Identification of highly gifted children

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Abstract

We observe that lately more and more specialists focus their attention on the problematics of highly gifted children, on their identification, on finding the most adequate methods to develop their potential and on designing a proper legislation. This aspect is marked by the necessity to acknowledge and respect individual differences, based on human rights: gifted children need adequate educational opportunities to develop their inborn abilities. Identification and education of gifted children receives more and more attention from the personnel in charge, and we observe that as special place is assigned to excellence within the present educational system by developing excellence centres in several regions of the country. Implemented at the level of educational policy, the regulations well stipulated in the education are admirable. The development of educational strategies to identify and train gifted children is an imperative necessity in the pedagogy of highly gifted children.

Introduction

Brilliant intelligence is rare and human abilities to identify it are rather limited. Most of the times we are unable to recognize it, and if we do we do not know how to approach it. We are fascinated by the brilliance of the human genius but until its recognition we have to follow a difficult path, full of obstacles. It is, maybe, easier to identify talents that perform in domains such as: art, music, sport. These categories benefit from special centres, but the concerns are reduced for the rest of the gifted children, though 80% of all discoveries and scientific innovations are due to gifted and creative children.

In Romania, the concerns for the domain of intellectually gifted have developed especially after 1900 when myths and prejudices regarding the superiority of the white race have been put aside by research and studies in this area. The findings have revealed aspects regarding intellectual superiority in all human races, equally distributed for each gender. Of course, giftedness has its own, culture and tradition related characteristics. Unfortunately, after World War II and the political changes that occurred as its

consequence, we observe lower interest for the subject of giftedness, considered of elitist nature, promoting social inequality.

Nowadays, in Western Europe and the USA, concerns for the psycho pedagogy of giftedness are numerous and in Romania the interest for this domain has increased after the 90s. Since then, attempts have been made to include the category of gifted people in the object of study of special psycho pedagogy, taking into consideration their special psychological profile. As a matter of fact, in countries such as Spain and the USA, the statement *special educational needs* explicitly includes the category of gifted children in the legislation of special integrated education.

Giftedness is a delicate and interesting subject but still too little explored by the history of psycho pedagogy, due to non-inclusion of gifted children in the category of persons with special needs for a long time. Today, it is more than obvious that these children should benefit from special training programmes, adapted to their high potential, to their psychological profile. Without these facilities they can not achieve superior performances.

1. Argumentation in the initiation of gifted children identification

The problems of identifying and educating the gifted brings about debates regarding the types of giftedness, the influence of different cultural groups, the origin of giftedness, the procedures of identifying it, the efficiency of training programmes. According to research, gifted children cover between 2 and 6% of the statistic population, but this percentage can rise up to 20% if inborn intelligence, plus creativity and self-motivation are stimulated in a social and educational environment proper to the development of gifted children. We support this idea, underlining that these children can reach superior performances in the development of their own potential if they are identified soon enough and are provided with proper development conditions. According to some authors, the usefulness of research and education of the gifted can be analysed based on these three aspects: definitions, ideologies and hypothesis that allow the classification of seven problems regarding the programmes of identification and education for the gifted after their orientation:

- the level of superiority or of superior performance and the assignment of a label of gifted child;
- types of giftedness;
- the way giftedness is manifested in different cultural environments;
- the origin of giftedness;
- screening procedures of the gifted;

- the efficiency of educational programmes.

Any attempt to identify and train the gifted in a differentiated manner is improved if those involved are aware that in planing and applying the programmes prevail the aspects related to ideology, empirical obviousness, or if they are focused only on definitions. All training strategies designed for the gifted children capable of superior performances (acceleration, enrichment, grouping, school activities, outside school activities) though so different when viewing their components, teaching and learning time management, knowledge presentation, have a few common premises that refer to:

- the intellectual nature of giftedness;
- affective characteristics of giftedness;
- objectives settled by a regular curriculum;
- the ability of enriched or differentiated curriculum to fulfil the education of the gifted.

Many authors reveal in their studies the importance of early identification of gifted children in an attempt to help them understand their status, to understand that what they have is not a mistake of the nature, to make them aware that the nature of their personality has nothing weird and that they should not feel ashamed by what they are. A second argument would be the authors attempt to help them progress in their own pace in the fields they manifest giftedness, so as to achieve the performances they are capable of and to become real creators in their fields of interest. Silverman, L.K. (1983), Terman, L. M. (1981).

1.1.Identifying gifted children by the method of observation

Argument for choosing the method of observation. According to some specialists (Benito, Yolanda, 2003), preschool children and pupils possess certain hidden social and cognitive abilities that are rather difficult to identify. Therefore, more integrative methodologies are required to identify gifted children. There are gifted children in every type of culture, both genders and of different ages. Gifted children sometimes hide their abilities and refuse to obtain high scores in tests. The gifted can be emotionally extremely sensitive and therefore obtain low scores in tests. Complex identification methodologies are necessary and they should take into consideration various factors, including the academic, psychological and cognitive ones. There is a strong urge to find specific methods for identifying gifted children. A flexible identification system has to contain a multitude of factors. A rigorous identification is necessary but so is giving equal study opportunities to gifted children, without discrimination. Educational opportunities for gifted children should be offered equally to boys and girls.

The first stage in the identification work is searching the best valid selection procedures. Usually, the choice depends on the aimed educational programme but also on the experience of those involved professionally. A set of identification procedures contains: IQ measurement tests, tests for special abilities, teachers` appreciations, a portfolio of talents, observations, etc. All components can be examined empirically from the point of view of internal consistency, content validity, test – retest fidelity and empirical validity. Research points out the invalid aspects of an identification instrument (Rotaru, T., Ilu , P.,1997). For this reason, identification procedures depend on hypothesis related to the label of "gifted". Therefore, in problems related to identification several meanings are assigned to various definitions, ideological or empirical aspects being less taken into consideration. This approach clarifies the elements that represent a central interest in a position or another towards differentiated education of gifted that are ignored or neglected.

The identification of gifted or talented children is a concern that lately gained interest among researchers. Identification in practice can be made by studying some types of gifted children, different personality patterns that vary from a cognitive, ability – based and emotional point of view. The higher the giftedness is, the more emotionally asymmetric the children are, and therefore the differences are substantial. Gifted children, especially at a young age seem to possess attention and observation abilities and the level of attention and concentration evolves through the method of observation. However, identification should contain multiple procedures, various tools and methods: observations, questionnaires, lists, standard tests, meetings with parents, children and teachers, etc. Observations have to be selected according to scientific qualities, objectivity, fidelity and validity, everything based on observation grids. (Radu, I., Ionescu, M., 1987). Identification requires a multi-methodological approach.

Intellectual and personality features are observable aspects by field research, direct and systematic observation, without outside interference.

We can classify the events based on aimed behaviours as follows:

- non-verbal behaviours made up of information provided by body movements, facial expressions, gestures;

- spatial behaviours offer information about the individual`s reactions to certain concrete situations, like proximity reactions, bounding of a pupil with the other;

- extralinguistic behaviours include aspects of an individual`s peculiarities according to his voice modulation, tone, timbre, volume, etc.;

- linguistic behaviours refer to the content of oral or written message.

If these aspects are observed accurately, they will provide us information regarding certain intellectual and personality – based characteristics that will be registered according to a checklist. Observations can be made on groups of subjects, during a school semester. The time attributed to observation (F. C. Dane, 1990, apud, Boco M., 2005) will be the time assigned to formal and nonformal activities. Not all characteristics of gifted children are positive, there are also negative features. We must to identify these features too based on the method of observation and we can record them in our observation sheets. Observations will be classified into four components: non-verbal, spatial, extra linguistic and linguistic:

- stubbornness;

- the tendency to dispute authority;

- not taking part in class activities;

- lack of cooperation;

- cynicism;

- negligence and disorganization;

- emotional frustrations;

- absent-mindedness;

- weak interest for details.

The observed events will be systematically recorded in individual observation sheets belonging to each individual.

The evaluation of performed observations. The evaluation activity of observations can be done at the end of the semester through a critical attitude in perceiving the results, without improvising and misinterpreting the truth. The recordings will be written with a pencil, on the "field" and all observations will be written down even those that seem less important or less interesting. They can be very useful later on when we will analyse them based on work hypothesis. That is why observation grids will have two entries: secure and insecure information. Observations will be analysed with the aim of testing hypothesis and differentiating between necessary and sufficient causes.

The interpretation of evaluation will be done based on some criteria that take into account selection errors. These can be:

- Alfa errors or type I risks when we identify a child as possessing high abilities without actually possessing them;

- Beta errors or type II risks when a child is gifted but not identified as such.

- we also have permanently in view the following aspect: Any diagnosis at

ability level has a time limited predictability value (Carmen Crețu, 1998).

The evaluation of the degree of validity and fidelity

a) the analysis of *validity* establishes if the working strategy and the tools used, are useful for our expectations. There are the following types of validity:

- validity of content (internal) – targets the degree to which the indicators measure what is supposed to be measured;

- predictive validity (external) – has in view the degree to which the performed measurements allow the observation of relations with other measurements as well as the possibility to forecast the analysed phenomena;

- construct validity refers to the explanatory factors of a result obtained through measurement. The measure of this type of validity is given by the correlation manner between the studied variables.

b) the *fidelity* analysis has in view the trust and stability degree of the work tools. The fidelity degree is given by the extend to which we succeed in obtaining true values by the undergone measurements.

Observation, as primary method of collecting data regarding human behaviour, is the most adequate method of identifying gifted children, especially in early ages. It allows collecting data in different moments of a day, the observation of child behaviour at different activities, his interest for certain areas, everything in real-life situations. Collecting data, comparing the ones that repeat frequently can lead to certain conclusions regarding the degree of giftedness, of the area where his abilities occur, the age level where the child is placed and the way s/he reacts from an emotional point of view. Another advantage of observation is that it can be carried out without making the observed person aware of the fact that s/he is being observed. Observations collected in this manner can be compared with other methods of identification, with data collected through teacher, parents or other family members addressed questionnaires or with questionnaires addressed to the child himself.

Many authors think that natural observation is one of the most adequate methods of studying human behaviour. (Louis Cohen, Lawrence Manion and Keith Morrison, 2007)

1.2. Testings

The tests will follow a few regulations. Firstly, we will use standardized tests that follow validity norms such as: a standard set of items applied to all children, standard application rules and evaluation procedures. Following these rules allows us to compare individual results with target group results, in our case, gifted children. Below, we

present the tests we have used in our study:

- *Domino 70* Test that properly highlights the *g* factor (Spearman). From a conceptual and correlational point of view it results a strong saturation of *g* factor, as: 0,86- g factor; 0,9 – k factor k (perceptive spatial variation); 0,04 - n factor (numeric).

- *H.P.* Test. This test is applicable for the age group of 9-25, it consists of 60 items that contain aspects related to mathematical intelligence as arithmetical argument, to linguistics and vocabulary, to logics by analogy making, to succession grasping, focus ability, differentiation between essential and inessential.

- *H.S.P.Q.* Test, according to the test manual it is applicable to the age group 12-18 and investigates 14 personality factors that are in direct relationship with success/ interest for school and sport activities, leadership and school adjustment.

- *Woodworth –Mathews* Test can be used to determine the degree of school and social adaptability of the subjects as well as to determine certain differentiating aspects of their personality. This test has been standardized on a normative population of over 2000 subjects and is one of the most frequently used questionnaires of adaptation. It aims at highlighting the adaptation difficulties in different areas of human activity and grasps the differentiating aspects of a person`s adaptation.

- We consider as useful the usage of sociometrical tests and demonstrations because these respond to our selection criteria. They offer us the possibility to observe group relations, child behaviour, as well as indexes to reveal possible hetero - chronic aspects of development between intelligence and adaptation conditions.

- Another test is the *Brumbaugh & Rosho Guide to Identify Gifted Children* (1959) – that is addressed to both parents and teachers.

- *Diana Test, a creativity test[1]*. The creativity test for preschool children consists of drawing as many figures as possible starting from a circle and a square. Each child gets o sheet of paper with several identical squares drawn on it and another sheet of paper with several equal circles.

Instructions. Preschool children are instructed to draw as many images as possible starting from the squares and circles on those two sheets of paper. There is no time limit for this activity.

Evaluation. Children that draw the most figures, images on the test sheet and those that show creativity in drawing are considered highly creative. A ranking of figures and images drawn by the children can be made in order to see which category is the most frequent:

(1) Figures created staring from a CIRCLE:

- Human physiognomies (F): 18 figures.(child, human, human face, the face of a human, Indian, girl)

- Toys (J): 8 figures.(balls, balloon, robot)

- Animals (A): 2 figures.(rabbit, bear)

- Plants (P): 10 figures.(tree, flower, apple)

- Means of transportation (T): 3 figures(tank, bicycle)

- Constructions (C): 15 figures.(snowman)

- Heavenly bodies (Cc): 7 figures.(planet, sun, globe)

- Other objects (Ao): 5 figures.(traffic light, painting, flag, island)

(2) Figures created staring from a SQUARE

- Human physiognomies (F): 2 figures. (human)

- Toys (J): 15 figures. (robot, toy)

- Animals (A): no figures.

- Plants (P): 6 figures. (flower, tree)

- Means of transportation (T): no figures

- Constructions (C): 34 figures. (house, wardrobe, chair, television, computer, dog house, window)

- Heavenly bodies (C): 1 figure (smoke)

- Other object (Ao): 11 figures (flag, alien, abacus, present, ice-cream, painting, cobweb, sock)

Test-based selection implies the acceptance of certain truths by the whole educational community. These refer to:

- the existence of a threshold value that differentiates gifted children from non-gifted. The value can be the value of an IQ measurement test equal to 130, a maximum score in a math or foreign language test, or the child can be nominated by the teacher;

- the test or the process of selection can certainly discriminate the gifted from the non-gifted based on a valid criterion;

- the test is not influenced nor favours one group or the other;

- most capable pupils can be identified through this testing or selection process.

1.3. Nomination made by the parents

We consider that in early age parents or legal guardians are the first one that get to know the development level of the children and to ascertain specific aspects that differentiate children. They are the first ones to observe aspects different from those manifested in the classroom. At home, children have a different behaviour, motivations are different, the interests are different, the attitude differs in a secure environment like the one at home, and therefore special abilities can easily be observed. Thus, we will rely on data provided by parents within the identification process. These data have been collected in interviews that contain relevant questions regarding exceptional development of children in different directions such as:

- precocious reading skills;

- special linguistic abilities;

- advanced thinking;

- intellectual curiosity.

These aspects may or may not be relevant in the identification process of a gifted child, because parents have the tendency to be subjective and lack realism when they compare their child`s performance with other children` performances. Therefore we have related each item – by parent or teacher – to the assessed child/pupil trying to identify the *intensity, frequency and the degree of adequacy* of the characteristics based on the identification scale.

1.4. Nomination made by the teachers

This method represents an accepted way to identify gifted children of all ages. It focuses on observing behaviour and characteristics typical for children of a certain age. The teacher observes the child in different states while being in school. The teacher uses various means of thorough observation, such as: spontaneous observations, systematic observations recorded in checklists, the analysis and study of school results, of school portfolios. Outstanding aspects observed through this methos can confirm the presence of a gifted child among other children. Teacher`s checklist should contain the following directions of identification:

- outstanding learning characteristics;

- strong motivation;

- leadership;

- highly creative thinking;

- eagerness for knowledge and information;

- constancy of these abilities;

- self-determination.

In order to possess information as real as possible, we will use multi-factor identification items. Teachers` observations will be done based on these items.

A child that possesses all these characteristics is considered a gifted child and s/he should be put under a close observation.

1.5. Nominations made by classmates

In the first identification stage *(screening)* of children with high abilities, there are used teachers, parents, classmates nomination procedures, even self – nomination. Nominations made by classmates are viable due to the fact that children have a developed spirit of justice and honesty, therefore their observations are considered just and relevant. One of the most appreciated classmates` nomination procedures is *Tracking Talents,* designed by the Canadian professor Françoys Gagné. The questionnaire presents 42 psycho-bevahioural prototypes, grouped in 9 ability categories (intellectual abilities, creative, socio-affective, physical, academic, technical skills, artistic skills, interpersonal skills, inferior achievements/success). The classmates are required to fill in the questionnaire, nominating four classmates, in order of their preferences that they consider the most appropriate for the position described by the prototype.

1.6. The analysis of school scores

The procedure of school score analysis may or may not be relevant in the attempt to identify gifted children. Specialists argue that most of the times, school scores do not fully reflect the exceptional abilities of gifted children, yet it is good not to give up on this procedures, if it is used cautiously. School scores can be analysed as a whole or each school subject separately.

Conclusions

We consider that in the attempt to identify gifted children, the most efficient procedures are the ones mentioned above: observations, nominations made by parents and teachers, IQ evaluation through tests and standardized/nonstandardized methods, analysis of school scores, nominations and denominations made by pupils.

In the identification process of gifted children it is proper to focus especially on

those markers that allow us to make a multifactor identification, as honest as possible. Therefore, we consider that mingling different procedures and techniques, namely using a wide variety of items, we will succeed to achieve our goals.

It is necessary to use a target group consisting of enough members, so as to be representative for the identification of gifted children.

The results of the application of identification strategies must reveal objective and clear information on the following dimensions:

- the distribution of scores in the H.P. intelligence test
- the results of applying the *Domino 70* intelligence test
- the results of applying the creativity test.
- Bravais-Pearson and Spearman correlations between the intelligence tests.
- the results of applying the *H.S.P.Q.* test and the sociometric test.
- the distribution on standard grades of QI_2 factor in pupils with medium QI,gifted children.
- results obtained at non-tests.

All results are necessary if we want to identify gifted children in order to train them properly. This educational intervention should start at an early age, so as not to waste the inborn potential of the gifted. The sooner the interventions start, the more satisfactory the results in the evolution of gifted children will be. It is a matter of moral conscience, to interfere with the best methods, in the identification and education of gifted children.

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Notes

1   This test is a personal contribution and was designed taking into account the characteristics of the group of children that were subjected to testing, namely children from Arad, and according to their special abilities.

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