Gifted children and their special needs

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ABSTRACT:

The concept of giftedness is placed at the crossroad of three qualities: intelligence, creativity and self-motivation. Each quality can be discovered in a gifted child in the absence of the other two. Giftedness is the attribution of a combination of factors, coming from two directions: natural, innate factor doubled by the educational factor. There is a mutual determination relationship between these two factors. The fact that people are born with specific features is highlighted by studies on identical twins raised by different families. They show surprisingly similar psycho-behavioural characteristics although they have been raised separately and in different social backgrounds. Education influences the development of abilities to the maximum level of giftedness but it is achieved only under certain conditions determined by educational and social factors but mostly by personal self-motivation even at very young ages. Motivation along with creativity can often replace the absent factor but when all three factors: intelligence, creativity and self-motivation work simultaneously in a proper educational and social environment, children can reach outstanding performance in their development.

KEYWORDS: giftedness, identification, training.

I.1. The complexity of the gifted personality

Any gifted child identified by parents or school must benefit from educational programmes that support the development of their innate potential. Thus, they can reach performances that can be turned into competences with social impact. The complexity of their personality brings about serious consideration on the elaboration and implementation of instructive-educational programmes. Gifted children develop learning abilities differently from other children, which are based on specific thinking models:

- critical thinking assesses ideas and arguments in a creative way;
- construction of models assigns logical meaning to the world and it can also be used in practice;
- construction of logical arguments which allow the validation or rejection of certain concepts;
- consideration and reconsideration of what is obvious; it favours the discovery of laws that are beyond the evidence and are not transparent at first sight;
- moral thinking favours the responsible approach of different actions and finding the best strategies to approach a situation.

All these features need special training for teachers who work with the gifted and therefore they need to develop proper learning styles, different from mainstream education. Gifted children own attitudes, moods and habits that revalue open mindedness, objectivity and impartiality. They practice metacognition and analyse their own way of thinking. Intellectual training that must underpin any activity/lesson requires planning, problem solving, strategic decision, methodologies, communication and use of others’ experience in a critical way.
Learning should be directed based on an analysis of the educational optimum and its planning for the future. Gifted children are driven by curiosity, they are eager to understand how the universe functions, being capable of picturing improvements or reformations which produce socially useful values. Therefore, educational programmes for the gifted must meet certain educational requirements that are proper for the specific characteristics of their thinking:

- raise vital issues and questions which are clearly and concisely formulated;
- collects and assesses relevant information using abstract notions to interpret them;
- draws carefully considered conclusions, testing them on relevant criteria and standards;
- open and non-dogmatic thinking within alternative thinking systems; they admit and assess their own suppositions, implications and consequences;
- communicate effectively with others by building solutions to problems.

For these reasons, the gifted with critical thinking are self-disciplined, self-monitored and self-correctional using rigorous strategies and special abilities to handle these skills. They also develop special abilities in problem solving and communication. Therefore, teachers who work with these children must own special abilities and a psycho-intellectual profile that is compatible to the pupils’.

1.2. Educational programmes for the gifted

An educational system that complies with the gifted has been developed all over the world, as gifted children show special development features. This system can revalue the huge intellectual potential and the abilities of the gifted by directing educational influences of mainstream education towards the stimulation of the gifted. The below listed efficient educational programmes for the gifted have been often cited by the literature:

- method of creative problem solving developed by Parnes (1977); Sidney J.Parnes was the founder of the foundation for creative education; he studied the way of developing educational programmes that would support children facing learning difficulties and would develop creative thinking; he also supported the necessity of implementing differentiated curriculum;
- Renzulli’s Enrichment Triad Model, 1977, 1985. Joseph S.Renzulli develops a programme for the education of the gifted based on differentiated learning experiences, which contains: group training activities, general exploratory activities, individual or small group investigation activities;
- Calvin W.Taylor’s Multiple Talent Model (1978); Taylor develops a theory (based on Guilford’s structure of intelligence) on the stimulation and development of multiple creative talents through optimal educational tools. He supports the idea that every individual has a specific talent. Therefore, he highlights the idea that more than 10% of the gifted can be discovered beyond evaluation with intelligence tests, if other aspects are also taken into consideration. He suggests 9 areas such as: academic results, productive thinking, communication, products, decisions, application, relations, judgement. He also supports the idea that if the students’ motivation for learning is stimulated, they will develop their potential abilities more intensely;
- the acceleration programme from John Hopkins University (Stanley, 1980). This programme contains several acceleration ways: earlier admission to schools than the normal age, skipping one or two grades, accelerated study of certain school subjects, study in parallel classes (a child can attend 2nd grade for certain subjects and 4th grade for others), placing the
child/pupil in classes with children of the same intellectual level, participation in special training programmes etc.;

- Tannenbaum’s Enrichment Matrix (1983). Abraham J. Tannenbaum studied the ways of improving the education of the gifted with motor disabilities, of those with poor school results, of children coming from different cultural backgrounds. He published his findings in 1983 in his book: Psychological and Educational Perspectives. He insists on the idea of creating special classrooms for the gifted;
- D. Cox’s Pyramid Plan (1985). Cox’s Model for gifted children aims the analysis and assessment of pupils’ results based on homework given by teachers or freely chosen by pupils; analysis and comparison of grades in different subjects of study; psychological tests for highlighting different structural components (spatial perception, chromatic discrimination, observation, spatial and flat representation, labyrinth type evidence, tracing lines, scoring, etc.);
- the model of autonomous pupil created by G. Betts (1985). Each pupil should benefit from a different approach according to his individual profile. Distinctive programmes need to be created based on the child’s profile;
- Integrative educational model created by S. Kaplan (1986) (according to Stănescu, 2002, p. 69-95). He is also a supporter of differentiated learning for the gifted by using a flexible curriculum, grouping children according to their abilities and skills in homogenous classrooms or groups;
- Purdue Programme created by John F. Feldhusen is a programme dedicated to the development of creative thinking and its four qualities: flexibility, fluency, originality and elaboration.

Ways of educating children who are capable of high performance can be classified according to:

- orientation towards a definition or more definitions of giftedness;
- orientation towards hypothesis;
- ideological orientation or educational policy.

The education of the gifted involves special educational programmes, sometimes special classrooms, extra classes, specially trained teachers for the work with the gifted and other economic-financial aspects. All these aspects needed in the education of the gifted are socially justified by the contribution of these children in the future of the society. Then we will be able to state that beneficiaries, both the individual who revalues the social offer but also the society which benefits from future retroaction. More and more emphasis is placed on creating special conditions for the development of these exceptional children (Hargrove 2005). Researchers and practice have proven that regular school programmes and mainstream education cannot maximize the individual potential of the gifted. They have to be encouraged and supported by specialized and different institutions (Borland, 1986).

I.3. Adapting the school curriculum to the gifted

The curriculum used by educational policies is deficient in providing real support for the gifted, though it is an important element in planning education.

Therefore, world literature talks about a differentiated curriculum as means of adapting objectives, contents, teaching, learning and assessment strategies to the abilities at cognitive, affective and motor level and to the pace and learning style of gifted youth capable of high performance. (Beyer, B. K. 2008).
It is necessary to use a different curriculum than the one offered by the syllabus in the education process of the gifted. It should be adapted to the superior receptiveness of these children, enriched and differentiated in their fields of interest so as to meet the knowledge needs of the gifted. A special curriculum gives the gifted the opportunity to assimilate contents which fulfill their exceptional cognitive abilities. Thus they will to school performance according to their possibilities, will enrich their skills, develop specific behaviour, practice high abilities and develop competences required by performance in their fields of interest. If given the opportunity to select their own curricular path, the subject matters for which they show abilities, the gifted will access rapidly and easily knowledge in their field of interest and will train and develop their creative abilities in a manner that eases access to excellence and fulfilment.

A method with excellent results frequently used in the education of the gifted is mentoring. The gifted is placed in the educational care of a mentor who helps and counsels him in finding the true calling. Thus, the gifted benefits from programmes of improving personal achievements, supplementary and individualized lessons and also from extended areas of interest under the guidance and watch of a person with training in that field of interest. In a “normal” classroom, teachers make a distinction between very good, good and less good children and they have to adapt their teaching to these levels. When teachers know their class very well, they can plan the teaching activities in a differentiated manner. The class can be divided in value groups, give less information to the less receptive and gifted children and advanced knowledge to the very good children. The differentiation strategies are part of the teacher’s style and manner of organizing teaching activities. The following procedures can be used with exceptional children:

- selection of curricular sequences according to the abilities of the gifted;
- extension of the complexity of actions, in depth exploration of concepts and their use in new situations/problems;
- planning cross-curricular activities which encourage children to overcome the regular curriculum boundaries, to solve real life problems or problems with social relevance;
- accelerating the assimilation of contents in their own pace, skipping redundant or unimportant information;

An aspect that needs to be taken into consideration, refers to children with high abilities in a field but whose school results are not outstanding. They either don’t have the patience to follow the teachers’ explanations, make elementary errors due to discontinuous learning or they cannot transfer knowledge to related fields. Most of them avoid new tasks, don’t take risks to avoid failure because the skills and strategies required by the overcoming of these problems have been wrongly developed: reading, writing, calculating. They don’t know where and how to search for information in a book or in the library and don’t own strategies of problem solving. They often show disability in social situations because they don’t trust themselves, they lack confidence, show physical clumsiness in games or in finding practical solutions for technical problems. Teachers use strategies provided by differentiated work and try to fill in these gaps, develop skills and correct the wrongly developed abilities. Some gifted children cannot fit in mainstream education because of their unique personality. Therefore, other ways of school education are needed. Abroad, these children have the opportunity to attend special school, skip a class or two and even have home schooling. There are cases of gifted children who have not attended “regular” schools. The gifted can often not be distinguished from other children in school; on the contrary, their school results might be mediocre. Giftedness is not always visible; it isn’t “transparent”. It cannot be always noticed in the first school years because it can develop by a specialized education, by developing cognitive interests and special abilities. Mostly, the
gifted can be identified among children with average results. Therefore, school and teachers have to duty to facilitate and develop a learning climate where the gifted can be stimulated to develop their abilities, talents and giftedness. Cognitive stimulation and affective-emotional support of children with high intellectual potential and abilities should take place in the classroom. This type of training requires other types of school organization and other ways of curricular implementation.

I.4. Organization of classrooms and groups for the gifted

The modern educational system carefully considers the way classes and groups are organized. The way teachers plan their schedule is very important and so are the group division in a classroom, the teaching of contents, teaching materials, the way they blend teaching methods, the way the present the teaching units and the assessment. They all are attempts to answer the question: “how to organize a numerous class so as to treat each child individually in order to fully activate its potential”. Teachers should be taken into consideration some measures if they want to achieve good results in the activity with the gifted:
  • grouping pupils according to their performance level, intellectual level, mutual abilities and preferences, similar development level;
  • careful consideration of the schedule, adaptation to the children’s needs in general and especially of the gifted because they have to work in their own pace to have the feeling of continuity in learning and of cognitive accumulation;
  • flexible arrangement of furniture so as not to restrict the possibilities to group children on centres of interest and also enable their access to classroom resources (maps, books, dictionaries, atlases, encyclopaedia, computer);
  • freedom of movement encourages children to take responsibility for their own learning; it teaches them how to use the resources available in the classroom and to work in a pleasant atmosphere along with the others.

All these organizational aspects provide the gifted with the opportunity to benefit from individualised training and cognitive stimulation, even if education takes place in mass schools.

I.5. Learning strategies for an active and creative pedagogy

Economic-financial restraints and even the educational policies do not allow the establishment of special classes for the gifted. These classes require special and specialized conditions from the very beginning. The classes from mainstream education can create a favourable climate for the education of the gifted. One of the conditions focuses on the adaptation of teaching strategies. The teaching strategies used in the education of the gifted are more varied and differentiated than they seem at a first glance. Even though these children have the ability to understand and memorize easily the information, process knowledge more rapidly, they are not all autonomous learners with optimal and fully developed learning strategies.

Therefore, it is important that teachers take into account the following aspects when planning their educational strategies for the stimulation of pupils’ abilities who are capable of high performance (Renzulli și Reis, 1985):
  • cognitive and continuous development;
  • permanent affective-emotional support;
  • development of efficient learning skills;
• development of research abilities and use of reference materials;
• development of communication abilities through oral, written and visual forms.

Teachers can select more strategies to teach the contents but they must be aware that certain abilities and skills are developed only by blending more strategies.

1.5.1. Active learning for the gifted

Modern pedagogy sets active learning as a modern educational paradigm. It facilitates the shift from teaching centred methods to learning centred ones. An activating methodology places the pupils and their learning activities in the centre and it guides the entire educational process taking into account the pupils' interests. The teacher is no longer concerned with the methods of teaching the contents but with the manner of facilitating the pupils' acquisition of notions and development of skills. Teaching changes into learning and the teacher focuses on the development of autonomous learning skills and skills that stimulate continuous learning abilities. Pupils also develop work and problem solving abilities along with other team members – team work abilities. Student centred methods involve the individual in the assessment of his learning process and in setting future objectives of his own development. The advantages of student centred methods are mainly connected to their formative role in the children’s preparation for perseverant, thorough and permanent learning.

Active learning must contain new knowledge processing activities to be efficient for the gifted. Students have to know how to link what they already know to what they learn. Tasks must be authentic, connected to real life and set in a significant context. They shouldn't involve the mere repetition of things because it leads to superficial learning. Moreover, the tasks should be selected to permit self-assessment, correction and discussions with their classmates in order to get the teacher's reaction. These tasks and questions require critical thinking and processing of information through analysis-synthesis and assessment processes:

• analysis: "why" questions;
• synthesis: "how", "could you" questions;
• assessment: judgement questions.

These types of questions, called superior rank questions, require the gifted to make their own conceptions on the assimilated information.

1.5.2. Creative learning adapted for the gifted

The efficiency of teachers' classroom activities can be interpreted as a balance between obtained results and available resources. It is important to identify “hidden”, potential resources, which are too little exploited by teachers. Teachers need to approach classroom management strategies if they want to increase the efficiency of the educational process with the gifted. They have to fully make use of all available resources.

If teachers want to achieve good results with the gifted and involve them in creative activities, they have to implement strategies in key domains which influence the learners' motivation:

• stimulating learning environment;
• active involvement of all students;
• feedback on their level of performance.

Stimulation suggestions for the activity with the gifted can be a good start in conducting teaching activities in optimal, cooperation conditions based on mutual respect.
Horizontal enrichment involves giving more material with the same level of difficulty to a child who has completed his tasks before other classmates. Vertical enrichment refers to giving more complicated materials, anticipating future lessons. Both procedures have also risks: horizontal enrichment might bore children and make them loose their interest; overused vertical enrichment can bring about disequilibrium in teaching. One of the most efficient activities with the gifted involves a mutual decision upon an individual topic of study. The topics should cover the children’s areas of interest. They mustn’t be compulsory; otherwise children feel compelled and lose their motivation. Another creative manner to stimulate the abilities of the gifted is their orientation towards reading. Certain specialists recommend the reading of biographies and autobiographies of celebrities as they may find them inspiring.

Each child is interested in a certain field, passionate about an activity, therefore the stimulation of hobbies is recommended by specialists.

If a child is particularly interested in poetry, mathematics or informatics, he should be encouraged to develop in this direction. Educational factors are those which encourage the children’s students orientations and will guide them in accessing information and documentation work. If their interest is real and they feel encouraged, their learning motivation reaches new quality adaptations. As they grow older, children are encouraged to attend scientific and creation contests, where their effort is rewarded and they get a real feedback.

1.5.3. Differentiated training of the gifted

Another method of optimal educational intervention is individualized training. This strategy emerges from the sine qua non concept that each child is unique, non-recurring, with specific skills and abilities and therefore needs individualized training. Each gifted must benefit from personal education and training. When gifted children are offered an educational programme structured according to their personality and they benefit from support given by educational factors such as: family, school and society, they will develop their personal skills and abilities. The educational path of the gifted requires personalized and differentiated training. The educator, teacher will plan the educational-instructive path of the gifted, considering the following parameters:

- individual and age characteristics of the gifted;
- the areas of interest;
- the fields they show abilities and talents in;
- permanent counselling of the gifted;
- keeping close touch to the family.

These minimal requirements ensure:

- individual development (children/pupils acquire concepts, notions, make judgements, develop abilities for permanent learning);
- taking part in knowledge enrichment activities (children/pupils explore extracurricular areas, become aware of numerous sources of information that they can use in various situations);
- thorough studies (children/pupils have the opportunity to focus on a topic of their interest for a longer period of time; more time is required for investigations and research as well as for writing the paper).

These strategies can be used at all educational levels with gifted children. At higher levels (secondary and high-school education), students are stimulated to allot weekly supplementary time for activities, while they are exempted from unimportant school obligations.
II. Institutional strategies for gifted children

II.1. Excellence centres for gifted children

Special instruction centres are very useful because they use specific training strategies for the gifted and talented children. These centres have a network of fields of study structured on scientific areas, art school, all oriented towards performance. They are pilot centres which select children from the mainstream education by using special methodologies for the identification of the gifted and talented and apply educational strategies specific for the activity of these centres.

The general objectives of these centres are:
• providing educational facilities for children with high abilities and performance;
• providing training according to the personality of the gifted, their intellectual development and creative expression, their specific needs of social and professional integration;
• ensuring conditions and procedures to adopt individualized training paths, a flexible programme which includes their own research and a system of transferable credits.

Curricular development takes place from preschool to post-graduate studies in these centres. It focuses on schooling categories, favouring training and education of the gifted according to their intellectual level and psychological maturity; the criterion of chronological age is on a secondary position.

The centres have programmes of fundamental or applied research, of creativity which are compulsory for the teaching staff and the students. They also benefit from educational programmes with alternative curricular offers or other educational products which will be offered to the educational system or to the educational market. They focus on the following activities:
• selection of gifted and talented children;
• selection of teaching staff trained for the education of the gifted and talented;
• development of educational programmes supported by grants;
• training of teaching staff for the work with the gifted;
• planning educational programmes adapted for the gifted.

Excellency centres collaborate with the Ministry of Education, The Institute for Educational Research, The National Excellency Centre, national NGOs and NGOs from abroad, other international research centres, international organizations in the field, national and international universities, scientists and men on culture from homeland and abroad.

To conclude, we can state that when the gifted benefit from education in their field of ability and when they are closely guided by dedicated teachers, they can develop their performance and abilities to an outstanding level.

II.2. Educational strategies for the gifted capable of higher performance in extracurricular contexts

Present educational policy encourages and develops educational opportunities for the gifted. These policies stimulate their intellectual potential, their talent and creative abilities to reach a higher level of development.

A method considered worldwide is study acceleration. Acceleration is a strategy that optimizes instruction and education of the gifted according to their own development abilities, namely they go through the curriculum faster than other children. This strategy can be reached by:
• starting school earlier. This thing can be achieved in kindergartens, 1st grade, high school, university;
• transition from one class to another more rapidly by covering the curriculum in an accelerated pace;
• setting up study groups with children of different ages but similar intellectual level; this type of organization is practiced during extracurricular activities in children’s clubs, scientific and artistic workshops;
• designing a special curriculum, differentiated on levels of intellectual development or subjects of study; it uses tutoring or mentoring, which are mostly used in Romania with participants in the school Olympics.

All school subjects can be covered in a vertically accelerated pace or in cross-curricular activities, if teachers use an efficient methodology. Irrespective of the chosen acceleration strategy, it is important that the result is a blending between children’s availability, the ways of learning, the opportunity of learning methods chosen to cover rapidly school stages (Boden McGill, J., Carrie Kathleen P. King, 2013).

It is necessary for the gifted to be able to select an alternative education according to their abilities. It matches the acquisition desires to their intellectual development, without encouraging frustrations which occur in standard educational environment. Schools also benefit from these programme of acceleration because they give the gifted the opportunity to stimulate their innate potential. Research conducted after using acceleration strategies revealed positive effects for the gifted. They are visible in learning opportunities adapted to the intellectual level of the gifted, their interests, exceptional abilities, their personality and pace of learning. It has been proven that people with high skills have evolved better when using a curriculum adapted to their needs than with a classicalone, which is too boring for them.

Mainstream schools cannot foresee in their curriculum and regular timetable all the needs of gifted and talented children. Maybe more than other children, the talented and the gifted experience moments when they can’t handle things on their own and need special encouragement. In 1985, Bloom noticed that if an individual’s initial skills and exceptional characteristics are neglected, he will never achieve the most of the potential and abilities without an intensive and long process of education, training and stimulation. Consequently, special programmes are needed in and outside school. Efficient time management outside classroom is very important. Extracurricular activities can be a source of efficient alternatives for the stimulation and orientation of the gifted. Children’s clubs in and outside school, children’s palaces or other institutions can develop attractive activities where gifted and talented children find the right place for the development of their abilities. Certain institutions could develop talent identification and selection programmes using the handiest methods:

a) to create a sort of “arena” where talented children perform one or more task and their performances can be considered superior if they pass a certain scale or criterion according to a definition accepted by the jury;

b) a psychometrical evaluation of those highly capable through standardized tests, considered valid predictors of giftedness.

The first manner highlights some of the special needs that cannot be fulfilled in normal classrooms. Even when there are programmes for selected groups, labs or special classes, not all the gifted can benefit from them, as not all of their needs can be satisfied.

Educational extracurricular activities such as: Saturday schools, summer schools, activities organized by the school after classes complement the educational experiences of the gifted.
These supporting extracurricular activities for the talented and the gifted should take into consideration some aspects:

- incite and stimulate curiosity, determining them to search for information from more easily accessible sources;
- offer a wide range of options which engage students in learning activities: workshops, courses, special programmes and competitions;
- different difficulty levels for activities according to the intellectual level and abilities, so that each child to be properly stimulated and to make an effort in achieving his goal;
- reward the children’s achievements through attractive and stimulating activities and give them feedback through the possibility of having their achievements acknowledged and being successful;
- counsel children and parents and receive pertinent information on the existing programmes;
- stimulate the cooperation between children/teenagers with access to experiences and social contacts; it is beneficial for the socializing activities of the gifted and for their social responsibilities.

Research on the specific application for school situations have spread also towards the extracurricular ones. Children with similar concerns should be able to meet somewhere and learn together, share their passions and aspirations. Learning by cooperation is a good method for the gifted to make friends, overcome their anxieties and loneliness. Learning by cooperation developed around three concepts:

- reward for the whole team;
- individual responsibility;
- equal chances (opportunities) for each member of the team.

The reward is ensured by the success of the whole team. The team’s success depends on each member’s efficient learning; the activity is oriented towards mutual tutoring to be certain that each member of the team can face a form of assessment (grade, certificate, credit). “Equal success chances” means that children contribute to the good of the team by improving previous performance. Research has shown that rewarding the whole team and individual responsibility are essential for the development of basic self-achievement abilities. It is enough to tell children that they need to do something together and they will consider responsibly their responsibilities. The results will thus be as expected. Moreover, research has pointed out that when children are rewarded for improving their own results compared to previous, they will be more motivated than if rewarded for doing better than the others.

**Conclusions**

As stated above, orientation on the education of the gifted can refer to extracurricular activities carried out in the following directions: nurturing the abilities of the gifted through school activities such as mentoring and training in the field of their giftedness. Outside school, they should be guided by a mentor. The activities they must focus on are: individualization of the educational activity under the tutor’s coordination; stimulating the exceptional abilities through activities in children’s clubs, science and art clubs, contests and school Olympics; training of teachers who work with the gifted; permanent psychopedagogic counselling of the gifted. The children’s progress and their achievements will be monitored through observation, comparison of their academic results, results in competitions and school Olympics and stimulating interventions.
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