problem solving using critical and creative thinking (http://www.fpspi.org/). By offering leadership opportunities through independent or teamwork, youth are encouraged to research and develop a plan of action that would have the greatest impact for their future. Academic Competitions for Gifted Students: A Resource Book for Teachers and Parents is a good resource guide for integrating national and international competitions within the framework of a gifted child's academic curriculum (See Resource Directory) [19].

   Teachers
   Exposure to additional learning opportunities widens the breadth and depth of the curriculum to enrich and extend the mainstream curriculum [20, 21]. Offering opportunities that focus on positive aspects of being unique will build confidence in gifted children so they do not feel different in a negative way due to an asynchronous learning style and advanced achievement.

   Parents
   Parents can expose their gifted child to cultural experiences outside of the classroom. They can present gifted children with opportunities to attend a symphony, ballet, or theater production. Parents can also investigate the appropriateness of MOOCs (Massive Open Online Courses) that are offered by universities. A gifted child can also be enrolled in an online course appropriate for their level of high academic learning, e.g., Athena's Advanced Academy,

LLC, which offers online courses throughout the year in a variety of areas to a community of gifted learners around the globe, including adults (http://athenasacademy.com).

If parents discover they have a child who is highly, exceptionally, or profoundly gifted, they could contact the Mensa Foundation to learn about the gifted youth admission policy and its available resources. *Mensa for Kids* offers online activities, contests and e-newsletters to connect gifted children with other gifted children (https://www.mensaforkids.org). Many highly, exceptionally, and profoundly gifted students who are fascinated with a specific topic and eager to discuss their interest can connect with someone who shares their passion at a higher level of learning. Similar to challenging yourself to play tennis with someone who is more skillful than you, gifted children need to experience a challenge that will hone their skills by interacting with children who are intellectual equals.

Regrettably, schools may not accommodate the needs of gifted children, e.g., missing classes to attend a concert, competitions, etc. If parents believe the school is not providing an appropriate education for their gifted child, they need to search for an alternate favorable learning environment, such as homeschooling or private school.

Although enrichment and acceleration opportunities are meaningful and important in the lives of gifted children, it is important to extend the pedagogy in the mainstream classroom because giftedness can occur in different people at different times and under different conditions [22]. Offering opportunities in a variety of subject areas can spark exploration of interests to benefit *all* students, not only gifted. However, it is important to watch for signs of stress in gifted children and to address them immediately. Gifted children need to develop and flourish, and not become overwhelmed by feeling an even greater gap among other children.

3. **Use Higher Order Thinking Skills (HOTS)**

Teachers and Parents

Using higher order questioning strategies encourages a gifted child to analyze information, expand answers, and cite evidence to support their thinking. Because there are no costs involved, both teachers and parents can implement HOTS either formally or informally. The following 12 higher order thinking skills benefit all children at home or in school:

1. **Bloom's Revised Taxonomy**
   In the 1956, Benjamin Bloom published a framework that highlighted six categories of educational objectives to help teacher write curriculum from simple and concrete (recalling facts) to complex and abstract (producing a new piece of work): knowledge, comprehension, application, analysis,

synthesis, and evaluation [23]. This taxonomy of learning is depicted as levels in a pyramid to encourage questioning techniques that evaluate a student's knowledge and understanding.

In 2001, Bloom's Taxonomy was amended to turn the hierarchy of nouns into action words. It became known as 'Bloom's Revised Taxonomy.' Here is a list of Bloom's Revised Taxonomy with examples of question starters to serve as a tool for planning curriculum and delivering instruction [24]:

1. Remembering: *Record, recall, locate …*
2. Understanding: *Discover, observe, interpret …*
3. Applying: *Implement, compute, list …*
4. Analyzing: *Categorize, distinguish, sequence …*
5. Evaluating: *Compare, debate, measure …*
6. Creating: *Construct, invent, predict …*

Although you do not have to stick to any particular order when teaching, it can be helpful to begin with the basic level, i.e., 'Remembering,' to gauge the ability level of a student for the first time. Asking relevant higher order questions based upon Bloom's Revised Taxonomy is great way to inspire children to stretch their thinking.

2. **'What if' Questions**
   Encourage gifted children to think in diverse and creative ways by probing with a question stem that begins with 'What if …?' For example, you can ask, 'What if the Internet stopped working?' 'What if you moved to another country in which people spoke a different language than you?' Ask open-ended questions to encourage gifted children to extend their thinking by looking for more than one answer to solve a problem.
3. **Socratic Questioning**
   Socratic questioning, a technique named after the Greek philosopher, Socrates, stimulates critical thinking by asking and answering open-ended questions. Some examples might include, 'Does anyone have anything more to add?' 'What different ways can you think of to solve this problem?' 'What questions do you still have or want to ask?' Urge students to be prepared by creating a few possible solutions to a problem that offer additional possibilities in case a classmate responds first with an answer they also had in mind. An open-ended question can also begin with the question stem 'How might?' or 'In what way(s) might?'
4. **Backward Brainstorming**
   Start with the end in mind by providing your children with a product or conclusion. Then ask 'If this is the answer, what is the question?' This technique requires children to create an explanation and make sense out of their answer by providing supportive evidence. Teachers and parents can further extend a gifted child's thinking by asking them to list steps in their explanation that detail how they arrived at their results.

5. **Degrees of Separation**
   Degrees of separation is based upon the theory that anyone on the planet can be connected by sequencing at least 3–5 acquaintances. To promote creativity and make conceptual links, select two pictures that represent different objects. Ask students to make a connection linking the two by writing six sentences in which they use the last word of the first sentence as the first word for the following one. According to the ability level of your students, you can challenge them with an appropriate number of sentences other than six. Critical thinking can be used in any subject area and adapted for any level of student.
6. **Forced Analogies**
   Challenge gifted children to compare two unlike items by using a figure of speech, i.e., a simile (using 'like' or 'as') or metaphor (direct comparison). For example, 'He was as hungry as a bear' (simile) or 'She was a stubborn mule who resisted change' (metaphor). This can be a good way to motivate and engage students before teaching a lesson! You can also use this idea as a homework assignment by presenting students with the task of creating their own forced analogy to challenge their peers the next day in class.
7. **Scaffolding**
   Instructional scaffolding is a learning process of dissecting or breaking a lesson into chunks of relevant information to help children digest the content easily. Providing various tools, e.g., graphic organizers, for students to chunk out and visually record information helps them to avoid becoming overwhelmed by textual material. By grouping similar thoughts, students find it easier to remember the information because it becomes meaningful when categorized. An example of a graphic organizer that endorses creativity is a concept map or mind mapping. These tools enable students to cluster their ideas through the illustration of a web. Adding color-coding and/or pictures to the nodes or bubbles of words can enhance thinking.
8. **Tiered Lessons**
   Imagine a three-layered wedding cake. Think of each layer or tier as representing a different ability level in a classroom to accommodate the wide span of learners. Creating a tiered lesson is an effective way for teachers to differentiate classwork expectations. For example, Tier 1 requires students to read and highlight verbs on a page. Tier 2 extends the students' thinking by asking them to define various verbs they highlighted to use correctly in a short story. And, Tier 3 challenges students to illustrate or dramatize their story. Each sequential tier presents greater complexity in the assignment.
9. **Reverse Thinking**
   Instead of asking how to make an experiment work, teachers can challenge students to think of a variety of ways in which an experiment can fail. A 'flipped approach' forces students to consider realistic as well as silly and creative ideas for many probabilities, possibilities and predictions. Reverse thinking can be a fun and creative way to challenge students!

10. **Dig Deeper**
    Teachers and parents should inspire gifted students with statements or questions that require them to dig deeper to provide a meaningful learning experience. For example, 'In what ways would life be different if you became blind?' Ask children to evidence their reasons. Digging deeper challenges students to think more by personalizing the situation, rather than if they read an article about optics and the eyeball. You can elicit more information by asking open-ended questions so students will continue to think, explore, and reveal new thoughts.
11. **Ask Five Hardest Questions**
    To extend your questioning technique, challenge gifted children to create at least five of the hardest questions that can be answered from their reading. Ask students what makes these particular questions the hardest ones to answer. Can they identify any commonalities between the questions or classify them into specific categories? What opinion do their classmates hold? Is there a consensus of agreement among the group that these are the five hardest questions to answer? Why or why not?
12. **Tell the Story**
    After reading an article or piece of literature, ask gifted children to retell a story from the perspective of a graph, a photo or any object related to the content. Gaining a different perspective promotes understanding of another person's point of view. It also stimulates creative as well as critical thinking.

Higher order thinking skills encourage gifted children to think in many different ways. Teachers should not provide students with all of the answers. It is important that students leave the classroom still thinking about the lesson and searching for additional answers. Although some gifted individuals do not consider themselves to be creative, everyone has the capacity to think in new ways. HOTS can be used to differentiate learning challenges for children of all ability levels. These strategies motivate students to produce more interesting and provocative lessons in which everyone learns from one another. Students may surprise themselves by the creative answers they can come up with!

HOTS techniques are especially effective for gifted children who complete assignments early in the classroom. By exposing all children to as many physical activities, intellectual undertakings, and art forms as possible, children will discover ways in which they are 'smart.' Everyone should be encouraged to experience novelty and have fun thinking 'out of the box!'

6.10 Providing Resources that Celebrate Diversity

If an unforeseen problem prevents the scheduled landing of your flight, an alternative plan is warranted. The pilot needs to communicate the new situation to the control tower. The set of normal safety regulations must be replaced with updated resources that address the new situation that has arisen.

Similar to an alternative plan warranted for an unforeseen flight problem, a teacher needs to have a repertoire of teaching practices at their disposal because not all gifted children are alike. A teacher must become aware of the special ongoing needs of each gifted child in order to effectively offer provisions that encourage their learning process. Being a precocious learner does not necessarily mean a child's talent production will automatically continue throughout adulthood. Prodigies also need help to realize their high potential by understanding how it affects them as individuals and how it can serve the greater need of their community and society in the future [25]. Because strong social obstacles can become barriers to discourage an individual and produce negative effects in the development of gifted children, a teacher must be prepared to know how to intervene.

Many of you have heard about 'genius' children who enrolled in a university at the age of 12 or became a doctor at the age of 17. However, displaying extraordinary talent can be viewed as a problem for both teachers and parents due to unique needs that require different resources. The adolescent years can be especially painful as highly, exceptionally, and profoundly gifted children realize their high abilities and strive for perfectionism while trying to find their place in the world. Thus, exceptionally gifted students need to experience a social and emotional balance in their upbringing to prepare them to enter adulthood.

6.11 Was Mozart Really a Genius?

At first, student prodigies may be viewed with awe and trepidation because gifted children easily process complex information in great depth and make connections others may not see. According to Shenk [1], gifted children who are considered to be prodigies are not adult-level innovators, but masters of technical skill. Their mesmerizing quality comes from natural comparison to other students' skills, and not because they compare to the best adult performers in their field. Shenk argues that although advanced for his age, Mozart can be compared to many young musicians today using the Suzuki method. Mozart was born into to a family of musicians who encouraged constant practice and held high expectations for him. His family provided intense and continual nurturance through early exposure to musical instruments and exceptional musical instruction [1]. Unfortunately, many profoundly gifted children do not have their special needs met because they are offered fewer opportunities and experiences at home or in school.

The manner in which a gifted student is raised dramatically impacts their potential learning. If a baby is born with a dominant musical ability that is never acknowledged, encouraged, or recognized, the child may never develop their potential for becoming a talented musician in later life [1]. It can be inferred that being provided with proper nurturance and opportunities cannot be understated.

Gifted children have rights. Like every student, a gifted child also has the right to learn something new each day [26]. Learning something new involves a struggle in

which a student is challenged to acquire and apply new meaning to make new connections that did not previously exist. Every student needs to stretch their thinking and be encouraged to develop their potential.

References

1. Shenk, D. (2010). *The genius in all of us*. New York: Doubleday p. 52.
2. Caine, R. N., & Caine, G. (1991). *Making connections: Teaching and the human brain*. Alexandria, VA: Association for Supervision and Curriculum Development (ASCD).
3. Dweck, C. S. (2010, September). Even geniuses work hard. *Educational Leadership, 68*(1), 16–20.
4. Eyre, D. (2009). The English model of gifted education. In L. Shavinina (Ed.), *The international handbook on giftedness*. Amsterdam: Springer Science and Business Media, pp. 145–161.
5. Rogers, K. B. (2002). *Re-forming gifted education, matching the program to the student*. Arizona: Great Potential Press.
6. Ruf, D. (2005). *Losing our minds: Gifted students left behind*. Arizona: Great Potential Press, p. 51.
7. Hollingworth, L. S. (1926); O'Shea, H. E. (1960); Gross, M. U. M. (1993). In M. U. M. Gross (May 2003). "Play Partner" or "Sure Shelter:" What gifted students look for in friends. *The SENG Newsletter,* 2(2), 72.
8. Gross, M. U. M. (1999). Small poppies: Highly gifted students in the early years. *Roeper Review, 21*(3), 207–214.
9. Gross, M. U. M. (1992). The use of radical acceleration in cases of extreme intellectual precocity. *Gifted Student Quarterly, 36*(2), 90–98.
10. Hollingworth, L. S. (1942). as cited *In* Gross, M. U. M. (2000, Winter). Exceptionally and Profoundly Gifted Students: An underserved population. *Understanding Our Gifted*. [Online], http://www.openspacecomm.com. Accessed September 22, 2016.
11. Gross, M. U. M. (2000, Winter). Exceptionally and profoundly gifted students: An underserved population. *Understanding Our Gifted*. [Online], http://www.openspacecomm.com. Accessed September 22, 2016.
12. Goertzel and Goertzel (1962) as cited *In* Gross, M. U. M. (Winter 2000). Exceptionally and Profoundly Gifted Students: An underserved population. *Understanding Our Gifted*. [Online], http://www.openspacecomm.com. Accessed September 22, 2016.
13. Gove, P. B. (Ed.). (1961). Webster's third new international dictionary of the English language unabridged. Springfield, MA: G. and C. Merriam Co. In D. H. Feldman (Fall 1993), Child prodigies: A distinctive form of giftedness. *Gifted Child Quarterly. National Association for Gifted Children (NAGC)*, *37*(4), 188–193.
14. Feldman, D. H. (1993, Fall). Child prodigies: A distinctive form of giftedness. *Gifted Child Quarterly. National Association for Gifted Children (NAGC)*, *37*(4), 188–193.
15. Bloom, B. (Ed.). (1985). *Developing talent in young people*. New York: Ballantine Books. In D. H. Feldman (1993, Fall). Child prodigies: A distinctive form of giftedness. *Gifted Child Quarterly. National Association for Gifted Children (NAGC), 37*(4), 188–193.
16. Dabrowski, K. (1964). *Positive disintegration*. Boston: Little, Brown.
17. Meek, M. (1982). *Learning to read*. London: Bodley Head.
18. Kanevsky, L. K. (1994). A comparative study of students' learning in the zone of proximal development. *European Journal of Giftedness, 5*(2), 163–175.
19. Tallent-Runnels, M., & Candler-Lotven, A. C. (2008). *Academic competitions for gifted students: A resource book for teachers and parents* (2nd ed.). Thousand Oaks, CA: Corwin Press.

20. Charlie, R., & Koshy, V. (1998). A national curriculum and the sovereignty of high ability learners. *Gifted Student Quarterly, 42*(4), 253–260.
21. Tomlinson, C. A. (1999). *The differentiated classroom*. Alexandria, VA: Association for Supervision and Curriculum Development (ASCD).
22. Renzulli, J. S., & Reis, S. M. (1995). Extending the pedagogy of gifted education to all students. *The Enrichment Cluster Study Research Monograph* 95118. Storrs, CT: University of Connecticut, The National Research Centre on the Gifted and Talented.
23. Bloom, B. S. (Ed.)., Engelhart, M. D., Furst, E. J., Hill, W. H., Krathwohl, D. R. (1956). *Taxonomy of educational objectives, handbook I: The cognitive domain.* New York: David McKay Co Inc.
24. Wilson, L. O. (2001). *The Second Principle*. [Online], http://thesecondprinciple.com/teaching-essentials/beyond-bloom-cognitive-taxonomy-revised. Accessed on September 6, 2016.
25. Freeman, J. (2001). *Gifted children grown up*. London: David Fulton Publishers.
26. Siegle, D. (2009). NAGC. [Online], http://www.nagc.org. Accessed on April 23, 2012.