Recognition and Teaching Gifted and Talented Children – Good Practice for Europe
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Recognition and Teaching Gifted and Talented Children – Good Practice for Europe
Guidelines for teachers and other professionals working with able, gifted and talented children.
Product of The Erasmus+ project Talented Children

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# Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>5</td>
</tr>
<tr>
<td>ABOUT THE TALENTED CHILDREN PROJECT</td>
<td>7</td>
</tr>
<tr>
<td>CZECH REPUBLIC</td>
<td>9</td>
</tr>
<tr>
<td>1 THE EDUCATION SYSTEM IN THE CZECH REPUBLIC</td>
<td>11</td>
</tr>
<tr>
<td>2 BASIC DEFINITIONS</td>
<td>12</td>
</tr>
<tr>
<td>3 CHARACTERISTICS OF GIFTED AND TALENTED CHILDREN</td>
<td>13</td>
</tr>
<tr>
<td>3.1 PROFILES OF GIFTED AND TALENTED CHILDREN</td>
<td>15</td>
</tr>
<tr>
<td>3.2 POTENTIAL PROBLEMS OF GIFTED AND TALENTED CHILDREN</td>
<td>16</td>
</tr>
<tr>
<td>4 IDENTIFICATION AND DIAGNOSIS OF GIFTED AND TALENTED CHILDREN</td>
<td>18</td>
</tr>
<tr>
<td>4.1 IDENTIFICATION AND NOMINATION OF GIFTED AND TALENTED CHILDREN</td>
<td>18</td>
</tr>
<tr>
<td>4.2 PHASES OF IDENTIFICATION AND DIAGNOSIS</td>
<td>18</td>
</tr>
<tr>
<td>4.3 GIFTEDNESS SUPPORT SYSTEM</td>
<td>19</td>
</tr>
<tr>
<td>5 PROVEN AND SUITABLE STRATEGIES FOR TALENTED AND GIFTED CHILDREN</td>
<td>21</td>
</tr>
<tr>
<td>5.1 CONTENT ADJUSTMENT</td>
<td>22</td>
</tr>
<tr>
<td>5.2 EDUCATION PROCESS ADJUSTMENT</td>
<td>25</td>
</tr>
<tr>
<td>5.3 ENVIRONMENT ADJUSTMENT</td>
<td>28</td>
</tr>
<tr>
<td>5.4 OUTCOME AND ASSESSMENT ADJUSTMENT</td>
<td>28</td>
</tr>
<tr>
<td>6 REFERENCES</td>
<td>29</td>
</tr>
<tr>
<td>UNITED KINGDOM</td>
<td>33</td>
</tr>
<tr>
<td>1 THE EDUCATION SYSTEM IN THE UK</td>
<td>35</td>
</tr>
<tr>
<td>2 BASIC DEFINITIONS</td>
<td>37</td>
</tr>
<tr>
<td>3 CHARACTERISTICS OF GIFTED AND TALENTED CHILDREN</td>
<td>38</td>
</tr>
<tr>
<td>4 IDENTIFICATION AND DIAGNOSIS OF GIFTED AND TALENTED CHILDREN</td>
<td>41</td>
</tr>
<tr>
<td>4.1 BASIC PRINCIPLES OF IDENTIFICATION</td>
<td>41</td>
</tr>
<tr>
<td>4.2 INDICATORS OF GIFTS AND TALENTS RELATED TO PHASE</td>
<td>42</td>
</tr>
<tr>
<td>5 PROVEN AND SUITABLE STRATEGIES FOR TALENTED AND GIFTED CHILDREN</td>
<td>47</td>
</tr>
<tr>
<td>6 REFERENCES</td>
<td>54</td>
</tr>
</tbody>
</table>
APPENDICES .......................................................................................................................................................55
TURKEY ................................................................................................................................................................59
1 THE EDUCATION SYSTEM IN TURKEY ..................................................................................................61
2 BASIC DEFINITIONS..................................................................................................................................62
3 CHARACTERISTICS OF GIFTED AND TALENTED CHILDREN ........................................................63
4 IDENTIFICATION AND DIAGNOSIS OF GIFTED AND TALENTED CHILDREN .....................................65
4.1 IDENTIFICATION METHODOLOGY .....................................................................................................65
4.2 STAGES OF IDENTIFICATION .........................................................................................................66
4.3 IDENTIFICATION OF GIFTEDNESS IN TURKEY .......................................................................67
5 PROVEN AND SUITABLE STRATEGIES FOR TALENTED AND GIFTED CHILDREN SUPPORT AND DEVELOPMENT .................................................................69
5.1 IN SCHOOLS .........................................................................................................................................69
5.2 RECOMMENDATION FOR TEACHERS ..........................................................................................72
5.3 COOPERATION WITH PARENTS ...................................................................................................74
6 REFERENCES ...................................................................................................................................................77
MESSAGES FROM TEACHERS AND PUPILS ..............................................................................................79
Introduction

One of the characteristics of a developed society is to focus attention on those in need. A developed society with social responsibilities helps its members who need help and not only supports weak members but also those potentially strong ones - gifted and talented children. Such members can contribute significantly to the future of their society and to the world. Gifted and talented people, in particular, will contribute to development and progress in the society. The necessity for effective identification and care for gifted and talented children was the impulse for Erasmus+ Talented Children Project and for this publication.

The publication is a result of the cooperation of professionals from the Czech Republic, Turkey and the United Kingdom who were involved in the Project. It contains essential knowledge and methods of identification and work with gifted children. Our aim was to provide teachers in primary and secondary schools with key information for quick orientation in the concerned field. Primary and secondary level are the important stages of education where giftedness and abilities can be supported and developed by educationalists.

As the publication is a product of cooperation among three countries, it consists of inputs from all of the involved partners. The structure of the input is identical for all; the content reflects practice in the particular country. This enables the users to gain information and inspiration internationally.

We believe that this publication might be a source of information both for new and experienced teachers. In every profession working with people (including pedagogy), it is necessary to develop the potential of not only those who are looked after but also those who provide support. We hope that this publication brings inspiration and motivation to teachers who want to do their best in their profession.
About the Talented Children Project

The project was implemented by the Regional Pedagogical and Psychological Counselling Centre in Zlín (Czech Republic) in cooperation with Titan Partnership Ltd. in Birmingham (United Kingdom) and Nevşehir Hacı Bektaş Veli University (Turkey).

Our project was aimed at teachers, psychologists and other professionals in education. We intended to upskill them in the early recognition of gifted and talented children and, in cooperation with their family, in supporting the development of the potential of the child. All partners have identified the need for support teachers and other professionals who work with talented and gifted children both in formal and informal education. The partnership consider support and motivation of gifted and talented children vital to future economic development.

According to the Czech law, gifted and talented children must be firstly identified by psychological examination in Pedagogical and Psychological Counselling Centres. Then the school can accommodate the educational process necessary to meet the needs of the child. Nevertheless, the Pedagogical and Psychological Institute of the Czech Republic have found that both parents and teachers often lack information and support to recognize a child’s abilities and talent and enable them to reach their potential.

In Turkey, there are programmes offered by public and private schools for gifted and talented children. The psychologists working in public sector run tests to identify the giftedness and talent of children. Teachers and psychologists co-ordinate the work and delivery of specialists in the following subject areas: math, sciences, drama, music, natural sciences and interdisciplinary studies. Children who took individual assessments have an opportunity to be observed in the group by the teachers.

Able Gifted and Talented (AG&T) is a real focus in the UK. Between 1999 and 2013 there was funding available to schools for the development of AG&T young people through the Aim Higher project and through the Excellence in Cities Able Gifted and Talented funding. There remains an issue in UK schools regarding the under-achievement of AG&T students and with regard to appropriate differentiation in the classroom in order to stretch and challenge all students.

The situation of gifted and talented children varies from country to country. Each partner country applies different measures to identify gifted and talented children and has various approaches to fulfil their educational needs. That is why our project can contribute to the sharing of best practice among the partner countries and provide new means of nurturing talent. An effective and equal educational system is considered essential for smart, sustainable and inclusive growth. An equal education system will also ensure that talented and gifted children are welcome and supported.

For further information on the project please visit www.talentedchildrenproject.eu
Maybe that children just as trees need stable ground anchors, enough room, and good conditions to grow up and develop their potential...

It is up to us what environment we create and what we give them to enable them to reach heights.

Miroslav Orel, psychiatrist, psychologist and writer

Czech Republic

Eva Machů
Věra Facová
Miroslav Orel
1 The Education System in the Czech Republic

Compulsory school attendance is mandatory for all children from 6 to 15 years. The system is organized in four levels – pre-primary, primary, secondary and tertiary level.

- **Pre-primary** – nursery schools for children from 3 years up to 6 years of age;
- **Primary** – primary schools have two stages: the first stage covers the first to fifth grade and the second stage covers sixth to ninth grades for children from 6 years up to 15 years of age;
- **Secondary** – secondary general schools and secondary vocational schools for students from 15 years up to 19 years of age;
- **Tertiary** – Higher professional schools and Universities.

Primary schools accept children who have reached 6 years of age by the 1st September of the year in question. Children turning 6 between the beginning of the school year and the end of the calendar year can be admitted if they are sufficiently mature, physically and mentally, and if their legal guardian applies for admission. The maturity of pupils is assessed during their enrolment in school. The assessment is made by Pedagogical and Psychological Counselling Centres or Special Pedagogical Centres. These institutions, on the basis of the pedagogical and psychological diagnosis, design an individual education plan for the child.

Strategic documents on the education of gifted children in the Czech Republic are: *Strategy of Educational Policy of the Czech Republic 2020, Long-term Strategy of Education and Development of Educational System in the Czech Republic, Framework Education Programme for Primary and Secondary General Education, Act No 561/2004 Call, on pre-primary, primary, secondary, upper vocational and further education (Education Act), §17–18*, where §16 will be amended in 09/2016.

The §16 specifies the requirements on the creation of a complex system of care about gifted children. This requirement is equal to the education of children with special needs. The system will contain 5 levels of measures of adequate support and care.

The binding document for education in basic school is the Framework Educational Programme for Basic Education approved by the Ministry of Education. The Programme defines nine main educational areas consisting of one or more educational fields, cross-curricular topics, complementary educational fields and key competences of a school leaver. On the basis of the Framework Educational Programme for Basic Education, schools have to prepare their own school educational programmes.
2 Basic Definitions

There are numerous definitions of the terms giftedness and talent. This disparity is a logical consequence of development of the term giftedness which changes dynamically in relation to the individual needs of the child, type of diagnosis and education. This is why a generally applicable definition cannot be created. Furthermore, the phenomenon of giftedness and talent (as with any other feature) can be studied from a number different perspectives.

There is a tendency to categorize the existing definitions in specific taxonomies. The ensuing examples show how different the definitions can be in terms of quality (depth) and quantity (width). For example, the categorization of McAlpine (1996 in Porter, 1999) is as follows:

- **Conservative versus liberal definitions:** Conservative tend to use a single dimension such as high intelligence (as measured on an IQ test) and restricts the areas that are included in the categorization of giftedness and talent or how many people will be regarded as gifted for example the top 5% of any given measure of ability. The conservative definition is being used for selection of gifted children for a tailored education or leisure activity. Liberal definitions suggest that there is no meaningful difference between those who scored in the top 5% and the ones who come just below and so would advocate that 20% should be included in the gifted category. Liberal definitions shall be used for complex pedagogical and psychological diagnostics.

- **Single versus multi-dimensional definitions:** Some definitions of giftedness refer to ability in just one domain, usually academic while others include achievements in a number of domains. While a broad definition of giftedness is desirable as it makes it less likely that children who are gifted will be overlooked.

- **Potential versus performance:** Performance definitions require concrete evidence of above average performance. Potential definitions include children, for example, who are underachieving and their performance might be not exceptional, but can be considered to have further potential. These definitions are being used in cases of pre-primary age or of disadvantaged children with potential for development of giftedness.

For example, some concrete defections are as follows:

- According to Framework Education Programme for Primary Education giftedness is a complex of abilities to achieve at a level significantly in advance of the peer group. Exceptionally gifted child may show abilities in all areas of curriculum or in a limited range. The estimated number of pupils who are exceptionally gifted is from 3 to 10%.
- According to Porter (1999): Gifted children’s mental processes are on a higher level and also quicker in comparison to their peers. Gifted children’s performance is more developed in terms of quality and quantity in comparison to their peers.
- According to Clark (1998): Gifted and talented include those with demonstrated achievement or potential ability in any one or more of the following areas general intellectual, specific academic subjects, creativity, leadership, and visual and performing arts. They need highly attentive care at school in order to develop their abilities.
- According to Heward (2013): Giftedness is an ability in a specific area appreciated by the society. This ability is more developed in terms of quality and quantity in comparison to their peers.
3 Characteristics of Gifted and Talented Children

In order to capture the essentials of giftedness, it is more useful to apply those models which are represented by extensive verbal definitions. Models like this exist in various types from the simple ones (like Renzulli’s Three Rings Model) to multi-dimensional (like the Munich Model of Giftedness and Talent). Models, as well as definitions, vary significantly.

**Monks’ multifactor model of giftedness** (Mönks, Ypenburg, 2002) shows jointly effective factors. Besides the individual’s factors, there are three environmental conditions: school, peers, and family. This multi-factor model emphasised that only if all six factors are in interaction various talents or gifts develop into talented performances.

![Diagram of Monks' multifactor model of giftedness]

This model is being used for a survey of the child’s environment and for creation of a programme of individual assistance for the child. The model helps to detect factors which affects the child’s giftedness’ development or stagnation. Giftedness is not a constant state; its extent is influenced by individual and social factors.

Nowadays there are lists of typical characteristics of gifted children in most of the publications about giftedness (for example in Davis, Rimm, 1998; Davis, Rimm, Sielge, 2013; Porter, 1999; Leyden, 1985, Clark, 2013; Webb, 2002; Škrabánková, 2012). As those lists are very extensive, they can be helpful for teachers doing initial classifications (pre-diagnosis). To become familiar with them is useful (otherwise we sometimes don’t know what is worth registering).

Particular signs of giftedness must be considered together with other typical attributes. The characteristics can appear in various ages and their positive sides are shown during the educational process so knowledge of developmental psychology is crucial. Giftedness is inconsistent during the individual’s life and this is important to acknowledge.

**The main intellectual characteristics:**

- **Verbal proficiency:** Gifted children use an advanced vocabulary from their early years. They display fluid, descriptive oral language, early mastery of the phonetic code and grammar. They use words or phrases from other languages assimilated into their mother tongue in pre-primary age. This rich vocabulary and a specific way of speaking might cause communication problems with their peers. Verbal proficiency can be passive because development of thinking is ahead of development of speech. In this case, there is a risk that giftedness will remain undiscovered.
• **Power of abstraction, conceptualization, generalizing:** Together with a high creativity, this ability helps children to produce original products and ideas. Children like playing with words, they enjoy verbal puzzles and experiments in natural science.

• **Metacognitive skills:** Gifted children have their own knowledge about when and how to use particular strategies for learning or for problem-solving. Metacognitive skills help children to plan, monitor and assess their thinking. Children often use more advanced learning styles than their peers.

• **Critical thinking:** Gifted children tend to challenge teachers, adults or „experts“. They are sceptical about facts they gain and look for further information.

• **Flexible and original thinking:** Gifted individuals look for answers by themselves. Their imagination is rich, they express their attitudes easily. Their work and products are often unique.

• **Sense of humour:** Keen sense of humour which is different from their peers. It is a combination of brilliant verbal skills and generalizing.

• **Early reading:** In the literature we can find the term „paper and pencil kids“(Freeman, 1979). Most of gifted children are interested in letters and numbers. They are able to create words from letters in their early age sometimes even earlier than they start speaking. Some experts (e.g. R. J. Sternberg) suggest that the ability to read before the child reaches four years is a sign of exceptional giftedness. Some psychologists are sceptical and distinguish children motivated by their natural interests and children encouraged by their ambitious parents.

• **Quick, accurate memory:** Gifted children are brilliant observers and have great attention to details. They prefer logical thinking to memorize.

• **Quantity of advanced information on many topics:** Gifted individuals have deep knowledge in disciplines they are interested in. They recall particular information easily and the knowledge might reach expert level. On the other hand, they might fail in subjects they don’t find compelling.

• **Hobbies and preference:** Children gifted in academic fields tend to focus on books, encyclopaedias, atlases, PC, chess. They enjoy classification and generalization of information.

• **Ability to concentrate and persist:** This typical characteristic is shown from early years. The ability to concentrate is logically influenced by motivation and is decreased in the case of monothematic and routine tasks.

• **Work pace:** When it comes to recalling, application of knowledge and assumption, gifted children belong to the best in the classroom. On the other hand, the gifted are the slowest when they complete a task using critical, creative thinking and problem solving. This is because of their tendency to look for more sophisticated constructions and solutions.

**Individual characteristics:**

• **Vivid imagination (day dreaming):** In case of gifted children the daydreaming has rather creative than escapist characteristics.

• **Motivation:** Usually the intrinsic motivation prevails the extrinsic motivation. These children crave learning and getting new information and have various interests. Mental activity doesn’t tire them at all.

• **High involvement:** Some gifted and talented children have a high energy level from a very young age. Many of them are interested in a variety of subjects. This can cause problems at school as they become upset when an adult tries to get them to move on from their preferred tasks.

• **Super-sensitivity and extra perception:** Many gifted and talented children are emotionally sensitive, causing them to become angry through frustration. They perceive subjects and phenomena intensively. They are also sensitive to aesthetics, harmony and everything problematic.
Perfectionism: Some gifted and talented children are very ambitious and have a tendency towards perfectionism. These children can be very self-critical or become emotional if things don’t go well in their eyes (even if others feel they did what was expected of them).

All the above mentioned signs can become a potential reason for conflicts with adults or peers. Therefore, it is necessary to know them and focus on what “is behind” them.

3.1 Profiles of Gifted and Talented Children

It is very important to inform teachers on various kinds of gifted children. In teachers’ daily practice they might encounter gifted children who belong to several groups (Birley, Genshaft, 1991 in Sejvalová, 2004; Portešová, 2004 etc.).

◆ The Successful: These children are conformists. Children who demonstrate the behaviour, feelings and needs, have learned the system. They have listened closely to their parents and teachers. After discovering what “sells” at home and at school, they begin to display appropriate behaviour. They learn well and are able to score high on achievement tests and tests of intelligence. As a result, they are usually identified for placement in programmes for the gifted because they can be identified easily. Rarely do they exhibit behaviour problems because they are eager for approval from teachers, parents, and other adults. Their general characteristic corresponds with available theories of giftedness or descriptions of behaviour of gifted children in Czech literature (Kalhous, Obst, 2001, p. 19): Pupils’ performance is above-set requirements; their answers are quick, creative and confident, learn easily; they are interested spontaneously in new information and need to show off their knowledge and abilities. Other indicators: Positive attitude to school and teachers; liked by peers and included in social groups; positive self-concept. This is a case of the ideal gifted child.

◆ The Challenging: This type of children typically possess a high degree of creativity and may appear to be obstinate, tactless, or sarcastic. They often question authority and may challenge the teacher in front of the class who can rarely afford to come unprepared to the lesson. They do not conform to the system, and they have not learned to use it to their advantage. They receive little recognition and few rewards. Their interactions at school and at home often involve conflict, they are not liked by adults. They appear mostly in lower grades of education. Later (without appropriate support) they stagnate.

◆ The Underground: A shy, quiet and bashful child. They deny their abilities in order to feel more included with a nongifted peer group. Their self-esteem is very low. They often feel insecure and anxious. Gifted children like these are often left unrecognized.

◆ The Dropouts: These type of gifted students are angry. They are angry with adults and with themselves because the system has not met their needs for many years and they feel rejected. They may express this anger by acting depressed and withdrawn or by acting out and responding defensively. School seems irrelevant and perhaps hostile to them. Some of them don’t do their homework, attend school sporadically or only on certain days and have in essence “dropped out” emotionally and mentally if not physically. They also might feel rejected and disliked by their peers. Their self-esteem is very low, and they require a close working relationship with an adult they can trust otherwise they can end up in a vicious circle.

◆ The Twice Exceptional: Gifted children who, besides their intellectual abilities, are physically or emotionally handicapped in some way. They, for example, suffer from ADHD, ADD, PAS, or have learning disabilities. In some cases, only their disability is recognized and their giftedness remain undiscovered. Traditionally, these children are ignored because they are perceived as average. School systems tend to focus on their weaknesses and fail to nurture their strengths or talents. These children belong to an endangered group of gifted children.
• **The Autonomous**: These gifted children are the autonomous learners. They have learned to use the system to create new opportunities for themselves. They do not work for the system; they make the system work for them. They have a strong, positive self-concept because their needs are being met; they are successful, and they receive positive attention and support. Their interests often lie outside the school.

• **The Highly Creative**: These children have the ability to make unusual associations or connections between seemingly unrelated or remote ideas. They find it hard to obey rules, are often concerned with adapting, improving, or modifying existing ideas, thoughts or products. They frequently challenge teachers, textbook authors, and those in authority or “experts”. Teachers often struggle with identification of these children as they usually fail in didactic, performance and academic tests. They have a large number of ideas or solutions to problems.

### 3.2 Potential Problems of Gifted and Talented Children

From the above mentioned characteristics follows the uniqueness and specificity of the gifted and talented children. This difference can be found problematic by the others although it has an important effect on the child’s development. The following table shows examples of potential problematic phenomena and inappropriate assessment of the signs of giftedness (Winebrenner, 2001):

<table>
<thead>
<tr>
<th>General characteristic</th>
<th>Examples of problematic assessment</th>
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| Quick and high-quality learning process | - Impatience.  
- Slower tempo of their peers makes them nervous.  
- Dislike for exercise. |
| Critical thinking, abstraction conceptualization, generalizing | - Correct teacher.  
- Question rules, policies.  
- Inconsistent work habits.  
- Prefer highly active/questioning approach.  
- Stand up for convictions. |
| Creativity | - Occasional resistance to directions; rejection or omission of detail.  
- Dislike for routine drill.  
- Rejection of knowledge; need to invent for oneself. |
| Accelerated and advanced thought process | - Prefer communication with adults.  
- Rejected by peers. |
| Deep knowledge | - Show boredom in the class.  
- Daydreaming.  
- Disruptive.  
- Poor home works.  
- Peers find them amusing. |
| High involvement, ability to concentrate and persist | - Resistance to interruption.  
- Hyperactivity. |
| Curiosity | - Disruptive in the class.  
- Require new activities. |
| Sensitivity | - Critical attitude toward others; discouragement from self-criticism.  
- Dislike noise in the classroom. |
| Intrinsic motivation and goal-directed orientation | - Low interest in school marks.  
- Frustration with inactivity and absence of progress. |
| Perfectionism | - Stubbornness.  
- Intolerant to imperfection.  
- Discouragement from criticism.  
- Heighten sensitivity. |
| Thrives on complexity, structure | - Apply own rules in learning and communication.  
|                                | - Tendency to govern the classes.  
|                                | - Active in discussions.  
| Idealism, sense of ethics and justice | - Frustration with political situation in the world.  
|                                | - Hypersensitivity.  
| Sense of humour | - Communication problems with their peers.  
|                                | - Classroom entertainers.  
| Verbal proficiency | - Communication problems with their peers.  
|                                | - Strong in argumentation with teachers.  
|                                | - Escape into verbalism.  |
4 Identification and Diagnosis of Gifted and Talented Children

The initial identification shall be made by the schools or families. Specialized diagnosis of giftedness and talent is the agenda of Pedagogical and Psychological Counselling Centres which assess both academic and non-academic abilities. The process is based on reports from experts in the specific fields (like science, arts, sports etc.). The problematics of identification and the diagnosis of giftedness and talent is described in the publication Obligatory Diagnosis and Obligatory Diagnosis in Pedagogical and Psychological Counselling Centres. (Obligatorní diagnózy a obligatorní diagnostika v pedagogicko-psychologických po-radnách. Praha, IPPP ČR, 2006).

According to the Czech legislation, each school is obliged to create conditions for the diagnosis of gifted and talented children. The Czech School Inspectorate undertook research in 2008 which showed serious failings in the identification of gifted and talented children. Only 36% of visited schools declared a clear process for the identification of gifted pupils. The best results were found in arts schools and secondary general schools. The Pedagogical Research Institute undertook a survey in 2010. According to the survey, 70% of teachers never encountered gifted or talented pupil (or these children appear very rarely).

4.1 Identification and Nomination of Gifted and Talented Children

In the process of discovering giftedness, it is necessary to distinguish between the terms identification and nomination. (Hříbková, 2005).

- Identification of gifted children is the process of recognition of children who meet the requirements for engaging in specialist care for gifted children. The process focuses on unveiled abilities. It is advisable to realize this process in the case of pre-primary or children in early school years as early identification has the most effective impact on further development of the child. (Olszewski-Kubilius, 2003).

- Nomination of gifted children is the process of recognition of children whose performance approves them to be educated in special education programmes or in special schools for exceptionally gifted children (primary schools with enriched curricula, secondary general schools, leisure time institutions for talented children). This process involves primary school children whose abilities in specific area are above the average. Nomination shall be the second phase of identification.

Sometimes the identification process runs parallel with the nomination. Nowadays the term identification is being replaced with the term diagnosis.

4.2 Phases of Identification and Diagnosis

According to experts the diagnosis process shall consist of three consequential phases. Considering the above mentioned principles of giftedness and talent, the child shall go through the process repeatedly. Another reason for the repeated diagnosis is that giftedness and talent can culminate during the individuals´ life.

1. PRE-DIAGNOSIS (NOMINATION): Nomination is usually being made by a parent, a teacher or other adults from the child´s background. In case of pre-diagnosis the usual methods of identification are applied, e.g. observation, interview. Results of the observation can be recorded in a so-called nomination scale which are statements about signs of giftedness. The nominating person then assess the level of abilities on the scale.
2. PSYCHOLOGICAL DIAGNOSIS (CONFIRMATION). Diagnosis exceptional giftedness is being made by Pedagogical and Psychological Counselling Centres. To ensure this the Counselling Centre needs an application and the agreement of the legal representative of the child (parent). The Centre also requires a statement from the school. The first phase of the examination is diagnosis the IQ and profile of cognitive abilities which is made by a psychologist. The following phases are initiated only if the IQ score is 130 or more. Complex examination consists of anamnesis (family and personal); IQ and profile of cognitive abilities; creativity; personality; social and communication skills; numeracy; reading and writing; other knowledge; learning and cognitive style; cognitive functions (perception, concentration and memory), laterality and writing skills; motivation and interests, vocational orientation; exceptional performance or activities at school and out of school (e.g. portfolio).

3. PEDAGOGICAL DIAGNOSIS. Pedagogical diagnosis is divided into two phases – initial and checking (continuous).

- Initial pedagogical diagnosis is made prior to creating the individual education plan and is essential for resultant amendments to the education process of the child. These amendments relate to the curricula content and teaching methods and effect the individual education plan which is obligatorily created by the school if the child’s exceptional giftedness is certified by the pedagogical and psychological counselling centres. This phase of pedagogical diagnosis focuses on getting as many facts necessary for the individual education plan as possible. The most used methods of pedagogical diagnosis are observation, interview and analysis of the child’s products. The special educationist who makes this type of diagnosis shall cooperate with parents of the child as they can provide further information on the child’s interests, his/her development, habits or leisure time activities.

- Checking (continuous) pedagogical diagnosis is initiated for continuous evaluation of the individual education plan and its amendments.

The key role in the process of diagnosis involves the child’s background – teachers, parents or others have to notice the child’s potential. The second step is evaluation made by professionals in Pedagogical and Psychological Counselling Centres or Special Pedagogical Centres – when diagnosis the twice-exceptional child, e.g. with PAS.

4.3 Giftedness Support System

*Strategy for the Support of Giftedness Development and the Care of Gifted Children and Youth for the years 2014 – 2020 (hereafter referred to as Giftedness Strategy)* was set by the Ministry of Education, Youth and Sports in 2014. This Strategy contains formation, function, and activities of particular components of the proposed system. The main aim is to assure maximum development and full use of the potential of all children, pupils, and students.

The Giftedness Strategy initiates a process for expert upskilling in the field of work with gifted children, pupils, and students. This process includes the training in identification, development and use of giftedness for the following groups of professionals:

- (future) teachers,
- (future) psychologists,
- (future) special educators.

The Giftedness Strategy provides a scheme of tasks in legislation and school documentation which needs to be adapted to create better conditions for both the pupils and the teachers when developing giftedness.

The Giftedness Strategy assumes the formation and provision of necessary coordination both in the field of activities directly linked with the care of giftedness and with the information, methodical a strategic field. It
creates the basis for the establishment of National Network of Giftedness Support. The National Network, with a guarantee and support of the Ministry of Education, Youth and Sports, ensures systematic and high-quality offer of possibilities to giftedness development. This is covered by regional capacities and resources.

The Regional Network consists of all types of schools (pre-primary, primary, secondary, and universities), pedagogical centres and NGO’s which work or intend to work with gifted and talented individuals. Experts from various fields are also a part of the network as well as a representative of regional authorities in education and regional coordinators of the network.
5 Proven and Suitable Strategies for Talented and Gifted Children Support and Development

Gifted and talented pupils are very specific both in academic and emotional spheres. Their needs cover cognitive, social and emotional factors and they should be respected. For example, Feldhusen and Robinson-Wyman (1980, in Jurášková, 2003) give the following list of the needs and conditions for their fulfilment:

◆ Maximum achievement of basic skills and concepts.
◆ Learning activities at appropriate level and pace.
◆ Experience in creative thinking and problem solving.
◆ Development of convergent abilities, especially in logical deduction and convergent problem solving.
◆ Stimulation of imagery, imagination, spatial abilities.
◆ Development of self-awareness and acceptance of own capacities, interests, and needs.
◆ Stimulation to pursue higher level goals and aspirations (models, pressure, standards).
◆ Exposure to a variety of fields of study, art, professions, and occupations.
◆ Development of independence, self-direction and discipline in learning.
◆ Experience in relating intellectually, artistically and effectively with other gifted students.
◆ A large fund of information about diverse topics.
◆ Access and stimulation to reading.

**CURRICULUM ADJUSTMENT** for gifted pupils shall comprise both the qualitative and the quantitative change of all parts of the educational programme. Curriculum enrichment means qualitative (quantitative) change of specific parts (content, process, product, environment, assessment). These changes shall respond to the needs of the gifted pupil. The general characteristics of the curriculum adjustment are as follows (Davis, Rimm & Sielge 2011):

◆ **Challenge** – cognitive targets on a higher level.
◆ **Choice** – possibility to creative problem solving.
◆ **Interest** – offer of interesting and motivating tasks.
◆ **Involvement** – supported by adequate didactic methods.

The curriculum enrichment covers particular segments - content, process, product, environment, assessment.

◆ **Content adjustment** relates to qualitative (enrichment) or quantitative (acceleration) changes of curriculum. It responds to the question – **What will I teach?**
◆ **Process adjustment** is change in the process of teaching within the meaning of using specific methods and forms of the process. It responds to the question – **How will I teach?**
◆ **Product adjustment** requires qualitative or quantitative change of the results of education. It responds to the question – **What will be the result of the curriculum?**
◆ **Environment adjustment** consists of changes in relationships (for example the method of communication), and change of place or equipment (for example the didactic tools, excursions). It responds to the question – Where and by what means will I teach?
◆ **Assessment adjustment** means change in the way of assessment of the education outcomes. It responds to the question - What and how will I assess?
5.1 Content Adjustment

In order to meet the educational needs of gifted pupils, the curriculum must be modified. The content is being accelerated and enriched. These terms (acceleration and enrichment) represents the essential principles of the education for gifted pupils which are also mentioned in legislation. The acceleration is suitable for segregated education forms. The enrichment is not possible without acceleration and vice versa. This needs to be taken into account.

**ACCELERATION**, as one of the key models of education, enables quicker progress in education.

- Internal acceleration is realized during classes through less repetition, omission of easy tasks or skipping the parts which pupils are familiar with. In the saved time the gifted pupils can deal with schoolwork which the rest of the pupils will get to later.
- External acceleration means re-organizing of education conditions such as early beginning of the school attendance, skipping the school year, skipping the subject (learning the subject with pupils in higher grades), compressing of the school years (attendance in two grades in one year), parallel education (attending particular lessons at a secondary school or other school).

Concrete examples of acceleration are **telescoping** and **compacting**.

- Telescoping means reduction of time necessary to deal with concrete schoolwork. This is the possibility to attend two grades in one school year.
- Compacting is based on acceleration of the educational process. In the saved time the child can be engaged in developmental activities according to his/her interest.

**ENRICHMENT** is broadening and deepening of the curriculum. The gifted pupil attends the lessons together with his/her peers, doesn’t skip the school year but is offered some kind of enriching activities. As was mentioned above, the enrichment is based on particular internal acceleration. Enrichment means a broader curriculum which reacts to the child’s education needs. The aim of the enrichment is support for creative thinking, problem-solving, advanced thinking, and development of independence, initiative and self-control.

Discussions about the enrichment techniques distinguish between horizontal and vertical enrichment. The horizontal enrichment is based on giving more school work to gifted children in comparison with the rest of the pupils. Vertical enrichment means school work based on higher level of Bloom’s taxonomy of educational objectives.

If we offer gifted pupils more tasks of the same kind the result can be boredom and loss of motivation. For example, the gifted pupil is ready with the task earlier than his/her schoolmates and asks what to do now? A teacher gives more exercises of the same type or asks the pupil to prepare for the next step of the lesson. Warning: The gifted pupil might see the additional tasks as a punishment for his/her quickness and activity. Next time he or she remains silent and will not show off. The second way can lead to vicious circle. Both methods are not suitable. Our aim is to offer vertical acceleration which means tasks on the higher level of mental ability.

When creating and assignment the enriched tasks is recommended (Riley, 2011, Clark, 2013, Roberts, 2005) using the several times revised Bloom’s taxonomy of education objectives. B. S. Bloom, who in the 1950’s dealt with the educational needs of gifted children, created a classification of education objectives according to the difficulty of mental operations. The objectives are categorized from the easiest to the most difficult ones:

1. **Knowledge** – remembering of previously learned information.
2. **Comprehension** – grasping (understanding) the meaning of informational materials.
3. **Application** – use of previously learned information in new and concrete situations.
4. **Analysis** – breaking down of informational materials into their component parts.
5. **Synthesis** – creatively or divergently applying prior knowledge and skills to produce a new or original whole.
6. **Evaluation** - Judging the value of material based on personal values/opinions.

The first taxonomic category covers the objectives on the lowest level and requires only remembering. This means terminology, facts, conventions, classification, criteria, methodology, generalization and theories. The second to the sixth categories covers intellectual abilities and skills of the pupils and relate to organization and re-organization of the curricula, to methods of application, and evaluation of the assigned schoolwork or problems. Hierarchy of the objectives is based on hypothesis that reaching the higher levels is impossible without command of the curricula on the lowest level.

The following table describes particular levels of the education objectives, presents suitable terms which represent the activity (active verbs) and offers products of the activities. This is the original, non-revised version of the taxonomy.

<table>
<thead>
<tr>
<th>Level of expertise</th>
<th>Description of level</th>
<th>Outcome illustrating verbs</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Knowledge</td>
<td>Remembering of previously learned material; of terminology; specific facts; ways and means of dealing with specifics (conventions, trends, and sequences, classifications and categories, criteria, methodology); universals and abstractions in a field (principles and generalizations, theories and structures).</td>
<td>defines; describes; enumerates; identifies; labels; lists; matches; names; reads; records; reproduces; selects; states; views; writes.</td>
<td>event, record, newspaper, magazine, TV show, radio, text, film, video, drama, facts, …</td>
</tr>
<tr>
<td>2. Comprehension</td>
<td>Grasping (understanding) the meaning of informational materials.</td>
<td>classifies; cites; converts; describes; discusses; estimates; explains; generalizes; gives examples; illustrates; makes sense out of; paraphrases; restates (in own words); summarizes; traces; understands.</td>
<td>model, relationship, dramatization, cartoon, picture, graph, photograph, document, statement, comparison, analogy, overview, conclusions, story, grammar rule, historical event, …</td>
</tr>
<tr>
<td>3. Application</td>
<td>The use of previously learned information in new and concrete situations to solve problems that have single or best answers.</td>
<td>acts; administers; applies; articulates; assesses; charts; collects; computes; constructs; contributes; controls; demonstrates; determines; develops; discovers; establishes; extends; implements; includes; informs; instructs; operationalizes; participates; predicts; prepares; preserves; produces; projects; provides; relates; reports; shows; solves; teaches; transfers; uses; utilizes.</td>
<td>instructions, map, forecast, graph, picture, task, document based on overview, solution, list, project, dramatization, panting.</td>
</tr>
<tr>
<td>Level of expertise</td>
<td>Description of level</td>
<td>Outcome illustrating verbs</td>
<td>Outcome</td>
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<tr>
<td><strong>4. Analysis</strong></td>
<td>The breaking down of informational materials into their component parts, examining (and trying to understand the organizational structure of) such information to develop divergent conclusions by identifying motives or causes, making inferences, and/or finding evidence to support generalizations.</td>
<td>analyses; breaks down; categorizes; compares; contrasts; correlates; diagrams; differentiates; discriminates; distinguishes; focuses; illustrates; infers; limits; outlines; points out; prioritizes; recognizes; separates; subdivides.</td>
<td>questionnaire, discussion, discovery, report, overview, definition, graph, parts, material, example, argument, attitude, intention, structure, opinions, …</td>
</tr>
<tr>
<td><strong>5. Synthesis</strong></td>
<td>Creatively or divergently applying prior knowledge and skills to produce a new or original whole.</td>
<td>adapts; anticipates; collaborates; combines; communicates; compiles; composes; creates; designs; develops; devises; expresses; facilitates; formulates; generates; hypothesizes; incorporates; individualizes; initiates; integrates; intervenes; invents; models; modifies; negotiates; plans; progresses; rearranges; reconstructs; reinforces; reorganizes; revises; structures; substitutes; validates.</td>
<td>conclusion, overview, review, evaluation, recommendation, comparison, trial process, self-evaluation, group discussion, proves, product, data, method, problem, …</td>
</tr>
<tr>
<td><strong>6. Evaluation</strong></td>
<td>Judging the value of material based on personal values/opinions, resulting in an end product, with a given purpose, without real right or wrong answers.</td>
<td>appraises; compares &amp; contrasts; concludes; criticizes; critiques; decides; defends; interprets; judges; justifies; reframes; supports.</td>
<td>hypothesis, suggestions, contractions, creating, building, writing, solution, forecast, plan, development, invention, combination, organization, …</td>
</tr>
</tbody>
</table>

The following scheme of pyramids shows comparison between common curriculum and enriched curriculum for gifted children when it comes to quality and quantity of offered activities (Wallace, 2006).
Enriched curriculum, in this case, enrichment of the lesson content, is considered the main education strategy respecting the principles of inclusive pedagogy. We define enrichment strategies with respect to the inclusive pedagogy principles:

- Assignment of both standard and above standard tasks. The standard tasks are objectively easier and are based on fundamental curriculum. The above standard tasks are more challenging and are based on higher levels of Bloom´s taxonomy of education objectives. Pupils can choose the task according to their knowledge and abilities.

- Assignment of additional tasks. These type of tasks are meant for children who are quicker in lessons. The additional tasks should be based on the previous activity and the pupils should see them as a reward for their active involvement. Additional tasks are intended not only for gifted pupils but also to those with average and under average abilities. In fact, there are two types of additional tasks. Using both types is respectful to the principles of inclusive pedagogy as it eliminates giving labels to the pupils. Assignment of additional tasks only to gifted pupils is not recommended as well as using tasks which don´t follow the previous activity and gifted pupils work on a task typical for them (reading their own books, encyclopaedias, working on different topic etc.).

- Use of stimulating methods is another strategy of enrichment. These strategies don´t set the limits of quality for the pupil. This means that a successfully assessed conceptual map can look like a simple sun as well as sophisticated diagram created by the gifted pupil. The outcome of the stimulating methods is reaching the objectives of Bloom´s taxonomy.

The three above-described principles of enrichment can be applied separately or can complement each other. We are aware that the enrichment relates not only to the content but also to the other parts of the curricula.

5.2 Education Process Adjustment

The educational process adjustment means changes in the way of teaching. In the framework of modifications this is use of teaching methods and forms which respond to the gifted pupils’ education needs. These methods are based on active learning and encourage motivation, independence, cooperation, communication, creativity, imagination, critical thinking and higher order thinking. These activities can be enriched with drama, situation methods or discussions, which compensate possible problematic personal traits of the gifted learner. These methods are productive for all learners. The adjustment shall be realised from the perspective of quality and quantity of the teaching methods. Distinguishing between techniques effective and not effective for all learners seems to be more logical than definition methods effective only for gifted and for other pupils.

The aim of this publication is not to provide a list of all education practices but to show some of them which contribute to active learning and are differentiated (e.g. additional work, standard and above standard work). The following methods are not the only right ones. The lesson shall be enriched with many various methods including frontal teaching which is, in some cases, also important.

I.N.S.E.R.T. Method *(Interactive System for Effective Reading and Writing)*, is based on principles of critical thinking. During the reading of an article the pupil notes down their relation to information in the article according the following key:

Make √ at the edge of the text if information you are reading confirms what you already knew.
Make - at the edge of the text if information you are reading is in the contrast with what you thought.
Make + at the edge of the text if information you are reading is new to you and you believe it. Make ? at the edge of the text if you don´t understand the information you are reading or you would like to learn more about it.
These marks can be used for particular sentences or for whole paragraphs. Then each child creates a spreadsheet with a number of columns which responds to the number of marks. The pupils then write down under each mark their notes about each information. In this phase the child learns also to formulate briefly the main ideas. The spreadsheet encourages discussion in pairs or group, inspires comparison and is also stimulating in order to look for more information. The outcome of this method can be notes, drawings, brainstorming etc.

\[\begin{array}{c|c|c|c}
\checkmark & - & + & ? \\
\end{array}\]

The method itself enables teachers to have individual approaches to gifted learners. The above standard variation can be other, longer or more difficult text or all pupils work with mark √ and mark – and the other marks + and ? are left for the gifted ones. Other differentiations could be the creation of own text as an additional activity.

Another method of work with text is double notepad or triple notepad. The aim of this method is the development of critical thinking and understanding the text. The pupil reads a text from which, after repeated reading, they choose an idea which they find interesting. Then they formulate the idea in a brief form and write down in the notepad and reason why they chose this particular idea, what this idea reminds them of and what questions they recall. Afterwards the pupils present the outcome to their peers.

\[\begin{array}{c|c|c}
\text{Idea} & \text{My comment} \\
\end{array}\]

The double notepad method enables individual work with all pupils which can be strengthened in case of gifted ones by using the triple notepad technique. After creating double notepad where there is one column more the spreadsheet children are split into groups. Each child circulates their notepad to the peers in the group and all pupils add their comments in the third column. This method then leads to discussion and presentation.

\[\begin{array}{c|c|c|c}
\text{Idea} & \text{My comment} & \text{My peers’ comments} \\
\end{array}\]

Mind map is a diagram used to organize information visually. The mind map shows relations among ideas and terms. Mapping encourages children to think actively, to work on their ideas and to develop them. Students not only get the information, they have to think about it and create connections to their schemes. Through connecting new information with already existing knowledge pupils reach new levels of comprehension.

Good practice examples can be as follows:

- Stories mapping: this method is useful for literature lessons or others where social skills of pupils are developed. Pupils read text, then they shall write down key situations and terms. These pieces of information are put together in the story map which shows the relation between cause and consequence.

- Knowledge mapping (work with text): Maps can be also made of parts of curriculum. Pupils look for essential information in text and map links among the information. Knowledge mapping is useful for both new and already taught themes.
Hierarchy mapping: Pupils are provided with a list of words related to given terms. The aim is to realize the order of the words and their relations. The map can be enriched with other links across the hierarchy.

Problem mapping: The initial phase of this method can be writing or brainstorming about a concrete problem. Group discussion follows and as a result, pupils identify common key terms which are plotted on the mind maps.

Mapping strategies enable teachers to go deeper in the curriculum and identify meanings continuously and in an organized way. The map can be displayed on the board in order to make it visible for pupils as they can make changes or work on it later. Teachers can use sticky notes or magnet cards which are easy to move.

Another mind mapping method is pětilístek (five leaves’ method). This method is useful for initial stages of lessons to evoke new knowledge as well as for concluding part of the lesson to make sure that pupils understand the topic. The aim is formulation of the ideas, making conclusions and finding pupils’ attitudes.

**Scheme of the method:**

```
  __________
  ________
  ________
  ________
  ________
```

First pupils are introduced to the structure of pětilístek and told what they are expected to write in the lines:

1. line: one word (noun – title, topic)
2. line: two words (adjectives – what the topic is like)
3. line: three words (verbs – what the topic is doing)
4. line: four words (sentence – consistent statement about the topic)
5. line: one word (synonym to the topic - point)

After the pupils create their pětilístek, they present it to the peers.

**Expert groups method** – assign each pupil to a „home group“ of 3–5 students and offer them a set of reading selections according to their abilities. Then create „expert groups“ that consist of students across „home groups“ who will read the same selection. Pupils in these expert groups then study the topic together and prepare a presentation for their peers. Provide each group with instructions on the presentation or additional tasks (where appropriate). Members of the expert groups then rejoin their home group where they introduce the others to the topic of their reading. Home group members are responsible to learn the whole content from one another. Pupils then, together with a teacher, make conclusions and write notes in their notepads. Differentiation can be deepened with a use of texts of various levels of difficulty. More able pupils obtain more difficult materials or in the expert group two pupils from the same home group can work together in order to enable cooperation of the able one with less gifted one. Obviously, the teacher doesn’t show their intention to differentiation. Another option of differentiation is creating expert groups only from gifted and able pupils or to differentiate the education process outputs.

**Group teaching** is based on cooperation of a group of pupils who work on individual tasks or cooperate on activities where they aim for a common result. The teacher is the main organiser and supervisor of the group work.
Use of methods which encourage competition is not advisable. It can nurture shallow learning, demotivate less able pupils and label the gifted ones. It can also nurture various socio-pathological phenomena in the classroom. Application of methods of extrinsic motivation is preferable to attractive but not effective methods of intrinsic motivation. Competitive activities can be used in lessons from time to time.

5.3 Environment Adjustment

The environment is a very important education factor. The influence of the environment on the development of giftedness is highlighted in several models of giftedness. Each environment consists of two levels (Chudy and Neumaister, 2010):

- First level is material (real, spatial). This means material conditions, equipment etc.
- Second level is social and mental (personality-relational). This level is created by people, their structure (e.g. age, level of abilities) and relationships among them. This level is set by the teachers’ condition (mental and physical).

5.4 Outcome and Assessment Adjustment

Modification of the learning outcomes (products) is another important part of the differentiated curriculum which responds to the gifted and talented child’s education needs. Modification of the products is a result of the curricula content, process and environment adjustment.

The gifted children (and other children with special education needs), in the framework of differentiation, are being assessed according to individual assessment standards. The teacher observes the pupil and compares levels of his/her performance in different times. To ensure this, the initial pedagogic diagnosis of the pupil is important as the diagnosis sets the pupil’s performance standard. Also, the individual characteristic of the pupil and his/her environment must be taken into account. One of the methods can be an evaluation of the pupil’s portfolio.

In case of the enriched curriculum (and modification of assessment), the pupil is not separated from the group of peers. This eliminates labelling. Following the principles of inclusive pedagogy is recommended during assessment. Kratochvílová (2013, p. 94 and 101) suggests the following assessment criteria:

- The assessment is being made by the teacher in cooperation with the pupil. The assessment can be used in the further educational process of the pupil.
- The methods of assessment enable all pupils to reflect their knowledge and skills, they contribute to development of all pupils and the feedback consists of information on how to improve the pupil’s performance.
- Formative assessment is used in the process of teaching.
- The assessment subject is success of the pupil in comparison to his/her individual preconditions.
- Teachers don’t use labels to assess the pupil’s performance.
- Knowledge and abilities are evaluated when pupils are ready for this. Pupils know the criteria and methods of assessment.
- The methods of assessment are being discussed with parents and experts continuously.
- The assessment covers various types of methods which respond to the individual needs of the pupils.
6 References


- DOČKAL, Vladimír, 1983. *About Definition of the Terms Giftedness and Talent*. *Czechoslovak Psychology*, Roč. 27, č. 2, s. 120-135. ISSN 0009-062X.


‘Our deepest fear is not that we are inadequate. Our deepest fear is that we are powerful beyond measure. It is our light, not our darkness that most frightens us. We ask ourselves, Who am I to be brilliant, gorgeous, talented and fabulous? Actually, who are you not to be?..... Your playing small does not serve the world. There is nothing enlightened about shrinking so that other people will not feel insecure around you. We are all meant to shine as children do....It is not just in some of us; it is in everyone and as we let our own light shine, we unconsciously give others permission to do the same. As we are liberated from our own fear, our presence automatically liberates others.’

Marianne Williamson, poet and author

United Kingdom

John Bridgman, Titan Partnership
Helen Hadley, Titan Partnership

With contributions from:
Jamie Bedwell, Saltely Academy
Sue Middleton, Stanville Primary School
Farhat Parveen, Aston University Engineering Academy
Roanna Pierce, King Edward VI Aston School for Boys
Rebecca Richardson, Aston University Engineering Academy
1 The Education System in the UK

There are 5 stages of education that form the UK education system, starting with early years (3-5 years), primary (5-12 years), secondary (12-16), Further Education (FE, 16-18 years plus adult learning), with many young people moving on to Higher Education (HE, 18+). Education is compulsory for all children between the ages of 5 (4 in Northern Ireland) and 16. In England, it is now compulsory for young people to continue in full-time education, training/apprenticeship or work/volunteer whilst undertaking part-time training or education, up to the age of 18. Education is devolved in Scotland Northern Ireland and Wales.

Early Years Education

From September 2010, 3 and 4 year olds are now provided with 15 hours of free nursery education per week (up to 38 weeks pro anum), paid for by the government. Pre-school age children are educated in either a state-funded nursery school, a nursery class housed within a primary school, or privately run settings such as private nurseries or childminders. In 2002, the Department for Education introduced a foundation stage to the national curriculum which covered education in the pre-school years (3-5).

Early Years are referred to as ante-pre-school in Scotland and children are entitled to receive one academic year of education the year before they start primary school. In Northern Ireland pre-school places are available in statutory nursery schools and units and in those voluntary and private settings.

Primary

Primary education includes 4 stages: nursery (under 5), infant (5 to 7 or 8, Key Stage 1) and junior (up to 11 or 12, Key Stage 2). A nursery or a children's centre is sometimes included on a primary school premises providing early years education. Children will transition from primary education to secondary at age 11 (12 in Scotland), although a few middle schools for age ranges covering 8-14 years do exist in England.

Primary education is designed to ensure a child's basic literacy and numeracy abilities, plus foundation knowledge in a range of subjects including science, are developed and can be built on in secondary school. Assessments on a child's progress in English, Maths and Science are taken at the end of KS1 and KS2 in England and Northern Ireland. In Wales, all learners in their final year of Foundation Phase and Key Stage 2 must be assessed through teacher assessments. No standardised assessments are currently taken in Scotland for children aged below 13, although the Scottish government published plans to reintroduce them by 2017.

Secondary

There are a number of public secondary schools formats and secondary education lasts 5 years. The majority of state educated children attend comprehensive schools which provide education to any child who lives in the local catchment area. There are no entry requirements other than a local address. They are funded by the local authority and provide education to children of all abilities. Places at grammar schools are gained by passing an examination which tests academic ability. In England, children have the option of attending a state-funded academy which is able to operate independently and has the choice of setting its own curriculum.

State funded secondary schools in Scotland are in the most non-selective, with secondary education lasting 6 years in total. In the remote areas of Scotland such as the Highlands and Islands schools can offer two-year and four-year phases.

Students work towards external qualifications which are taken at the end of secondary school. In England, Wales and Northern Ireland students primarily sit GCSEs (General Certificate of Secondary Education) and the equivalent Standard Grades in Scotland. Many schools also offer more vocational focussed qua-
ifications including BTEC and NVQ.

Further Education

Education provided following completion of compulsory schooling at age 16 but is not part of higher education falls under the banner of FE. This includes a wide range of education from basic functional skills to specialised vocational training which includes foundation degrees.

FE is offered in large by colleges as well as adult education providers (some local authority run). Some schools offer FE courses through a sixth form and some specialist colleges offering training in specific vocations also exist (media, dance, culinary arts etc.)

Higher Education

Following completion of A level, the Higher Grade (Scotland) or GNVQ/NVQ level 3, students can undertake a HE qualification including an undergraduate degree (Bachelors, graduate diploma) equating to EQF level 6. Alternative undergraduate options includes NVQ level 5 and HND. Following completion of an undergraduate degree, a postgraduate degree can be undertaken (doctorate, masters, postgraduate diploma, postgraduate certificate of education (PGCE). This equates to EQF level 7.
2 Basic Definitions

From 1999 until 2008 there were statutory requirements placed on schools in England and Wales with regard to the provision they should make for more able, gifted and talented pupils. After this time schools were free to make their own arrangements for these pupils. This coincides with increasing fragmentation of the education system in England and Wales. As a result there is a wide variety of approaches across schools and a plethora of terminologies in use to describe more able, gifted and talented pupils. Therefore, there is no single definition used by UK schools to determine who are the more able, gifted and talented pupils. Indeed, UK government documentation encourages schools to come up with their own definitions as a result of staff discussions (DCSF, 2008). The following definition of more able gifted and talented is just one of those schools have used in order to further those discussions.

‘Children and young people with one or more abilities developed to a level significantly ahead of their year group, or with the potential to develop these abilities.’

(National Guidelines for identification, DCSF, 2008)

What is meant by ‘exceptionally able’?

As with the definition of the more able gifted and talented, there is no agreed definition in the UK system for the exceptionally able and consequently each school is responsible individually in engaging all teachers in discussion, leading to consensus and clarity. Following initial agreement on a working definition, discussion and the development of provision need to be ongoing, reflecting the emerging needs of pupils.

Broad definitions which can be used as a starting point is:

‘Learners who demonstrate or have the potential to demonstrate extremely high levels of ability compared to their peers across the entire population.’

(DCSF, 2008).

‘The cohort of highly able children equates roughly to the top 2 per cent of children as measured by standardised tests. That is to say that children with a measured cognitive ability two standard deviations above the mean (approximately IQ 130 and above) might be considered highly able (exceptionally able).’

(UK House of Commons, 1999: 69–70).

This distinguishes exceptionally able learners from other gifted and talented learners in two ways:
1. By the qualifying adjective, ‘extremely’;
2. By the comparison with peers in all schools as opposed to within each particular school.

It includes learners who have as yet unrealised potential for exceptional ability.

A quantitative measure which can be used as an indicator is the top 2% nationally for one or more academic and talent areas.

This makes clear that exceptionally able pupils may not necessarily be so across all curriculum areas in any one school. The top 2% is a useful guide, but should not be the only criterion applied, as it excludes those of potentially exceptional ability whose performance is depressed by lack of opportunity or inhibiting personal circumstances. Talents may be difficult to measure in this way.

Her Majesty’s Inspectors (HMI) have stated that the exceptionally able are classified as those capable of working several years ahead of their contemporaries (HMI report 1993).

Any definition of the exceptionally able should be inclusive, flexible and adaptable to meet the needs of pupils known and unknown.’

(DCSF, 2008)
3 Characteristics of Gifted and Talented Children

The following characteristics (taken from the 1998 OFSTED review of research by Joan Freeman) are not necessarily proof of high ability, but they may alert teachers to the need to enquire further into an individual's learning patterns and ability levels.

He or she may:

◆ Be a good reader;
◆ Be very articulate or verbally fluent for their age;
◆ Give quick verbal responses (which can appear cheeky);
◆ Have a wide general knowledge;
◆ Learn quickly;
◆ Be interested in topics which one might associate with an older child;
◆ Communicate well with adults – often better than with their peer group;
◆ Have a range of interests, some of which are almost obsessions;
◆ Show unusual and original responses to problem-solving activities;
◆ Prefer verbal to written activities;
◆ Be logical;
◆ Be self-taught in his/her own interest areas rather than on what is being taught;
◆ Be socially adept;
◆ Appear arrogant or socially inept;
◆ Be easily bored by what they perceive as routine tasks;
◆ Show a strong sense of leadership;
◆ And/or not necessarily appear to be well behaved or well-liked by others.

There will be others.

Underachievement

More able gifted and talented underachievers may tend to:

◆ Have low self-esteem;
◆ Be confused about their development and about why they are behaving as they are;
◆ Manipulate their environment to make themselves feel better;
◆ Tend towards a superior attitude to those around them;
◆ Find inadequacy in others, in things, in systems, to excuse their own behaviours.

Sometimes those with abilities in one or more areas of learning may also suffer from a disability or difficulty in others. This can present a considerable barrier to the achievement of potential, as well as leading to frustration and disaffection.

Developing strategies and approaches to countering underachievement should be an integral part of the school policy for more able gifted and talented provision. The key aspects of underachievement that need to be taken into account are considered as:

◆ What are the indicators of underachievement?
◆ What are the causes of underachievement?
◆ What are some of the ways of countering underachievement?
◆ Are there potential causes due to dual or multiple exceptionalities?

Schools are expected to come up with their own solutions. In the past this has been possible through schools working together in partnership, but with funding for this type of working has ceased, it is now up to individual schools.
UK schools are expected to also provide a range of opportunities for more able gifted and talented students to be exposed to new and challenging experiences, such as: master classes at universities, company visits, performance events, enterprise activities, leadership activities, education-business challenges, speakers in schools and activities, etc. Within these, students are exposed to a number of role models. More able and exceptionally able students are often referred to clubs, theatres and professional organisations.

How parents are engaged is determined by the school’s ethos and capacity. The best practice is when schools actively provide guidance and support to parents/carers in how best to support their child. This could involve regular workshops, support materials through the school’s VLE or through 1:1 support for parents.

Schools are advised:

- Acknowledge a parent may have specialist knowledge
- A lack of involvement does not equate to lack on interest
- Social, cultural, economic or faith factors may preclude parental involvement

Other adults:

- Schools are encouraged to develop links with FE colleges, universities and businesses to organise events for students and parents
- Schools can use mentoring and e-mentoring schemes to provide positive role models
- Schools provide activities for students to engage with ‘experts’ and or ‘leaders’ – arts, sports etc.

Case Study: Stanville Primary School, Birmingham

There is currently no nationally agreed definition of what constitutes Able, Gifted and Talented and the terminology has changed several times over recent years.

All information in this report refers to current practice at Stanville Primary School and is not necessarily typical of other schools across the country.

The OFSTED report The Most Able Students An update on progress since June 2013 relates to the progress of the most able students in non-selective secondary schools and celebrates examples of good practice “that prove the barriers to high achievement, especially for the disadvantaged most able students, can be overcome.”

The provision of a high quality curriculum for all pupils, along with early identification is seen to be crucial to maximising potential of gifted and talented children and this is what we ensure at Stanville. We use Cornerstones Curriculum alongside the National Curriculum, which provides a stimulating and child-centred approach to teaching across all subjects.

The majority of the information relating to gifted and talented students is from 2008 or before as much of it was linked to National Strategies (see earlier reference to the document ‘Gifted and Talented Education Guidance on preventing underachievement: a focus on exceptionally able pupils’ (DCSF 2008)

At Stanville Primary School we use our tracking system (SIMS) to identify through teacher assessment those children who are gifted and talented in any area. We have currently identified 16% of our children in this way although that may increase as we identify a wider range of talents and children have increased opportunities to demonstrate their talents.

MIS systems in schools are all different but should allow for identification and tracking of G&T children as SIMS does which we use at Stanville. This allows us to identify children who are academically gifted in National Curriculum subjects but also those who are gifted in a whole range of skills eg arts, sport, social
skills, public speaking etc. We can also increase the fields to include more talents as we discover them eg golf, ice skating, particular artistic skills etc. Identification will still depend on teacher assessment and agreed school processes however. We are able to do this for EYFS, KS1 and KS2.

We also now have the concept of mastery particularly in Maths since new National Curriculum 2015. Schools are currently moving towards a mastery approach (MathsHub, 2015) As stated previously, there is no nationally agreed standard definition. Stanville are currently updating their policies.

Case Study: Aston University Engineering Academy, Birmingham

All students at AUEA have access to a Learning Review Tutor. This is someone who can track their progress academically in all their subjects, along with offering pastoral advice. They are the first person a parent will contact with any concerns of queries. It is then up to the LRT to pass on the information to the relevant person. This is from the age of 14–19 years and each LRT links to a College Leader, who can then get involved with more complex issues.

As it is an Engineering school, many students have industry partner links, such as links with Jaguar Land Rover, HS2 (planned high speed train) and RAF Cosford. This is to give real industry experience and to be positive role models. The female students also have female engineers as role models and take part in competitions aimed at female engineers of the future. Parents have additional parents’ evenings aimed at involving the parents more in their child's learning – this is not only for the more able students. Students who are identified as Gifted and Talented have additional classes/clubs to go to for example:

- additional English lessons aimed at A*/A grades at GCSE
- maths Bronze Award level 3 algebra (in addition to GCSE maths)
- Aston Villa Young Enterprise Scheme – teaching business skills and an additional qualification for students (Year 10 only)
- Year 12–13 membership of ‘The Brilliant Club' which is working with a university mentor and having pieces of work published
- additional trips to Russell Group universities

Methods used to share information with parents of most able, gifted and talented pupils

Sharing of progress and targets in written reports
By letter e.g. asking permission for identified pupils to attend enrichment activities
Regular progress meetings
Year 6 transition meetings
Seeking parental opinions about their child's talents and abilities by questionnaire Open days when parents can look at learners’ work
Sharing class project information and homework tasks School prospectus
Commendation letters
Specific information on the school’s website
Providing written guidance to parents and carers on how to support their child's learning
Identification and Diagnosis of Gifted and Talented Children

Diagnostic testing to identify students does occur in the UK but is not mandatory and is NOT common place in UK schools. However, some schools do use the following tests that may influence/support the identification process:

- NFER tests: https://www.nfer.ac.uk/schools/
- Centre for Evaluation and Monitoring (CEM): http://www.cem.org/secondary
- MidYis Tests – measure developed ability – students’ underlying learning potential rather than achievement based on the curriculum for students aged 11-14. MidYis also offers a baseline assessment, enabling you to monitor student progress throughout secondary education.
- YELLIS Tests – offer a measure of developed ability, or aptitude for learning, free from the influence of curriculum based teaching, for students aged 14-16
- INSIGHT Tests – measure specific ability in mathematics, reading and science midway through secondary education. They assess what students have learned from the curriculum together with a measure of developed ability, producing a more rounded profile of the student
- ALIS Tests – for those studying post 16
- HE Standardisation Tests e.g. UK Clinical Aptitude Tests
- The work of David Camplin (www2.teachernet.gov.uk) provides support and detailed information on how to use monitoring and evaluation data to improve performance and aspiration for MAG&T learners
- Cognitive Ability Tests (CATS) – look at a range of reasoning skills: words (verbal), numbers and shapes (quantitative), or figures (non-verbal reasoning). Thus students with EAL may achieve lower on the verbal scores.
- Stanford-Binet Intelligence Scale – was recommended for use in schools by psychologists to assess overall cognitive ability
- Wechsler Intelligence Scales are used in some schools to evaluate reasoning and intellectual abilities

4.1 Basic Principles of Identification

National Guidelines for identification (DCSF, 2008):

‘Gifted refers to those who are able in ‘academic’ subjects such as mathematics, French, science. ‘Talented’ refers to those who are more able in art, music, drama and PE’ (DCSF Standards Site). This definition has been extended to include students who excel in Visio- spatial skills or practical abilities.’

Identification of MAG&T students has not changed for a number of years. The DCSF guidance (2008) states:

‘We start from the principle that there is no single perfect instrument for identification – schools are advised to use a ‘best fit’ model that draws on a range of evidence that uses qualitative and quantitative elements.’

These include:

- Assessments using open/differentiated tasks
- Identification by staff using professional judgements, classwork and test and assessment results
- Checklists
4.2 Indicators of Gifts and Talents Related to Phase

Some children display signs of high ability at an early age. However, since an individual’s level of ability is not fixed and may develop significantly over time, the stage at which high potential is demonstrated will vary from one child to another. Teacher observation and informal assessment play an essential part in recognising high potential, particularly in the case of very young children. Whilst characteristics of high ability may be displayed at any age, some features may become particularly prominent during one phase of development and of schooling. Similarly, it is important that schools and colleges should meet the needs of more able gifted and talented learners in ways which are most appropriate for the stage of personal, social and emotional development which has been reached. The table below provides some examples of particular characteristics and needs of learners which may be most prominent, though not found exclusively, during one phase of schooling or another.

These are indicative and not definitive.

<table>
<thead>
<tr>
<th>Early Years</th>
<th>Primary</th>
<th>Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is it precocity or giftedness?</td>
<td>Needs fewer steps in process</td>
<td>Questions rules/authority</td>
</tr>
<tr>
<td>Uneven development</td>
<td>Enjoys increased pace</td>
<td>Non-conformity</td>
</tr>
<tr>
<td>Gets cross if task too easy/hard</td>
<td>Needs less instruction/practice</td>
<td>High ability/low motivation</td>
</tr>
<tr>
<td>Needs to own extended tasks</td>
<td>Thrives on independent study</td>
<td>Keen sense of justice</td>
</tr>
<tr>
<td>May display ‘unique creativity’</td>
<td>Likes open-ended situations</td>
<td>Divergent thinking/creativity</td>
</tr>
<tr>
<td>Often easily bored and disruptive</td>
<td>Needs to learn to fail</td>
<td>Excellent sense of humour</td>
</tr>
<tr>
<td>Very good verbal/reasoning</td>
<td>Responds to a wide variety of creative opportunities</td>
<td>Growing self-determination</td>
</tr>
<tr>
<td>Needs enrichment more than acceleration</td>
<td>Needs to be encouraged to take risks</td>
<td>May develop lifelong passion for field or hobby</td>
</tr>
<tr>
<td>Can show reflection above age</td>
<td>Whatever the intellectual level, must remember actual age</td>
<td>Intellectual curiosity stands out</td>
</tr>
<tr>
<td>Emotional literacy can lag behind academic work</td>
<td>Whatever the intellectual level, must remember actual age</td>
<td>Exceptional powers of concentration/stamina</td>
</tr>
<tr>
<td>Identification for understanding and provision, not labelling</td>
<td>Whatever the intellectual level, must remember actual age</td>
<td>Needs to work with learners of similar ability in/out of school</td>
</tr>
</tbody>
</table>
Identifying gifted and talented learners – getting started DCSF, Revised May 2008

Case Study: Aston University Engineering Academy, Birmingham

In order to identify a student as Gifted and Talented they must be identified in various ways: Key Stage 4 (age 14–16)

1. The first one is to look at KS2 results where students got a level 5 (before they leave primary school) in English and maths (see appendix 3). This then means that students are expected to get higher levels at GCSE (see predicted targets on table in appendix 4)
2. They have a high CATS score (Cognitive Ability Tests) of 115 or higher (see appendix 4). This test is taken when they enter Year 10 and looks at their skills in English and maths (see sample English question in appendix 5)
3. They have a high reading score which is approximately two years above their chronological age
4. They are nominated by their teacher for having a strong aptitude in that area eg science – however they must have evidence of other abilities as well

Key Stage 5 (age 16–19)

This is based on their GCSE results, which is then converted to ALPS scores for A levels (see appendix 6)

Examples of subject specific guidance on identification of very able and gifted pupils
(All NC subject specific guidance is available from QCA 2008)

Checklist for identifying very able and gifted pupils in English
Pupils who are gifted in English are likely to show some or all of the following characteristics.

Creative flair
- Writing or talking in imaginative and coherent ways
- Elaborating on and organising content to an extent that is exceptional for their age

Stamina and perseverance
- Using any suitable opportunities to produce work that is substantial and obviously the product of sustained, well-directed effort communicative skills
- Involving and keeping the attention of an audience by exploiting the dramatic or humorous potential of ideas or situations in imaginative ways
- Taking a guiding role in helping a group to achieve its shared goals, while showing sensitivity to the participation of others
- Writing with a flair for metaphorical or poetic expression
- Grasping the essence of particular styles and adapting them to their own purposes
- Expressing ideas succinctly and elegantly, in ways that reflect an appreciation of the knowledge and interests of specific audiences
- Using a range of technologies to research ideas and create new text

Ability to take on demanding tasks
- Researching, comparing and synthesising information from a range of different sources
- Engaging seriously and creatively with moral and social themes expressed in literature

Arguing and reasoning
- Creating and sustaining accounts and reasoned arguments at a relatively abstract or hypothetical level, in both spoken and written language
Grasping the essence of any content and reorganising it in ways that are logical and offer new syntheses or insights

Justifying opinions convincingly using questions and other forms of enquiry to elicit information and taking up or challenging others' points of view

Awareness of language

Understanding the nature of language and showing a special awareness of features such as rhyme, intonation or accent in spoken language, and the grammatical organisation of written texts

Showing an interest and enthusiasm for language study, including an awareness of the relationship between the sounds and words of different languages that are not apparent to most of their peers

Checklist for identifying very able and gifted pupils in mathematics

Pupils show their special talents in mathematics in a range of ways and at varying points in their development. Pupils who are gifted in mathematics are likely to:

- Learn and understand mathematical ideas quickly;
- Work systematically and accurately;
- Be more analytical;
- Think logically and see mathematical relationships;
- Make connections between the concepts they have learned;
- Identify patterns easily;
- Apply their knowledge to new or unfamiliar contexts;
- Communicate their reasoning and justify their methods;
- Ask questions that show clear understanding of, and curiosity about, mathematics;
- Take a creative approach to solving mathematical problems;
- Sustain their concentration throughout longer tasks and persist in seeking solutions;
- Be more adept at posing their own questions and pursuing lines of enquiry.

Checklist for identifying very able and gifted pupils in science

Pupils who are gifted in science are likely to:

- Be imaginative
- Read widely, particularly science or science fiction
- Have scientific hobbies and/or be members of scientific clubs and societies
- Be extremely interested in finding out more about themselves and things around them
- Enjoy researching obscure facts and applying scientific theories, ideas and models when explaining a range of phenomena
- Be able to sustain their interest and go beyond an obvious answer to underlying mechanisms and greater depth
- Be inquisitive about how things work and why things happen (they may be dissatisfied with simplified explanations and insufficient detail)
- Ask many questions, suggesting that they are willing to hypothesise and speculate
- Use different strategies for finding things out (practical and intellectual) -- they may be able to miss out steps when reasoning the answers to problems
- Think logically, providing plausible explanations for phenomena (they may be methodical in their thinking, but not in their recording)
- Put forward objective arguments, using combinations of evidence and creative ideas, and question other people's conclusions (including their teacher's!)
- Decide quickly how to investigate fairly and manipulate variables
- Consider alternative suggestions and strategies for investigations
• Analyse data or observations and spot patterns easily
• Strive for maximum accuracy in measurements of all sorts, and take pleasure, for example, from reading gauges as accurately as possible (sometimes beyond the accuracy of the instrument)
• Make connections quickly between facts and concepts they have learned, using more extensive vocabulary than their peers
• Think abstractly at an earlier age than usual and understand models and use modelling to explain ideas and observations. For example, key stage 3 pupils may be willing to apply abstract ideas in new situations; key stage 4 pupils may be able to use higher-order mathematical skills such as proportionality, ratio and equilibrium with some complex abstract ideas when offering explanations
• Understand the concepts of reliability and validity when drawing conclusions from evidence
• Be easily bored by over-repetition of basic ideas
• Enjoy challenges and problem solving, while often being self-critical
• Enjoy talking to the teacher about new information or ideas
• Be self-motivated, willingly putting in extra time -- (but they may approach undemanding work casually and carelessly)
• Show intense interest in one particular area of science (such as astrophysics), to the exclusion of other topics.

Checklist for identifying very able and gifted pupils in Design Technology

Pupils who are gifted in DT are likely to:
• Demonstrate high levels of technological understanding and application
• Display high-quality making and precise practical skills
• Have flashes of inspiration and highly original or innovative ideas
• Demonstrate different ways of working or different approaches to issues
• Be sensitive to aesthetic, social and cultural issues when designing and evaluating
• Be capable of rigorous analysis and interpretation of products
• Get frustrated when a teacher demands that they follow a rigid design-and-make process
• Work comfortably in contexts beyond their own experience and empathise with users' and clients' needs and wants.

Teachers may identify pupils who are gifted in DT by:
• Performance at an unusually advanced national curriculum level for their age
• The outcomes of specific tasks
• Evidence of particular aptitudes
• The way pupils respond to questions
• The questions that pupils ask themselves.

It is important for teachers to allow time for personal interaction with pupils. By observing the techniques and strategies that pupils use to tackle problems, teachers may pick up on gifts that do not come to light through more formal assessment procedures. It is important to acknowledge that these pupils may wish to hide the extent of their gifts.

Checklist for identifying very able and gifted pupils in history

Pupils who are gifted in history are likely to show some or all of the following characteristics. Literacy they may:
• Perform at levels of literacy that are advanced for their age;
• Show particular skill at inference and deduction when reading texts;
• Synthesise information to present a cogent summary;
• Use subject-specific vocabulary confidently;
• Follow and contribute effectively to a line of argument in discussion by making relevant contributions and substantiating points with evidence;
• Access complex source materials with growing independence. Historical knowledge They may:
• Have an extensive general knowledge, including a significant amount of historical knowledge;
• Develop with ease a chronological framework within which to place existing and new knowledge;
• Demonstrate a strong sense of period as a result of study. Historical understanding They may:
• Grasp quickly the role of criteria in formulating and articulating a historical explanation or argument;
• Understand and apply historical concepts to their study of history;
• Be able to draw generalisations and conclusions from a range of sources of evidence;
• Seek to identify patterns and processes in what they study, while being aware of the provisional nature of knowledge;
• Appreciate that answers arrived at depend largely on the questions asked;
• Recognise how other disciplines can contribute to the study of history and draw readily on what they learn in other subjects to enhance their historical understanding. Enquiry They may:
• Be able to establish and follow a line of enquiry, identifying and using relevant information;
• Be good at reasoning and problem solving;
• Think flexibly, creatively and imaginatively;
• Show discrimination when selecting facts and evaluating historical evidence;
• Manipulate historical evidence and information well;
• Appreciate the nature of historical enquiry;
• Question subject matter in a challenging way;
• Be intrigued by the similarities and differences between different people's experiences, times and places and other features of the past;
• Thrive on controversy, mystery and problems of evidence;
• Show resourcefulness and determination when pursuing a line of enquiry.
5 Proven and Suitable Strategies for Talented and Gifted Children Support and Development

This section begins with current recommendations on improving provision from Ofsted, the national inspection service.

School leaders should:

- Develop a culture of high expectations for students and teachers in Key Stage 3 and rapidly improve the quality of curriculum delivery, teaching and assessment, especially in foundation subjects
- Ensure that teachers and leaders in Key Stage 3 use information held by primary schools about students’ learning and achievements in Key Stage 2 effectively, so that work for the most able students provides the right level of challenge
- Identify designated staff and governors to champion the needs of disadvantaged most able students
- Give Key Stage 3 equal priority with other key stages when allocating teaching staff to classes
- Provide training for teachers of all key stages so that their teaching routinely challenges the most able students
- Ensure evaluations of curriculum delivery, teaching and learning in Key Stage 3 are robust and lead to rapid improvements
- Involve universities, other providers and employers in training school staff to provide expert advice and guidance to the most able students, especially those who are disadvantaged, about the opportunities open to them in higher education, apprenticeships and other work opportunities

Ofsted should:

- Make sure that inspections continue to focus sharply on the progress made by students who are able and disadvantaged
- Report more robustly about how well schools promote the needs of the most able through the quality of their curriculum and the information, advice and guidance they offer to the most able students
- Ensure thematic surveys investigate, where appropriate, how well the most able are supported through, for example, schools’ use of the pupil premium and the curriculum provided.

The Department for Education should:

- Ensure that its performance tables, which present key data on school outcomes, include measures of the achievement of the most able students.

Case Studies of successful practice

Aston University Engineering Academy, Birmingham

Strategies for Gifted Students

All students who are identified as gifted have a ‘Stretch sticker’ on the back of their books, which is done in conjunction with their parents. This is to ensure that all students have specific targets in lessons that their parents know about and can collaborate with (see appendix 7)

All students have a stretch element within the classroom. This is an additional piece of work that has extra challenge and really gets them to think deeper on topics

All lessons in core subjects are streamed to allow for more challenging work within the classroom

Students follow strategies such as Bloom’s Taxonomy and SOLO questioning
Aston University Engineering Academy, Birmingham

Students who arrive at AUEA are identified as “stretch” based on their KS2 data and their CATS scores. Teachers have received several training sessions on how to cater for the stretch students.

Strategies include
- Stretch stickers for all stretch students
- Use of bloom taxonomy to encourage higher order thinking and problem solving
- Setting challenging targets
- The use of the purple tray to challenge the more able students. The teacher provides additional challenging work in this tray to extend students understanding.
- Learning through self- discovery for the stretch students is encouraged in all subjects.
- Flipped learning is used to promote independent learning and learning outside the classroom.

Saltley Academy, Birmingham

In lessons we have a system of peer academic leaders and ‘buddies’, which are strategies that can work across any ability range, but in particular benefits G and T students. So, if a pupil excels in one particular topic or area of study, as teachers we encourage these students to lead small or indeed whole parts of lessons, to demonstrate their expertise and as a way of teaching their peers in a style that differs from that of the teacher. Similarly, the ‘buddy’ system is whereby more gifted pupils are assigned to weaker or less able students within the group, and act as mentors- whether that be just for one lesson or over a sequence of lessons, to help the lower ability pupils to make rapid progress, whilst giving these higher ability students the opportunity to show leadership and collaborative skills. I have used this ‘buddy’ system in my Year 9 Media Studies class, where I have assigned one expert to a weaker pupil to guide him through the principles of advertising and personalising language for effect. This has served to improve both pupils’ effectiveness at creating believable advertising campaigns for perfume products that they have invented.

Pupils are also be used as teaching assistants more directly by the teacher. For example, in my top set year 8 class, I often use the highest attaining pupils to summarise the key features of the lesson on the board as the lesson is being taught, which helps consolidate the learning of the rest of the group, whilst giving the gifted student the chance to develop their skills of summary and synthesis of information- skills which fall under the more advanced thinking categories of Bloom’s Taxonomy.

Stanville Primary School, Birmingham

Celebrating Success

A fundamental principle of identifying children who are gifted, talented and able at Stanville School, is ensuring a rich provision of opportunity for all children to develop skills and talents in both academic and non-academic subjects irrespective of background and support from home.

To this end we have chosen to follow the Cornerstones curriculum which is very inclusive and child-centred and aims to engage children in their learning across all subjects. This creative curriculum ensures full pupil entitlement to the National Curriculum. Moreover, learning is enhanced through an enquiry-led model and frequent enrichment opportunities.

https://cornerstoneseducation.co.uk/products/cornerstones-curriculum-england/

Our entrance hall celebrates the achievement of children across the school and displays are changed regularly to share these successes. Our Stanville Superstar board displays a variety of individual and group achievements including awards for wrestling, ice skating, dancing and performing as part of the area brass band and as a member of Stanville School choir. It also celebrates individual achievement in writing where a child has entered into a written dialogue with an author.
The photo noticeboard which makes parents and visitors aware of events that have happened in school, has pictures of work with Birmingham Royal Ballet who have been working in school with Years 1 and 2. Several children have been identified as having talent in dance which would not have happened had we not provided this opportunity. They have been offered the additional opportunity of attending classes for young people at BRB at weekends or in the holidays.

Art work is also on display and is regularly changed. It is currently showing individual pieces from the Year 1 class inspired by a Cornerstones carnival topic, Rio de Vida.

**Learning Detectives**

Learning Detectives activities are for Year 5 and 6 children during main school holidays (see appendix 8). Children are given a menu of options (also displayed on the school website so all children can join in if they so wish) that they can choose from which include developing their own interests and talents. When they return after the holidays, we hold an exhibition of all the work they have undertaken and projects they have completed. These are photos from the exhibition after the Christmas holidays.

**School Council**

Our School Council noticeboard in the foyer displays photographs and names of our school councillors; two from each class. These children are chosen by their peers and are the children who are skilled in public speaking and have strengths in representing their classmates both on a daily basis and at particular events and debates. Class councillors are chosen from Reception to Year 6. They go on to represent Stanville as ambassadors, acting as tour guides in school and speaking at local events and debates, including council events and Young People’s Parliament.

In addition to being publically shared and celebrated in the entrance hall, achievements in all of these areas are also shared through weekly Celebrations Assemblies, newsletters and on the website. They are formally recorded as positive behaviours on our behaviour portal which recognises and celebrates positive as well as negative behaviours and shares these with children and parents and are also recorded on our SIMS tracking system which allows us to acknowledge achievements in traditional academic areas and also to enter our own fields to celebrate new talents as we discover them. New fields that we have entered recently in addition to those previously mentioned above include talents in cookery, discovered through our Food for Life After School Club, boxing and golf, discovered through opportunities we have created in school and creative writing discovered through competitions such as the Centre for Values in Education Thank You letter competition which we enter annually.

We are also developing a Passport to Success for each individual child in Key Stage 2, which encourages them to take ownership of their own record and pursue and celebrate their own interests both in and outside school. These are being monitored and developed in partnership with our learning mentors and are proving very popular with pupils and parents. It is intended that the documents will go with the students to their secondary school and will help them to build on their own learning and further celebrate their successes.

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**King Edward VI School for Boys (Grammar School), Aston, Birmingham**

**Identification and monitoring of AG&T students**

Within the school a wide range of measures are put in place to monitor the progress of our most able students. Such measures include:

- Departments review their departmental AG&T criteria annually, and have a fluid list of subject specific nominations.
- The students on the AG&T register are regularly reviewed in relation to their progress. This is conducted by the member of staff responsible for AG&T.
• A shadow register of students, who were AG&T last academic year, is kept, and monitored as with those on the AG&T register.
• Year leaders are also conducting reviews of academic progress across the year groups. Intervention is put in place by year leaders where appropriate.
• Subject leaders participate in ‘Cluster Leader Meetings’ focussing on pupil progress.

**Provision for AG&T students**

The AG&T programme is an inclusive one whereby all students are encouraged to take part, however the AG&T students are particularly encouraged to do so through an AG&T parental information evening held for all students across the year groups (see appendix 9). Opportunities for the students have been enhanced by the following:

• EPQs – Students currently have to apply to participate in the EPQ and therefore demonstrate a desire to investigate an area of interest further.
• The school has appointed a ‘Leader of extended learning’ through which the students are offered a range of enrichment activities with which they can engage.
• Masterclasses are offered to sixth form students to enrich and further their studies.
• Students receive specific preparation for Oxbridge applications and visits to both institutions for years 9 and 12 take place annually.
• In preparation for university applications workshops take place based around a range of careers and the associated university courses.
• There are also many other opportunities for students to engage with enrichment activities outside of the curriculum.
• Year 7 induction evening provides tutors with the opportunity to meet parents, and for parents to raise any information regarding their son that the school should be aware of.

**Teaching and learning**

Fundamental to our successful provision for the most able students is the teaching and learning that takes place across our school. Our teaching and learning policy highlights the importance of creating challenging conditions for learning, as detailed below:

The conditions for learning are:

1. A climate within the school and the individual classroom that:
   • Is orderly and where all pupils follow the school expectations for behaviour;
   • Is characterised by mutual respect between teachers and learners;
   • supports students in becoming confident learners who are prepared to take risks;
   • stretches and challenges pupils
   • includes guidance and support for students to understand the ways in which they can improve in each subject area.

2. A commitment to high aspirations.

3. Prompt and effective assessment of progress, with students’ learning being tracked and monitored.

4. Marking and feedback, whether verbal and informal or written and formal, is related to criteria and expects a response from the learner.

5. To encourage high aspiration the school will work in partnership with parents in order to:
   • improve parents’ understanding of the content, purpose and procedures of the teaching in the school
   • provide advice to parents to support their son's educational development outside the normal school day.
More precisely as a school we:

- Give parents information on courses, homework and examinations through information evenings, guidance booklets and the school website (including fortnightly comments);

- Provide curriculum information for each subject area on the school website and the Virtual Learning Environment (VLE);

- Give parents adequate, clear and timely information about their child’s progress;

- Ensure that parents receive warnings of any underachievement as early as possible and are also given information of good work has been done; and

- Provide parents with opportunities to communicate concerns, interest or questions through parents’ evenings and information evenings at key transitional points (e.g. Year 7 Parent and Tutor evening, Year 7 PA Evening, Year 10 Information Evening, Sixth Form Information Evening). Parents are also issued with a questionnaire at parents’ evening providing an opportunity to express their views about the school.

6. Utilise a range of strategies to intervene when a student is at risk of underachieving in one or more subject areas and support them in their learning to achieve their targets. This may include a report, a meeting with parents or the opportunity to be mentored by a senior student.

7. Ensuring that the learning environment (classrooms, corridors and communal spaces) supports, encourages and challenges students in their learning.

Supporting the teaching and learning within the school our approach to continuing professional development is focusing on an increasingly personalised approach, offering coaching partnerships, training in six of the teacher standards and providing two fortnights during the school year which are designated as open classroom weeks. These are used as a method of sharing outstanding classroom practice. Intensive support is offered to colleagues who are underperforming through a combination of coaching, training and monitoring and a positive impact can be seen from this support. Teacher Learning Community meetings are used to continue the personalised support through a variety of staff led sessions, open group discussions, coaching sessions and opportunities to provide central training on aspects such as the schools’ Virtual Learning Environment.

The induction programme for new staff includes training of teaching the most able students, BLP and the VLE. This enables staff to ensure that the teaching and learning in their lessons provides the appropriate stretch and challenge and meets the meets of the most able students.

**East Barnet School**

In this school, science and design and technology students in Years 9 to 13 gained exceptional expertise in designing and building automated devices using industry standard software within and beyond the curriculum. Students regularly win national competitions and two teams, including a girls’ team, represented UK schools in an international robotics competition in California.

The most able science students who demonstrate a particular interest are given opportunities for additional accreditation. Two students took GCSE astronomy and were provided with telescopes to support their studies. The school is now planning to build an observatory to encourage further interest in the subject.

In 2013, the proportion of A*/A grades at GCSE was significantly above the national average in nine different science, mathematics and technology subjects. In the separate biology, chemistry and physics GCSEs, with a larger than average entry, approximately 75% gained A*/A compared with less than half nationally.

from: OFSTED The Most Able An update on progress since June 2013
March 2015
Drayton Manor High School

A transition team that includes teachers and some of the most able students in Years 7, 8 and 9 develop an understanding of each of the Year 6 pupils due to transfer. Staff members visit over 40 feeder schools to establish the students' strengths, interests and needs. This is gleaned through discussions with staff, parents and pupils. Students complete demanding literacy, numeracy and science activities on 'taster days' and subject-based 'challenge booklets' during the summer break. Leaders then set individualised and highly demanding targets based on information about each student. This is supplemented by the results of baseline subject, cognitive, reading and spelling tests that are used to diagnose gaps in learning, potential and any previous underachievement. Close liaison with the primary schools ensures that the Year 7 curriculum builds on, rather than repeats, work completed at Key Stage 2. Homework tasks develop students' higher-order thinking and reasoning skills well and help facilitate substantial progress during Year 7.

from: OFSTED The Most Able An update on progress since June 2013
March 2015

John Spence Community High School

In this school, English teachers plan together and produce high quality stimulus and challenging activities for lessons. They adapt the materials by pitching their lessons at the most able and offering scaffolding for different abilities. This includes regular review of model answers for the most able so that they know exactly what to aim for.

The English team invites all the families of Year 7 and 8 students to visit each term. At this popular event, families see different examples of work and get advice on how to support students. Parents of the most able see the work of other most able students and learn about the standards expected of class work and homework. They are given booklists to encourage wider reading and discussion.

Progress by the most able students in English language has improved markedly over the last three years, resulting in a very high proportion gaining A*/A in GCSE.

from: OFSTED The Most Able An update on progress since June 2013
March 2015

Prince Henry's High School

This large high school (13–18) is excellent at raising students' awareness of higher education and preparing them for the next phase of their education.

Students receive strong careers support from Year 9, with a clear emphasis on top universities for the most able students. Parents are involved in careers guidance, especially in Year 11, where the most able students are encouraged to study four facilitating subjects. The school makes effective use of its links with universities in providing seminars and signposting students to lectures, open days and other events.

Year 13 students focus on UCAS applications and practice interviews in the autumn term. The varied range of activities continues and they benefit from visiting speakers who give them valuable information. Any students who demonstrate potential not previously identified are encouraged to reconsider their plans with tailored support. Over a quarter of students in each of the last two years gained places at Russell Group universities.

from: OFSTED The Most Able An update on progress since June 2013
March 2015
Links to other examples of successful practice, and to support networks

Gifted and talented strategies in primary schools

http://youtu.be/awo4yGIJ7w8
Gifted and talented strategies in primary and secondary schools

http://www.iggy.net
Website offering a global community for gifted pupils, their parents and their schools

http://newteachers.tes.co.uk/content/how-stretch-and-challenge-your-students
Ideas for teachers to help motivate pupils

http://www.potentialplus.org
Support for gifted pupils and their parents

http://challenginglearners.wordpress.com
Ideas to challenge pupils

Ideas to help with planning challenging lessons
6 References


- Quality Assurance Agency for Higher Education (2014). Qualifications can cross boundaries


## Appendices

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Example of a CATS paper.

You are walking along a path through the jungle, and you hear a rustle in the undergrowth. A pang of fear clutches at you. Another rustling sound, and you run down the path as quick as you can. Why did you do this? You believed there was an animal, possibly a predator, about to jump out at you. However, the rustles were caused by a gust of wind. You have made a "false positive" error.

Later, you walk the same path, and you hear a rustle in the undergrowth. "Just a gust of wind" you say to yourself, as you continue down the path, only to be struck down by a leopard. You have made a "false negative" error, with serious consequences.

We learn to recognise patterns when we are very young, and these patterns may or may not be important. It may be best to regard all unusual events as potentially life-threatening, until our experience of them shows them not to be.

False positive errors are common in everyday life, sometimes producing bad outcomes. The parent who says "I do not wish my child to be vaccinated against measles because there is a risk of brain damage" is not evaluating the risk involved in contracting measles at a later date. Comparing risks shows that the much higher risk of catching measles with a devastating outcome far outweighs the minuscule risk involved in vaccination.

Identifying false positive errors is important in medicine because:

- A. the risks in vaccination are very high.
- B. patterns in disease are difficult to identify.
- C. inappropriate treatment may be prescribed.
- D. brain damage may be difficult to observe.
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“If we want to consolidate our position in the modern world, we need, even the smallest spark light of intelligence and talent.”

Mustafa Kemal ATATÜRK (The Founder of the Turkish Republic)
The Story of Edison

Thomas Alva Edison (February 11, 1847 – October 18, 1931) was an American inventor, scientist and businessman who developed many devices that greatly influenced life around the world, including the phonograph, the motion picture camera, and a long-lasting, practical electric light bulb.

Thomas Edison was born in Milan, Ohio, and grew up in Port Huron, Michigan. He was the seventh and last child of Samuel „The Iron Shovel“ Edison, Jr. (1804-1896) (born in Marshalltown, Nova Scotia, Canada) and Nancy Matthews Elliott (1810-1871). In school, the young Edison's mind often wandered, and his teacher, the Reverend Engle, was overheard calling him „addled“. One day Thomas Edison came home and gave a paper to his mother. He told her, “My teacher gave this paper to me and told me to only give it to my mother.”

His mother's eyes were tearful as she read the letter out loud to her child: Your son is a genius. This school is too small for him and doesn't have enough good teachers for training him. Please teach him yourself. This ended Edison's three months of official schooling.“ His mother home schooled him. Much of his education came from reading R.G. Parker's School of Natural Philosophy and The Cooper Union After many, many years, after Edison's mother died and he was now one of the greatest inventors of the century, one day he was looking through old family things. Suddenly he saw a folded paper in the corner of a drawer in a desk. He took it and opened it up. On the paper was written: Your son is addled [mentally ill]. We won't let him come to school anymore. Edison cried for hours and then he wrote in his diary: “Thomas Alva Edison was an addled child that, by a hero mother, became the genius of the century.”

He was fired from his first two jobs for being „non-productive.“ As an inventor, Edison made 1,000 unsuccessful attempts at inventing the light bulb. When a reporter asked, „How did it feel to fail 1,000 times?“ Edison replied, „I didn't fail 1,000 times. The light bulb was an invention with 1,000 steps.“
1 The Education System in Turkey

Education in Turkey is governed by a national system which was established in accordance with the Atatürk Reforms after the Turkish War of Independence. It is a state supervised system designed to produce a skilful professional class for the social and economic institutes of the nation. Turkish education system is under the supervision and control of the state, namely the Ministry of National Education. According to the Constitution of the Republic of Turkey, everyone has the right to receive education. Education is compulsory from ages 6 to 14 and free in state schools. The country’s primary schools currently have a 98 percent participation rate. The academic year in Turkish education institutions generally begins in the mid-September or early October and continues to May or early June. There is also a two-week winter break in February.

Stages of the Education System

Pre-School Education: Optional kindergarten education, up to 6 years of age.

Primary Education: Compulsory and free basic education for eight years (5 years elementary + 3 years secondary), 6-14 years of age.

Secondary Education: 4 years of High School (Lise), or Vocational High School education, 15-17/18 years of age. Some schools might have an additional year of language study. High schools are mostly owned by the government and provide free education.

Higher Education: 4 years of University, or 2 years at Higher Vocational Schools. Some schools have an additional year of language study. Under normal circumstances, Master’s study lasts 2 years; PhD 3-5 years. This category includes all educational institutions which will provide post-secondary education. They are under the supervision of Higher Educational Council (YÖK).

Types of High Schools

Public High Schools: Any student who successfully completes 8 years of basic education can go onto these schools. Graduates of public high schools, if successful in the nationwide University Entrance Examination (ÖSS), can go onto higher education institutions. Graduates are awarded with the Lise Diploması.

Vocational High Schools: Some of these schools may take an additional year to complete. Graduates can automatically go on to higher vocational schools (Meslek Yüksekokulları - 2 Year Vocational Colleges) in their respective fields of study if they wish. Alternatively, if successful in the university entrance examination, they can go onto 4-year schools in their respective fields.

Anatolian High Schools: One year of English study followed by 3 years of regular high school education, additional hours for English. Math and Science lessons at these schools are sometimes taught in English. Lessons at some Anatolian high schools are taught in either German or French.

Science High Schools: These are special public schools for students who have exceptional aptitude in the sciences. These very competitive high schools train students specifically for higher education in the sciences, technical and medical fields.

Private High Schools: Most private high schools charge very high tuition fees and are very competitive.

SCIENCE and ART CENTER

The education is free of charge in our institution because it is a public school. The institution is for gifted students. The teachers, parents and students are informed about the school each year.
2 Basic Definitions

Gifted Child

People show difference from each other both in terms of personal characteristics and mental characteristics. There are differences between individuals in terms of the amount of information learned and speed. Therefore, according to these individuals with different interests and abilities could be identified.

„The term 'gifted and talented,' when used with respect to students, children, or youth, means students, children, or youth who give evidence of high achievement capability in such areas as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services or activities not ordinarily provided by the school in order to fully develop those capabilities.“

Differences of the Gifted Child

There can be biological difference between the gifted child and the normal child. The gifted child seems to have an increased cell production that also increases synaptic activity. This all adds up to an increased thought process. The neurons in the brain of the gifted child seem to be bio-chemically more abundant and, as a result, the brain patterns that develop are able to process more complex thought. There seems to be more prefrontal cortex activity in the brain, which leads to insightful and intuitive thinking. 1 Gifted children have more alpha wave activity in the brain. They not only get more alpha wave activity faster than the typical child, but they also sustain it longer. This allows for more relaxed and focused learning with greater retention and integration. 2 The gifted child’s brain rhythms occur more often which allows for notice, care, search, and exploration.

Differences between the sexes

Studies have shown that the characteristics of the gifted child can differ on the basis of sex.

The following are common characteristics of the female gifted child:

◆ She likes school, especially courses in science, music, and art.
◆ She likes her teachers.
◆ She regularly reads news, magazines, another non-required reading.
◆ She is active in drama and musical productions.
◆ She does not go out on dates as often.
◆ She is a daydreamer.

The following are common characteristics of the male gifted child:

◆ He dislikes school.
◆ He dislikes teachers and thinks they are uninteresting.
◆ He does little homework.
◆ He dislikes physical education and seldom engages in team sports.
◆ He is regarded as radical or unconventional.
◆ He often wants to be a lone to pursue his own thoughts and interests.
Some general characteristics of gifted and talented children are listed below. It is important to note that academically gifted and talented children will not necessarily demonstrate all of these characteristics.

The gifted child may be:

- Self-disciplined, independent, often anti-authoritarian.
- Sense of humour
- Able to resist group pressure
- More adaptable and more adventurous
- Greater tolerance for ambiguity and discomfort
- Little tolerance for boredom
- Preference for complexity, asymmetry, open-endedness
- High in divergent thinking ability
- High in memory, good attention to detail
- Broad knowledge background
- Need think periods
- Need supportive climate, sensitive to environment
- Need recognition, opportunity to share
- High aesthetic values, good aesthetic judgement
- Different
- You can recognize them since they were born
- Develops more quickly than their peers
- Adapts quickly but produces different works with ordinary tools
- It is not difficult to recognize
- Clever so questions everything
- Different Viewpoint
- Distinguish
- Syntheses
- Global
- Extraordinary Observation Talent

**Emotional characteristics**

The gifted child appears to have his share of emotional stresses. The gifted child may have lower self-esteem than the average child. The high expectations that the gifted child has for himself and his unrealistic goals may cause anxiety, as the gifted child pushes himself unrealistically.

Children with hidden or demonstrated gifts or talents come from varying social and cultural backgrounds, have their own characteristics, and cannot be distinguished from other children by their appearance.

Educators have described children's behaviour which can indicate outstanding ability, perseverance and creativity. Behaviour indicating giftedness child can include the following:

- Learning quickly and easily
- Thinking of several solutions to a given problem
- Pursuing an interest or hobby intensively for a time; for example, the child might „live“, „eat“ and „think“ dinosaurs for six months
- Absorbing large amounts of information quickly and having the ability to recall this information
- Asking a great number of relevant questions and expecting answers
- Showing a fertile imagination
• working out complicated mathematics in their head
• showing outstanding curiosity, initiative or insight
• having a large vocabulary and using words effectively
• reading from an early age
• showing a keen sense of humour through the use of language, in art work or in everyday activities.

Behaviour which is less socially acceptable but can also indicate giftedness includes the following:

• getting bored easily both at home and at school
• being naughty or irrepressible in class
• being the „class clown”
• being inattentive and absorbed in a private world
• being unwilling to undertake tasks seen as irrelevant; for example, the child might not see any reason to keep their bedroom clean and tidy
• having „smart” answers to questions
• showing unconventional behaviour.

**Differences between Bright and Gifted Child**

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4 Identification and Diagnosis of Gifted and Talented Children

The group of gifted individuals who are diagnosed by professionals as having higher mental abilities than their peers, need special education programs according to their interests and abilities to develop these skills. Features that distinguish them from other individuals are advanced level mental ability, special talents in various fields, sensitivity, creativity, and intense motivation. Special education of gifted students should meet requirements of different features of this group.

Procedures for identification should be multifaceted, involving parents/caregivers, students, teachers, and other professionals. i.e. identification procedure must:

- be school-wide
- use multiple criteria
- be inclusive
- be dynamic and continuous
- be culturally fair
- ensure that all domains of giftedness and fields of talent are identified
- recognise degrees of giftedness and talent
- be organised and linked to differentiation
- allow for early identification and identification at all stages
- enable input from everyone involved.

4.1 Identification methodology

The issue of identification is complex because allowance must be made for all types of students, including those who are gifted underachievers and those who may be disadvantaged. Five key principles of identification are:

- Defensibility: procedures should be devised to identify students in all domains of giftedness and fields of talent.
- Advocacy: teachers should use assessments to promote students’ interests and should not expect students to perform equally well on all measures.
- Equity: there should be equitable procedures for identifying groups who may be disadvantaged by the mainstream identification procedures.
- Comprehensiveness: there should be the appropriate use of multiple sources of data.
- Pragmatism: identification needs to be consistent with the level of resources available.
  (Richert, 1991)

The process for the identification of gifted and talented students must;

- be dynamic and continuous
- allow for identification at any stage of the student’s development
- allow for the highly talented to emerge from the larger talented group
- ensure that the identification of students from disadvantaged and culturally diverse groups is not overlooked.

No single method of identification is appropriate for all types of gifted students. A wide net should be cast by the use of multiple criteria, and as much information should be gathered as resources will allow. This will identify a wide range of students.
The identification of gifted and talented students is a part of whole-school planning for meeting the needs of these students. Appropriate educational programs must be in place to cater for the identified students. These programs will provide ongoing opportunities for students to be identified as gifted and talented. Teachers should therefore be identifying gifted and talented students by means of all teaching and learning processes.

The identification of gifted and talented students is a continuous process and should not be viewed as a one-off procedure. Schools should be continually evaluating their systems and making changes. It is important to monitor the progress of identified students and to ensure that the program is meeting their educational needs.

4.2 Stages of identification

Identification is a three-stage process of nomination, screening and monitoring.

Nomination

This is the identification of gifted and talented students by parents/caregivers, teachers, peers, school counsellors, community members and the students themselves. It involves the collection of subjective information, usually via checklists. Checklists may need to be translated into the language of the target population to collect valid information.

Screening

Screening involves the use of a combination of measures of potential and performance. It is more objective than nomination. Ability tests are useful for assessing potential, whereas achievement tests assess student performance in syllabus outcomes, and generally classify students into bands. Underachieving students with high intellectual potential may score poorly on achievement tests. Diagnostic tests are designed to identify specific areas of difficulty and do not identify students with higher abilities.

Monitoring

Teachers should ask the questions, “What is being observed?” and “How should the observations be noted?” before beginning to formally observe students. Teachers can develop proformas to aid in recording observations of students. This information can give a picture of students’ performances, interests, strengths, weaknesses and skills. Specific data can be collected to reveal the effectiveness of the identification strategy.

Methods of identification

Some students will be easy to identify because of their academic ability and achievements, their enthusiasm and their intrinsic motivation.

Identification methods need to be selected on the basis of age or stage and the domain of the ability to be assessed. They include:

- Evaluation of student responses to a range of classroom activities
- Nomination by parent/caregiver, peer, self and teacher
- Assessment of responses to challenging competitions
- off-level testing
- standardised tests of creative ability
- IQ tests and other culturally appropriate measures of ability
- Observation and anecdotal evidence
- Behavioural checklists
- Interviews
- Academic grades.
Identification of giftedness in early childhood

Early identification of a gifted child will facilitate an appropriate educational pathway and provisions. Giftedness can be identified outside the school environment; it is not dependent on a child being able to complete academic tasks. A young gifted child can be identified by investigating his or her level in the developmental stages of childhood development.

4.3 Identification of giftedness in Turkey

Gifted are determined by experts to be superior to their peers in cognitive ability. The education programs which are designed for normal developing students are not suitable for gifted students; because they learn quickly, they get bored and therefore lose their motivation to learn (Ataman, 2003). Due to asynchrony between cognitive development and psychological and social development areas, they require special education. Enç (2005), defined Enderun School in the Ottoman Empire, as the first educational institution in the world that implemented a planned, comprehensive and systematic education for gifted. In Enderun School there were art courses and character and personality education as well as courses given in high madrassas (Akkutay, 1984). Despite this important heritage that we have gifted education, education of gifted that was described by Enç (2005) as ‘superior brain power’ could not be reached to required standards. Some started applications have been fruitless. Education of Gifted Students Self-actualization of gifted students can be maintained by special education programs according to their interests and abilities to develop their skills. The models commonly used in education of gifted students are; separate education, enrichment and acceleration (Yıldız, 2010). The first example of separate education in the historical process is Enderûn School. Science High Schools, Fine Arts Schools, İnanç Foundation High School are examples of separate education in Turkey. Education of gifted children with their peers, through required applications within the programs, is defined as enrichment (Ataman, 2003). The aim of Science and Art Centres are enrichment. Acceleration is completion of the student’s class; school, to speed up in earlier period than their peers. However, due to the asynchrony in development, gifted children should be supported in social and emotional aspects. Therefore it is essential to educate gifted together normally developing peers. Science and Art Centres were founded from this reality.

Although Turkey has a great heritage as Enderun School that educated gifted children in Ottoman Empire, today education of gifted students has many problems in Turkey. As mentioned before, research on Science and Art Centres show that education program, physical environment and effectiveness are basic problems.

In Turkey Gifted children, involved into the education system are identified by the Guidance and Research Centre (RAM), for early childhood Gifted are identified not only by RAM but also a psychologist in hospitals or psychologist in private sector. Identification procedures are started by family or request of the school. The children who are different from their peers and cannot adapt to different environments in school, are directed to RAM. According to the applied measuring instruments, the children defined as ‘gifted’ are educated with their peers at the same school and in the classroom. Gifted child is not received any program enrichment, differentiation proposal / application. However, if a gifted child wants to get support education outside formal education, they continue appropriate grade level at Science and Arts Centre. Science and Art Centres provide training to gifted students in pre-school, elementary school, middle school and high school on art, music, and general mental ability. Children are taken into training programs such as; harmony, educational support, noticing individual talents, special skills development and project generation / management in these centres.

Science and Art Centres (BİLSEM) The most common institution in Turkey for education of gifted students are Science and Art Centres, the first of which was opened in 1995 in Ankara. It was planned to serve gifted students outside of school time, with a planned education program. In the selection of stu-
dents to BİLSEMs, intelligence tests are applied and students whose intelligence quotient is 130 and over are accepted. There are 83 BİLSEMs in Turkey in 69 cities. SAC announces the class level of the identification process to all public and private schools via Education Directorate. Classroom teachers nominate the children whom he observed with different characteristics than their peers in the classroom students by completing observation forms prepared by the Ministry of Education.

Preliminary Evaluation: Observation forms of the nominated students are evaluated by SAC Identification Commission.

Group Scanning: Students who are eligible to enter the group screening in the preliminary evaluation are tested to group scanning with the determined standard assessment tools.

Individual Scanning: The students who have had adequate performance during group scanning are evaluated under individual examination with standard measuring tools.

According to the individual training results, students who are identified as gifted continue their education at SACs parallel to their formal education.
5 Proven and Suitable Strategies for Talented and Gifted Children Support and Development

5.1 In schools

The child who does well in school, gets good grades, wins awards, and “performs” beyond the norm is considered talented.

The child who does not, no matter what his innate intellectual capacities or developmental level, is less and less likely to be identified, less and less likely to be served.

- Based on intellectual and academic achievement scores, allow for grade acceleration and/or placement into a higher level class.
- Do not encourage rote or repetitive homework in the skill has already been achieved (ie: busy work).
- Allow parents to provide activities, projects, books, etc. for gifted students to use during class times when they have completed work or already know materials.
- Encourage and provide opportunities for teachers to learn about gifted qualities in order to limit stereotyping and misperceptions.
- Have a psychologist who is a gifted specialist provide a teacher and a parent seminar to teach strategies to manage poor behaviours and increase success in the classroom.
- Have field trips that expose children to what they learn in class.
- Recognize bullying behaviours and address it as quickly as possible.
- Have teacher or older peer mentors for students who appear to be struggling to fit in. • Encourage the school district to have a gifted parent’s support group.

Role of the school counsellor

The school counsellor’s role is to provide not just assessment but also support, information and advice to students, parents/caregivers and teachers. The school counsellor would be a valuable member of the school’s gifted and talented committee.

Counsellors are proficient in cognitive and adaptive assessment, understand emotional and social development and have insight into the impact of difference on the mental wellbeing of students. School counsellors are available to support the school in the identification of gifted and talented students by:

- providing advice on appropriate assessment and procedures and tools.
- interpreting reports from other agencies
- consulting on students’ emotional and social maturity
- being an advocate for the student
- liaising with parents/caregivers
- advising on the impact on access to the curriculum of:
  - Socio-economic factors
  - Cultural identity
  - Gender expectations
  - Disability.

The school counsellor is a part of the process for identifying gifted and talented students, but should not be the first or only way to achieve this. Tools such as nomination forms and checklists are a more efficient and cost-effective way of initially identifying gifted and talented students. Counsellors can be consulted
when further information is required, or perhaps if the student is displaying behaviour that teachers and parents/caregivers feel warrants further investigation. Each school will have its own procedures which should be outlined in the school policy. Teachers should be aware of these procedures when referring a student to the school counsellor.

**Independent Projects:**

Create an Independent Project activity. You will find that many gifted and talented students tend to have a lot of extra time on their hands in your classroom because they finish their work rather quickly. Use this time to help them develop their creativity by allowing them to explore a special area of interest related to the topic being studied.

**Academic Competition:**

Involve gifted and high achieving students in an academic competition. These highly motivating events can be held right at your school and have relatively inexpensive registration fees. They are computer driven and test students’ knowledge in a variety of academic disciplines. Not only do they challenge students academically, they provide an opportunity to develop skills in leadership and group dynamics. Here are two organizations that can provide competitions and more information.

**Vertical Enrichment:**

Plan „vertical enrichment“ activities with gifted students. Design assignments or projects that go above and beyond what is covered in the regular classroom. Don't just give gifted students „more of the same.“ There are a number of educational products designed for gifted and talented students that can be easily adapted into regular classroom activities. Here is a list of vendors offering affordable materials that can be used to challenge students in a range of academic disciplines while developing their higher level thinking skills and problem-solving abilities.

**Find a Mentor:**

Don't turn your gifted student into a tutor or teacher's aide! Instead, find a mentor who is willing to work with him/her in an area of interest. Start with the parents of students at your school. Ask other teachers. Contact local organizations. The bottom line is that you want to help the gifted student reach his/her potential and tapping outside expertise is sometimes necessary. Gifted children need „tutors,“ too!

**Try a New Approach:**

Change your approach when working with gifted and talented students. Instead of being „the expert,“ become „the facilitator.“ Rather than just „giving“ them information, help them to discover it!

**Use Bloom's Taxonomy:**

Let Bloom's Taxonomy become your guide in working with gifted students. This web site explains clearly and simply each level of Bloom's Taxonomy - a model of critical thinking that progresses from the most basic level to the most complex. Examples of appropriate questions are given as well as illustrations for use in the classroom and ways to use technology within each level on the taxonomy. Gifted students should be asked to utilize the upper three levels - analysis, synthesis, and evaluation. Below are some examples of lesson planning „actions“ that should be incorporated when planning activities for gifted students.

**Multiple Intelligences:**

Incorporate Multiple Intelligences into your lessons! Developed by Harvard Professor of Education Howard Gardner, this Theory of Multiple Intelligences states that all people possess at least seven different kinds of intelligences - linguistic, logical-mathematical, visual-spatial, body-kinaesthetic, musical, interpersonal, and intrapersonal. These intelligences exist in varying degrees within each individual. Applying this theory to your classroom activities ensures that every student will be individually challenged in one or more specific
area. The multiple intelligences web site provides many practical ideas for using Multiple Intelligences across the curriculum. Explore the Multiple Intelligence posters (and comics). Print some to hang in your classroom.

Use Technology:

Teachers first offers extensive resources and ideas for Nourishing Gifted through Technology in Any Classroom. Find hand-picked tools and strategies for differentiating academic content, injecting and respecting creativity, helpful gifted students form personal connections in areas of interest and collaborations with other gifted students, and managing the logistics of gifted in your classroom.

Levelling Assignments:

Try levelling class assignments and learning outcomes. In this way, you can explore the same material with all of your students, but require different outcomes depending on the students’ individual abilities. This strategy can also be applied to testing. Again, refer to Bloom’s Taxonomy and include higher level questions on exams for gifted students.

Teachers should differentiate: content, process, product and learning environment. Doing this for gifted and talented students involves extension and enrichment. Extension deepens students’ knowledge, understanding and skills through problem-solving tasks, use of digital tools and resources and flexible grouping. Enrichment broadens the curriculum. Students develop and apply their knowledge, thinking skills and attitudes on topics of personal interest — at a complexity beyond the learning expectations for their age peers. Enrichment may also be provided through extra-curricular activities.

What does this mean for your classroom practice?

Differentiation

For gifted and talented students you can:

- Adjust tasks so they are required to process more complex and abstract information from a variety of sources. (Content)
- Use a faster pace; this still means providing repetitions. (Process)
- Challenge and support students to set learning goals and develop higher-order thinking skills including problem-solving strategies, critical and creative thinking, and self-reflection. (Process)
- Provide opportunities for students to demonstrate imaginative, innovative and rigorous responses that may involve extended outcomes. (Product)
- Encourage students to pursue their interests in independent inquiries and negotiated tasks. Provide flexible groupings to enable collaborative work with students of the same or higher ability; or with shared interests. (Learning environment)

5.2 Recommendation for Teachers

It is estimated that students who are gifted and highly talented encompass 5 to 15% of the school age population. These advance students can have increased capabilities in academics, creativity, music, dance, art, and/or leadership. The following are recommended:

1. Compact the curriculum and provide enrichment activities. Provide environments that are stimulating, and address cognitive, physical, emotional, and social needs of gifted children in the curriculum. Let the students move quickly through the required curriculum content and onto more advanced material. Allow for academic rigor.

2. Implement a multi-level and multi-dimensional curriculum. Differentiate the curriculum in order to address differences in the rate, depth, and pace of learning. This will enable all students in the class to learn
about a specific area by creating projects at their own ability level. For example, if students are learning about the state of Delaware, students of different ability levels can be assigned to different types of tasks. At the conclusion of the class, all of the students can present what they have learned to the entire group.

3. Be flexible with the curriculum. Take advantage of real-life experiences that can be translated into problem-solving academics for all students. For example, an impending snowstorm can be used to instruct students. Students of different ability levels can be given different tasks, such as figuring out what snow is made of, predicting the amount of snowfall, or determining how many snow lows will be needed if 8 inches fall.

4. Make the curriculum student-centred. Engage gifted students in the curriculum decision-making process, giving them an opportunity to learn how to take responsibility for their own learning. Draw the curriculum from the students’ interests and educational needs. 5. Allow students to pursue independent projects based on their own individual interests. Independent projects can be assigned on the basis of ability level. Encourage creativity and original thinking among gifted students. Allow them to explore ways of connecting unrelated issues in creative ways.

6. Allow gifted children to assume ownership of their own learning through curriculum acceleration. Instruct them to work ahead to problems of skills that they do not know. To help children learn the value of attaining knowledge in their lives, encourage learning for its own sake, rather than emphasizing the end results or accomplishments. Teach research skills for accessing information; higher level thinking skills for processing it; creative thinking and problem-solving skills for flexibility in approach and generation of information; and communication skills for sharing it.

7. Try to maximize your students’ potential by expecting them to do their best. Encourage them to advance as quickly as they can. Assist in developing projects that allow them to achieve success one step at a time.

8. Teach interactively. Have students work together, teach one another, and actively participate in their own and their classmates’ education. Note: This does not advocate gifted children being peer tutors in the classroom; the gifted student should be challenged as well. Emphasis should be on working together in the classroom. Cluster gifted children together as a table within the regular classroom and utilize advanced materials, as well as other suggested resources and modification, to meet their exceptional needs.

9. Explore many points of view about contemporary topics and allow opportunity to analyse and evaluate material. Allow open forums and debates in the classroom about controversial issues. As a teacher of gifted children, take an active stance. Be an advocate for gifted students. Utilize specialized training to ensure the ability to meet the needs of gifted students. Share personal interests with all students, to enrich and expand their world.

10. Consider team teaching, collaboration, and consultation with other teachers. Use the knowledge, skills, and support of other educators or professionals in the schools.

11. Provide opportunities for gifted children to interact with other gifted children across grade levels and schools through competitions or collaborative projects.

12. Encourage gifted students to participate in extracurricular activities that involve academic skills. Examples include math and debate teams. Because gifted children are often natural leaders, it is important to invite them to use their talents and abilities in beneficial, rather than disruptive, manners. For example, encourage the gifted student to run for office in student council, or another extracurricular activity in which he/she is involved.

13. Involve students in academic contests. Gifted students tend to be competitive by nature. Therefore, participating in regional and national competitions such as spelling bees, science fairs, and essay competitions will be fun challenges.
14. Allow gifted children to create and publish a class newspaper to distribute. This consists of assisting students in understanding their special capabilities and the training necessary for them to reach their full potential.

15. Set individual goals. Help guide students in creating their own goals and set goals that are specific, measurable, aggressive, realistic, and within a reasonable time frame. Be sure not to place expectations that are too high or too low.

16. Consider parental input about the education of their gifted children.

17. Always remember that gifted children are similar in many ways to the average child in the classroom. Do not place unrealistic expectations and pressures on gifted children.

18. Address the counseling needs of each student to support emotional growth, as needed. Some gifted students have issues regarding anger, boredom, bullying, delinquency, isolation, depression, peer relations, perfectionism, dropping out of school, stress, frustration, and underachievement. About 20-25% of gifted students have emotional difficulties.

19. Remember that gifted children may not excel in all areas. They may be ahead of other students in some areas and behind in some areas. Become aware of the strengths and weaknesses of the children in your class.

20. Do not assign extra work to gifted children who finish assignments early. This is unfair and frustrating to them. Simply offering more of the same only restricts further learning. Instead, allow those children to work on independent projects or other unfinished work when they finish an assignment early.

21. If a child attends resource rooms, communicate with the specialist for suggestions on how to enrich daily classwork. Avoid penalizing the child for special class attendance. Have another child in the regular classroom take notes and assignments for him/her.

22. Provide plenty of opportunities for gifted children and average children to engage in social activities. Some gifted children may need help in developing social skills.

23. Try to find the joy and uniqueness in each child. Children may exhibit their gifts on non-typical levels, rather than in general intellectual aptitude of specific academic abilities. Keep in mind that every child will have different needs.

24. Organize resources in order to free yourself to work with individual children and give the children greater control of the learning situation. Supplementary books and learning tools, community resources, and the use of community members with specific skills as mentors can be helpful.

25. Establish and maintain a warm, accepting classroom. Teach your classroom community to embrace diversity and honour differences. Provide an environment in which the child can demonstrate his or her potential or aptitude to learn and perform. Teachers should strive to establish a non-competitive, individualized, and open classroom, which allows all students to advance at their own rate of learning.

26. Remember that implementing some of these strategies will benefit all of the children in the classroom, not just the gifted ones.

5.3 Cooperation with Parents

Having a gifted student comes with its own set of challenges and trials, and it’s important to be ready to meet these challenges head on. Here are some tips from Dr. James Webb; Dr. James Webb, clinical psychologist and senior author of Guiding the Gifted Child, offers a list of ten suggestions for parents of gifted:
• Treat them as children. They are still children. They need what all other children need: love but controls; attention but discipline; your involvement, yet training in self-reliance and responsibility. Even though they are gifted, they have a thorough understanding of adult problems such as death, sickness, job loss etc. They may need reassurance in these areas.

• Maintain a consistent system of values and a happy, healthy home. Maintaining harmony in the family is important for their optimum development. As gifted children may have a greater sensitivity to the world around them, they may be more affected by family disruption. If there is a breakup within the family, be honest with the child in a kind and gentle manner.

• Give them a special gift: Time. Children need an understanding parent and/or role model, and they need to spend time with this person. The child needs your attention in order to discuss values and ideas. These children often love the unconventional. You need to spend time helping them to understand the importance of behaving in a socially acceptable way.

• Don't stifle the gifted child. Gifted children are known for their curiosity and parents should be especially careful not to stifle the gifted child who asks questions. In particular, the child should not be discouraged for asking questions about what seems to be an improper or forbidden subject. The parent may, however, insist that questions not be asked at inappropriate times, and it may be necessary to ask the child to clarify or rephrase a question. Questions don't need to be answered completely, but parents or significant adults should provide a clue, guidance or even a question, which sends the child into some productive direction. When the parents cannot answer the questions, they should direct the child to a resource, which is likely to have the information.

• Intellectually stimulate the gifted. Pushing and intellectual stimulation are different. Some parents seem to feel pressured in many activities, such as reading, problems solving, etc. to push for greater achievement. Rather, you should seek in every way to stimulate and broaden the child's mind and enhance research skills through exposure to books, encyclopaedias, collections, charts, travel, technology, the arts, and active experiences. It is important to take your child to libraries and resource centres. Let them browse and read, let them use the computer to explore. Often children who never get out of their home environment need to see what the city core is like. Expose them to museums and art galleries, educational institutions and historical places to enhance their background learning and feed their curiosity.

• Encourage friendships and discover hobbies. Children need friends who are like themselves, to play games with and to share ideas. Encourage friendships, talk to their friends and show your child the value of a real friendship. Parents should encourage their children's hobbies and help them share their interests with their peers and friends.

• Avoid discouraging unusual questions or attitudes. Parents should avoid direct, indirect or unspoken attitudes that fantasy, originality, unusual questions, imaginary playmates, or out-of-the-ordinary mental processes are bad, or different. Gifted children's imaginations shouldn't be discouraged. Instead of laughing at your child, laugh with your child and seek to develop a sense of humour and balanced outlook.

• Don't over-schedule your child's life. Many parents feel that all of the child's spare time must be filled up with extra lessons of all kinds. They are afraid that the child may become bored for a short time. Allow your child to become bored and let them find a way to use time unscheduled by adults. Sometimes parents are concerned if gifted children spend their time watching TV or reading comic books. While they should not spend all their time doing so, children cannot be expected to perform at the challenge level at all times. Remember, TV and comic books have their own place in a child's growth and development and help a child develop connections with their less gifted peers and understand popular culture. Use common sense!
• Respect the children and their knowledge. Sometimes, it may be better than your own. If you feel that a child has made a mistake, start with the assumption that the child did not intend to do wrong. If your child wishes to follow his or her own methods for problem solving, interfere only if the child is in jeopardy of physical or emotional harm. When you have a task you want your child to do, give general instructions to be carried out in the child’s way, rather than specific commands that do not take into consideration your child’s personality.

• Get involved in school efforts and community programs to plan for gifted children. Support the schools efforts to plan programs and activities for these children. Help to interest the Parent/Teacher Association; solicit their help. Support study groups. Be active in the community and advocate for special education programs. Work to construct greater community understanding and appreciation of the special education needs of gifted children and collaborate with all parents in an effort to improve schools for all children.

• Talk to other parents. It’s always helpful to talk to parents who are “in the same boat” you are in. Other parents of gifted students can be an invaluable resource. For example, if your daughter has read every book on her bookshelf and in the school library, ask a friend if her son would like to have a book swap. Or, when you see another parent struggling to get the school to provide adequate services for her gifted student, offer some encouragement or an approach that was successful when you encountered a similar situation. Parents of gifted children can find much support by talking to one another and sharing resources.

• Look for extracurricular programs for gifted students.
Very often, the resources that schools are able to offer the gifted child are either limited or sub-par. If this is the case for your student, do not be discouraged! There are many other resources available to supplement your child’s school curriculum such as organizations that provide services to gifted students and their parents.

• Gifted children can be very talkative. At these times, they want to tell you every single detail of a book or TV show that they recently read or watched. They often seem to want to talk when you are doing something else. If possible, make a time to sit down with them and listen to a whole story. Give them eye contact, make comments and ask questions. At some point you may want to gently explain that most people do not want to hear every detail of books or shows. Then give them tips on how to summarize. I always say, “Less words, more content please.”

• Gifted children tend to be more emotional. It seems to me that their brains are supersensitive to characters in books and movies. These children can feel exactly how someone in a book feels, almost becoming the character. They tend to overanalyze a movie and new scenarios run through their overactive brains. I would recommend talking about the events of a movie prior to watching and let the child decide if it is something they are interested in viewing it. Certain books or movies could cause them to lose sleep and worry.

• Gifted children have a different way of organizing, but don’t rearrange their backpacks for them or clean their rooms. They may be extremely disorganized in your opinion. I would recommend finding a good time to sit down to “teach” them ways of organizing. Give them suggestions, and offer items to help, but let them choose on their own.

• Gifted children don’t always have common sense. Sometimes you can give gifted child instructions that are too vague and they can’t seem to figure out what to do. They are not purposefully disobeying. Normally this is something like a chore: doing dishes, doing laundry, cleaning their room. They can figure out a math problem so fast, but they can become befuddled with the simplest task. Be patient and explain without sarcasm. Sarcasm will upset them.

• They are generally energetic, happy, and helpful. She becomes unhappy if something is not fair. It may be the smallest thing, like how much ice cream she received as compared with her brother. Try to make
things fair for your gifted child from the beginning. They don’t want extra, they want fair. They may even get upset if they had more. Don’t fight this one, just work with them to make it fair. Be proactive, not reactive!

✦ Gifted children can get very angry. We all get angry and it is completely normal. Help them develop strategies to release their anger in a safe manner. Talk about how they can handle their anger appropriately in public and at school. Let them know that you have strategies that work for you, and they need their own. Let them know that sometimes, life isn’t fair.

✦ Gifted children can be very empathetic but they may need help developing it. If my daughter does something that hurts my feelings, I carefully explain why and how and then ask her, “How would you feel if…” I try to make the scenario relate to her. Once she understands it can really help to deter selfish actions. I believe gifted children need to understand the details to make better choices.

✦ Gifted children work best alone. They think ahead and plan how they are going to approach a project or activity. They get very frustrated when working in groups at school because other children may not understand a concept as quickly. But it is important that they learn how to work in groups. This must be taught to them because it does not seem to come naturally to them.

✦ Gifted children can be very quiet at times. When they are quiet, try to leave them alone, if possible. Let them have their space to “hyperfocus” on the computer, a book, an art project or activity that seems to have their complete attention.
6 References

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Messages from Teachers and Pupils

„It needs a courage and a lot of additional work, but it is worth doing that…“ teacher at a primary school.
„Sometimes I ask myself who teaches who. Working with gifted is demanding but also enriching.“ teacher at a primary school.
„The work doesn´t require only material equipment but also your heart. “ teacher at a primary arts school.
„Working with gifted is a challenge, both personal and professional. It doesn´t allow me to stay on…“ teacher at a secondary school.
„Although we do our best at school, the pupils´ background is more important. The role models, the family, and other factors are stronger. The school is the second important. “ teacher at a primary school.
„I wish they enjoyed also their childhood. “ teacher at an upper vocational school
„Working with gifted means that you are more advanced in a certain subject or activity. They grasp the subject more quickly.” teacher
„Every child has a specific skill. Our main aim is to discovered it and identify these gifted child at an early age for our future. “ teacher
„I realize that I could be even better… But sometimes I am very lazy.” pupil at a primary school.
„We are unusual.” pupil
„Being gifted is a gift from the God.” pupil
„When I learned that I am gifted, I was surprised.” pupil
„I want to make gifted friends.” student
„I don't need to go school.” student
„The school is boring.” pupil
„I don't want to grow up.” pupil
„My friends don't want to play football with me.” pupil