

Opportunities and limits for identification and development of gifted pupils

Markéta Janíková¹, Petra Kowaliková²

Abstract

The aim of the paper is to analyse the opportunities and limits of support of talented students in the context of institutional education in the Czech Republic. The theoretical backgrounds of the contribution are based on the psychological and sociological interpretation and the legislative definition of the talents, the summation of the socio-cultural, political and economic conditions of its development. The research findings are based on the results of the long-term cooperation of the VSB – Technical University of Ostrava, selected secondary schools and pedagogical-psychological counseling centers in the Czech Republic on identification and development of talented students within the project Development of advisory services for extremely talented secondary school students with special educational needs. The research results are illustrated with examples of good practice.

Keywords:

education system
secondary and tertiary education
talents
pupils with special needs
examples of good practice

1 Introduction

Scholarship structure in the Czech society has significantly changed during last twenty years. A number of individuals with basic education and with vocational certificate has decreased, whereas a number of university students has increased for 134% and there is three times more women with university degree than in 1995. Whereas in the ninetieth there were limited opportunities to study at university, present university capacities allow studies to a large group of the young population. (ČSÚ 2016)

The educational system has opened to quantitative growth due to democratization as well as demographic processes. Nowadays, 60% of secondary school graduates enter universities. By a simple comparison of this part with a normal IQ distribution within population, we can find out that the tertiary grade of the system must satisfy educational needs with significantly diverse dispositions in an appropriate way. Of course, on lower levels of the educational system this problem is even more significant. At the same time, the intelligence quotient is only one of many dispositions determining uniqueness and distinction of each and single pupil and student. Nowadays, the attention is focused on pupils and students with specific educational needs in terms of reduction of their handicap within the system of formal education. On the other hand, this paper targets exceptionally talented pupils and students also requiring special attention in order for them to develop their potential to the full. Frustration from unfulfilled educational needs of talented children transfers to adulthood and carries many problems in terms of professional self-actualization as well as mental health and personal peace. Wasted talent and professional as well as social employability mismatched with such adults' abilities means a significant loss for the society as a whole as well.

¹VSB – Technical University of Ostrava, 17. listopadu 15/2172, 708 33 Ostrava – Poruba, Czech Republic
Corresponding author. E-mail: marketa.janikova@vsb.cz

²VSB – Technical University of Ostrava, 17. listopadu 15/2172, 708 33 Ostrava – Poruba, Czech Republic

2 Gift

Gift is defined as “a high level of abilities”, i.e. a possibility to deliver high performance in any valuable area of human action. Talent is determined as a specific gift in connection with music, arts, sport or science etc. Gifted individuals are characteristic of extensive knowledge, good memory, speed of thought process, knowledge of work procedures, flexibility in thinking, preferring creative ways of problem solution. (Renzulli, Reisová, Montgomeryová, Jurášková 2008)

According to Renzulli’s model of three circles (1978), gift develops from extraordinary abilities, creativity and concern for a task. He indicates the intersection point of these three areas as gift (Fig. 1).

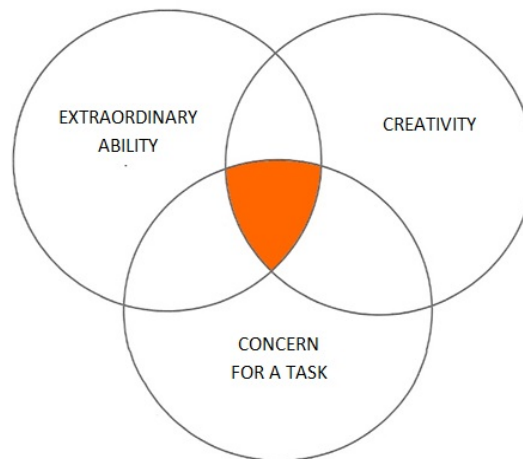


Fig. 1: The model of three circles (Renzulli, Reisová, Montgomeryová, Jurášková 2008, 33)

In case of extraordinary abilities, Renzulli distinguishes between general abilities (high level of abstract thinking, verbal and numerical thinking, spatial relationships, memory and verbal fluency) and specific abilities (application of various combinations of general abilities into specialized areas of knowledge or human performance). Concern for a task means a high level of interest, enthusiasm, engagement in certain area of studies as well as ability to persist, work and develop oneself. Creativity related to gift means fluency, flexibility, originality, openness to new things, unusual ways of problem solution etc. (Renzulli, Reisová, Montgomeryová, Jurášková 2008)

2.1 Identification of the gifted individuals

We can distinguish three main approaches within studies of gift: cognitive, personally developmental and socially cultural. (Hřibková, 2009) The cognitive approach is oriented on cognitive abilities and intelligence. In the centre of attention, there is a way the person learns, works with information and solves problems. For example, we know the hypothesis about faster cognitive development of girls contrary to boys (probably firstly formulated based on results of the longitudinal research carried out by L.M. Terman in 1925). Then, there are Herman Ruppell’s theses (1976) QI instead of IQ (quality of information processing instead of the intelligence quotient) or the hierarchical three-layer model by J.B. Carrol (1963) based on division of abilities into general, fluid and crystalized, specific. The development of personally developmental approach is connected with indefensibility of conception of gift as a high level of intelligence based on innateness, start of research of creativity and development of humanistic psychology. We would like to answer the question what personal characteristics influence delivering of exceptional performance. Moreover, why are they essential for the individual to reach above-average outcome. We have mentioned the model of gift by J. S. Renzulli (1978) based on interaction of three groups of characteristics: extraordinary abilities, creativity and concern for a task. F. J. Mönks (2000) later extended Renzulli’s model and put components into relation to social environment. In this case, three socialization factors influencing development of gift are the family, the school and the group of peers.

The last social-cultural approach puts development of gifts and special talents in relation to sociocultural environment into the centre of research. There is a shift from descriptive to developmental conception. It draws from the thesis that individuals develop skills and abilities in areas that are appreciated by the particular cultural environment. It is also important what activities are practised in the particular culture. The individuals will then manifest their gift. It is worth mention Gardner's (1999) typology of seven intelligences (language, logical-mathematical, spacious, physical-active, musical, interpersonal and intrapersonal) or A. J. Tannenbaum's psychosocial approach. (např. Hříbková, 2009) Various authors put emphasis on various aspects of gift, however majority of them finds agreement that timely identification of gift and further targeted and systematic support of the gifted individual are crucial.

The process of gift identification is a selection of individuals showing a high potential in chosen and monitored characteristics. The aim is to detect and confirm their gift and consequently find a suitable way and style of education and overall development. The identification is a complete and differentiated process – there are different ways for detection of gift among preschool children and school youth or adult individuals. Psychologists are mostly involved within the identification process among small children. The identification process among older children mostly involves pedagogues, special pedagogues and psychologists as well. (Hříbková 2009; Fořtíková 2009) The identification process is composed of two parts: nomination (eventually subjective) and diagnostic (eventually objective). Pedagogues, parents or psychologists who pre-identify children as gifted mostly play the leading part within the nomination phase. The second phase is held by specialists within the area and gift is diagnosed by means of objective pedagogical and psychological methods. Subjective methods include the following (Fořtík, Fořtíková 2007; Fořtíková 2009; Hříbková 2009): nomination by a group of teachers, nomination by schoolmates, parent nomination and auto-nomination, evaluation of results from activities (products) and involvement into competitions.

Objective methods are based on scientific psychological and pedagogical methods, among the most frequent belong: intelligence tests, performance tests, creativity tests and didactical tests. However, the didactical tests are mainly used abroad. Simple identification without subsequent care would not make a sense. Possibilities and limits for support of the gifted are significantly influenced by socio-cultural, political and economic environment. Factors like legislative determination of the gift subject, educational politics of the state and institutions providing education and related amount of financial resources designed for education and development, importance attributed to education and gift within society. On the subjective level, the most important is motivation of gifted students, parents and pedagogues to do something more than common activities.

2.2 Reverse side of gift

Most children with exceptional disposition of gift experience reverse side of gift, i.e. difficulties in main abilities that are important for social incorporation and interaction. One fifth of strongly gifted children (with IQ 160 and higher) deals with emotional and social problems, which are on a general level experienced only by one tenth of the overall population. There is partly direct proportion between the range of gift and the above mentioned type of problems because the gifted children with specific talent with IQ in the range from 125 to 145 handle social adaptation better and they encounter emotional problems less frequently. (Rajovic, 2009)

A concern of this group of children for social communication and integration into the group of peers encounters their exceptional cognitive abilities as well as moral-volitional characteristics. The gifted children are frustrated by slow pace of the class or its insufficient progress. They refuse routine and predictable work, they require detail answers to difficult questions, they accept work assignment and orders with difficulties, they yield to dreams, they assert themselves in class discussions at the expense of others, they can be imperious to classmates as well as to teachers, they are perfectionists intolerant to their and others' imperfections. They are oversensitive, they cannot handle criticism well, they incline to strong emotional reactions, they refuse to conform or cooperate, they disturb schoolmates etc. (Winebrennerová, 2004)

In comparison with their peers, the gifted children manage learning faster and by means of different methods, they show creativity and self-discipline, they can experience troubles with social conformity and with respecting formal as well as parent authority and with conforming to social conventions. They encounter misunderstanding from peers who do not understand their abstract thinking and unconventional interests. Misunderstanding comes from teachers on whom they impose special requirements not only for their scientific knowledge but also for their pedagogical abilities and skills, as they require special attention as well as specific attitude. Everyday interaction with gifted children can be difficult even for parents as they children are able to detect their insufficiencies, unacquaintance or inconsistency very quickly. (Rajovic, 2009)

On the level of the educational system, the gifted children need adequate stimulation, i.e. already in the pre-school period a necessity to secure incentive environment enabling them to demonstrate their gift even if it was hidden up to that time. Another must is an adequate curriculum with a flexible time schedule reflecting specifics of individual children in terms of their abilities and interests as well as in terms of their attitude to education and authorities. As the gifted children usually express lower level of conformity and conventionality, the important role is played also by a need or possibility of non-authoritative communication rather on a partnership level that can make it easier for these children to for example handle criticism that is usually more difficult for them. It is connected with a need for adequate social environment, open communication and mutual respect. Individual attitude should be a matter of fact - not only in a relationship with the gifted children. It is not possible to approach these children as a homogenous group due to a different kind of gift, specifically exceptional abilities as well as special structure of personality. (Jurášková, 2003; Hříbková, 2009)

Abilities that are more outstanding are usually connected with more outstanding particularities as well as eventual resistance towards classical educational systems. Longitudinal studies show that frustration from unfulfilled social and educational needs can lead to resignation of these children to education and further development of their talent or even to pathological symptoms, asocial and deviant behaviour in adulthood.

2.3 Gifted children and gifted adults

The laic idea about obvious connection between gift and excellent school, respectively study results is attacked by the research by Anne Favier-Townsend (2014) that focuses on perception of causes and long-term impacts of unsatisfactory study results among adults with above-average IQ. The author formulated the initial problematic situation based on her first-hand experience with her son who resigned the formal education despite his gift and above-average IQ. The main research question was then focused on the search for reasons why very gifted individuals do not reach adequate education that is equivalent to their abilities.

Among others, benefit of this study reclines upon orientation on gifted adults. Whereas there is an obvious effort to look after the gifted children in the system of the formal education, the care for the gifted adults remains aside from interest. It is possible to encounter approach that as far as children are concerned, gift represents a developmental acceleration with an assumption that a gifted child will become average disposed adult with a difference that the gifted child will reach a usual level of cognitive or other skills and abilities in adulthood sooner than his/her peers. However, the gifted adults represent the same specific and heterogeneous group as the gifted children and similarly to them they require a specific approach as it is evidenced by quoted research Favier-Townsend.

As it has been already mentioned above and as it is documented by many pedagogical publications dedicated to the question of gift, the children with exceptional abilities have specific needs and in case these are not sufficiently saturated, the children are confronted with various problems within the system of the formal education and out of it as well. The presented research documents that these problems are reflected on later decrease of academic performance too. From the methodological point of view, the research was based on combination of quantitative as well as qualitative research strategy (a technique of semi-structured questionnaire and semi-standardized individual interview) and it included 158 members of the British Mensa. Among others, both research techniques were focused on differences in experience with formal education in childhood and adulthood and on their impact on the individual's journey through life.

The respondents considered mainly the following as a cause of academic failure or a cause of inability to reach academic success accordant with exceptional abilities: non-adequate educational environment and conditions and/or non-qualified teachers (33,50% respondents). Too easy, boring, demotivating study materials and tasks (32,90%). Too easy and quick success which disabled mastering of study abilities (27,80%). Problematic family environment not supporting education and development (22,10%). Non-identified specific education needs (17,80%) and socio-economic conditions (15,70%). School and education did not make sense (15,70%). Personal characteristics such as laziness, anxiety and lack of self-confidence (14,50%). Unsuccessful attempt for integration or chicane of the student (12,00%) or the student pretended to be stupid in order to fit into the group (12,00%) etc. (Favier-Townsend 2014, s. 149)

The study conclusions point to discovery that inborn ability demonstrated in an above average volume can change from an obvious advantage to a disadvantage during the course of time. It is mainly due to nonfulfillment of the above mentioned – and not only educational – needs of the gifted children. Insufficient intellectual, psychical, physical as well as emotional stimulation in childhood significantly influences motivation and peace of mind in adulthood. Many respondents were not able to understand their academic non-success and they were subjected to self-accusation despite obvious objective and system causes. For example,

diagnostics of disorders such as dyslexia or dyspraxia among the gifted children showed to be insufficiently articulated theme. Even though it is an evident obstacle within possibilities of gift development, these disorders were often neglected mainly because they were compensated to a certain level by gift – by high IQ in particular – so bridged over to a certain level.

On a long-term level, impossibility to satisfy specific needs of the gifted children significantly influences their psychological health and well-being as well as economic prosperity in adulthood. Insufficient development of potential within the formal education causes limited possibilities of work placement below the individual's abilities resulting in feelings of failure, personal nonfulfillment, frustration from inability to finally "fit in" and become a valid member of society. This negative self-perception often leads to depressions and other pathological demonstrations. (Favier-Townsend 2014, s. 162)

Therefore, it is not possible to presume that neglecting of intellectual needs among the gifted children can be compensated at the threshold of their adulthood by individual effort to develop dispositions. On the contrary, it is becoming obvious that if the educational and generally social system loses child's gift, it consequently loses an exceptionally capable adult. Moreover, the gifted adults themselves pointed out at unfair system of distribution of financial resources that are according to them invested to saturation of specific needs of children from the other end of the intelligence spectrum and therefore they draw off from the gifted children a necessary share within the educational system on the financial backing level as well.

2.4 The legislative framework and key actors in identification and care of the gifted

The Czech Republic inclines to the integrated education of the gifted individuals, inclusion of the gifted into the classical school system of education (contrary to segregation model of creation of special classrooms and schools as for example in Slovakia) which is anchored legislatively as well. According to the school law Nr. 561/2004 Sb., the gifted pupils are placed equally to the level of pupils with specific education needs. The gift must be positively diagnosed in a specific facility, in the Czech Republic it is a pedagogical-psychological clinic in particular. Partial steps of the diagnostic phase are described in The Conception of Care Of Exceptionally Gifted Children and Pupils in period 2009-2013. It is a detail anamnesis, examination of intellectual abilities, creativity, eventually thinking strategy and interests. The consequential document called The Conception of Support of Gift Development and Care of the Gifted for the period of 2014-2020 differs from the previous conception, as it is not limited only to the target group of (exceptionally) gifted children, pupils and students. It is wider and more general – it focuses on support of identification, development and making use of gift belonging to children, pupils and students (support of gift). The current conception is focused on the support of gift on the background of a wider target, i.e. support of maximum development and full utilization of potential of all children, pupils and students. It draws from the principles of the inclusive education. The care of the gifted is a part of common activities on all types of schools, the conditions of education according to the integration model are determined in the Framework Educational Programme (FEP) for pre-school education, in the FEP for basic education, in the FEP for grammar schools and in the FEP for fields of secondary professional education. On the background of the integration model and in terms of the supported inclusive education (creation of differentiated conditions of optimal development of the gifted within work in a common, heterogeneous group or class) we can learn about two directions according to The National Institute of Children and Youth (NICY, 2008). The first one comes from an interaction of the exceptionally gifted children and pupils/students with the educational system and it focuses on observation of non-utilized capacity of a child or on observation of an unsuitable educational route. The second direction results from economic needs of the society in terms of economic development of the society and social order (demand).

According to NICY, the main actors of identification and care of the gifted are as follows (2008, 6): Ministry of Education, Youth and Sports – MEYS, Other Organizations Directly Managed by MEYS – OODM, Regional authorities, Non-governmental and Non-profit organizations – NNO, Employers, Leisure time centres, Organizers of nationwide competitions, Universities, Secondary schools, Basic schools, Kindergartens. In conclusion, there is a couple of information about individual subjects dealing with education of the gifted pupils and students in the Czech Republic. The Ministry of Education is the key actor not only within educational activities but also as far as other areas and resorts are concerned. From the legislative point of view, the care of the gifted is anchored in the school law nr. 561/2004 and in the public notice from MEYS nr. 27/2016 Sb. about education of pupils with special education needs and gifted pupils. By a gifted pupil we mean a pupil "who when getting adequate support, in comparison with peers he/she manifests a high level in one or more areas of rational activities, motional, manual, artistic or social skills." (MEYS, 2016, p. 12)

Exceptionally gifted pupil is by the public notice defined as a pupil “whose ability distribution reaches exceptional level within high creativity in the overall range of activities or in individual areas of rational abilities, motional, manual, artistic or social skills.” (MEYS, 2016, p. 12) Regional authorities are significant agents in the regional development, innovative and regional strategies. Contrary to national institutions, they can make use of particularities of the given environment and interconnectivity of regional institutions and subjects. The South-Moravian district is a good example where the gifted are looked after in a narrow cooperation of the regional authority, universities, secondary schools, non-profit organizations as well as private regional subjects. The NICY research (2008) shows that majority of employers declare that it is important that companies support the gifted. The companies expect that the cooperation with the gifted will influence increase of company competitiveness in a positive way and will lead to use of competitive advantage.

Excursions, trainee-ships and voluntary work are the most frequent ways of support. The companies give priority to cooperation with academic field (university students) than to cooperation with secondary schools (pupils from secondary schools). Leisure time centres provide informal education of the gifted children mainly in a form of interest groups or they support individual laps within subject competitions etc. The universities are criticised because they do not participate in the search for talents. Therefore, support of the gifted students is carried out rather randomly or based on student’s displayed interest. However, there is a wide offer of actions for interested active and gifted students at majority of universities and it includes participation in specialized seminars, lectures, workshops, excursions, trainee-ships as well as a possibility to join research work. In future, the universities could have a role of a mediator between needs of practise for the gifted and the system of education. Secondary schools and basic schools have a legislative obligation to ensure appropriate education for the exceptionally gifted. The support of the gifted pupils most often includes interest groups, seminars, scientific lectures and excursions, national scientific competitions etc. We can perceive several problematic aspects. On the national level, there is no complete system for education of the gifted. Teachers from basic and secondary schools are not sufficiently informed about questions of gift. Media, political representative and other as well diminish the value of education. A cooperation level school – parents – pupil is also problematic.

In our socio-cultural environment, the gifted individuals (pupils) are wrongly considered as persons who can manage everything by themselves, who do not have to put too much effort and who can do everything without help. However, sometimes contrary is the case. The school practise and modern research speak about specific education needs of the exceptionally gifted children with regard to age, reached level of skills and abilities and focus. Table 1 presents different attitude to the exceptionally gifted in terms of age.

Younger school age	Older school age + adolescence
It is mostly spoken about potential gift	The exceptional gift is already demonstrated which can bring problems
Focus of gift reclines on a teacher	Focus of gift development reclines in pupil’s work
It is necessary to support child’s interest as well as outer motivation	It is necessary to support pupil’s inner motivation
A teacher looks for adequately difficult topics	It is necessary to provide pupils free choice of topics
It is necessary to support pupils during unusual solutions to tasks	It is necessary to support divergent approach to task solution
We respect pupils` wish as far as their unconcern within group work is concerned. Group work can be used if the class contains several exceptionally gifted pupils.	We respect pupil’s wish, they often prefer individual work or work in pairs at maximum
We respect one`s own pace during task solution	We support pupil`s effort to solve a task in a perfect way, we provide space to present results in front of one`s peers

Table 1: Differences in approach to the exceptionally gifted according to age (Kovářová 2010, 10)

Due to revolutionary technological development and pressures of globalization there have been many changes that influence all aspects of human life. It is necessary to study and learn new ways of thinking and to master new behaviour figures. Support of education and further development of the gifted individuals (and not only them) can be one of possible ways for the society not to stagnate but to effectively use human potential to the maximum. However, it comes up that we have many insufficiencies at work with the gifted either in terms of financial sources aimed at education and within an insufficiently complete conception on the national level or in motivation and systematic management of pedagogues working with the gifted.

3 Experience with identification and development of the gifted in the project called “Development of advisory service for exceptionally gifted secondary school pupils with special education needs”

The main aim of the project was to enlarge an offer of advisory service for pupils with special education needs, their parents and pedagogical workers from cooperating schools and workers working at assistance service based on cooperation among the university, secondary schools and pedagogical-psychological counselling centres.

Project key activities were as follows: preparation of lecturers for specific needs of pedagogical training, processing of authorship materials for educational activities of pedagogues-specialists, realization of educational activities – workshops, seminars and individual coaching of the gifted secondary school pupils.

In terms of project activity 54 exceptionally gifted students were identified and these were: 32 in Opava – Mendel’s Grammar School, Silezian Grammar School, 9 in Ostrava – Olga Havlova’s Grammar School, 12 in Havířov – SPSE Havířov and 1 in Bruntál. In total, there were 10 girls and 44 boys. The gift was diagnosed in pedagogical-psychological counselling centres in Ostrava, Opava, Havířov and Bruntál. The students who took part in the project were pre-nominated by their teachers. It was necessary to overcome a barrier of students’ reluctance to take part in any testing. Moreover, some secondary school pedagogues thought it was useless to identify gift. It was a good choice to address particular pedagogues of engaged secondary schools (these were mostly career masters or school psychologists) who provided connections to particular persons in appropriate pedagogical-psychological counselling centres. Thus, out of all mentioned areas a team of a worker from the school (pre-nomination of the gifted students, motivating students to visit the counselling centre, coordination of further activities) and a psychologist from the counselling centre (gift diagnostics, recommendation for further care of the identified gifted pupils) was formed.

Project educational and development activities focused on the gifted pupils can be divided into three areas:

- an area of professional development,
- an area for soft skills development,
- an area focused on creation of a network of social contacts and structures, sharing and transferring of experience.

The students received individual (individual coaching) as well as group (participation at workshops, seminars, excursions and trainee-ships) support with respect to their individual focus. Tutors from among secondary school pedagogues and academic university workers were found for the students within the individual coaching. They were individually preparing the students for participation at knowledge contests and Olympiads and they were conducting SPA (students’ professional activities) works or other projects belonging to the gifted students. Motivation of the gifted students was also part of the tutors’ work.

The overall focus among students within the project was mathematical, mathematical-science or mathematical-technical and it matched with the choice of individual tutors and the content of individual support. Group educational activities were also deduced from the gifted students’ focus (or from expressed preferences). The most positively valued group activities were the following: first, a three-day mathematical workshop in Hradec nadMoravicí. Second, an educational seminar SPA focused on necessities of writing a scientific work, processing of results from scientific research and development of participants’ presentation and communication skills. Third, a workshop about physics in Havířov. Four, a tour meeting of the gifted students engaged in the project with the students from the Mensa Grammar School in Prague etc.

Engagement of the gifted students into the project meant for them enlargement of information, a possibility to try some new forms of studies used at the university, specialization and consultation with notable

specialists in the field. For the pedagogues the engagement into the project meant increase of their scientific qualification within further education and lifelong learning and improvement of work with target groups directly in the educative process secondary school – colleges – university.

In order to enlarge consultancy care a group of professionals in the particular area was activated. It included mainly special pedagogues and psychologists in the appropriate pedagogical-psychological counselling centres including coordinators in the appropriate schools and tutors – coaches chosen from among academic workers and scientist from practise.

Education and information meetings and seminars for the gifted pupils` parents and pedagogical workers of the cooperating secondary schools were organized as a part of project activities. We were surprised by a small interest in the topic of gift and gifted pupils from parents. The discussion showed that according to parents care for the gifted pupils should be mainly carried out by the school and pedagogues. Discussions with pedagogues from several secondary schools in the Moravian-Silesian region revealed that the pedagogical workers are usually interested in working with the gifted pupils. However, they think that common operations (classwork) do not allow many opportunities for extraordinary care for the gifted.

4 Conclusion

The current setting of the education system and appropriate legislation urges for adequate fulfilment of educational needs of all individuals who are disposed in a various way and in a different volume. Timely identification of the gifted children and care for their development means complicated issue since the gifted do not form a homogenous and easily identifiable group. Conversely, individual discourse of their exceptional abilities can differ in a significant way. At the same time, their exceptional habits can be accompanied by specific personal characteristics and discourse that can complicate social adaptation and communication with peers as well as authorities. Cooperation with such children is more demanding for parents and pedagogues. As it has been shown in the project carried out by the VSB-TUO, pedagogues from the monitored Moravian-Silesian region are deeply interested in self-education and in obtaining experience in the area of care for the gifted children. Appropriate care for the gifted children is a necessary presumption for their social placement in adulthood. Empirical studies demonstrate that the gifted adult is not able to compensate for suppressed or neglected development of exceptional abilities during his/her childhood. On contrary, such type of an adult often encounters feelings of failure and frustration due to limited possibility of self-fulfilment that is not adequate to his/her inborn abilities. That is why it is necessary to support timely identification as well as provide care for the gifted children and therefore reduce system restraints in development of exceptional abilities. It will contribute not only to increase of quality of their life but also to more effective functioning of the society for which they can be a benefit.

References

- Carroll, J. B. (1963). *A Model of School Learning*. *Teachers College Record*, 64, 723-733.
- Český statistický úřad. (2016). *Vysokoškoláků rapidně přibývá*. Retrieved October 15, 2018, from: <https://www.czso.cz/csu/czso/vysokoskolaku-rapidne-pribyva>.
- Favier-Townsend, A. M. M. (2014). *Perceptions of Causes and Long-term Effects of Academic Underachievement in High IQ Adults*. Hertfordshire: University of Hertfordshire. Retrieved October 15, 2018, from: <https://uhra.herts.ac.uk/bitstream/handle/2299/16520/98026281%20Favier-Townsend%20Anne%20final%20PhD%20submission%20April%202015.pdf?sequence=1&isAllowed=y>.
- Fořtík, V. & Fořtíková, J. (2007). *Nadanédítě a rozvoj jeho schopností*. Praha: Portál.
- Fořtíková, J. (2009). *Talent a nadání. Jejich rozvoj ve volném čase*. Praha: NIDM MŠMT.
- Gardner, H. (1999). *Dimenzemýšlení*. Praha: Portál.
- Hříbková, L. (2009). *Nadání a nadání. Pedagogicko-psychologické přístupy, modely, výzkumy a jejich vztah ke školské praxi*. Praha: GRADA Publishing, a.s.
- Jurášková, J. (2003). *Základy pedagogiky nadaných*. Pezinok: Formát.
- Kovářová, R. & Hampl, I. (2010). *Problematikamimořádného nadání v současném českém školství*. Ostrava: VŠB-TU.
- Mönks, F. J. et al. (2000). *International Handbook of giftedness and Talent*. Retrieved October 10, 2018, from: http://ksv-projekty.vsb.cz/repo/Text_metodiky_nadani.pdf.

- Národní institut dětí a mládeže. NIDM. (2008). *Shrnutí dílčích šetření současného stavu a způsobů realizace politik podpory identifikace a rozvoje kognitivně nadaných se zájmem o přírodovědné a technické obory v ČR a vybraných zemích EU*. Praha: NIDM.
- Rajovic, R. (2009). *Child's IQ - parents' concern*. Novi Sad: RankoRajovic - izdavač.
- Renzulli, J. (1978). *What makes giftedness? Re-examining a definition*. Phi Delta Kappan.
- Renzulli, J. & Reisová, S. M. & Montgomeryová, D. & Jurášková, J. (2008). *Úspěšná výuka mimořádně nadaných dětí*. Praha: Portál
- Rüppell, H. (1976) *Intelligenzförderung: Möglichkeiten und Grenzen*. München: Karger.
- Winebrennerová, S. in Sejvalová, J. (2004). *Talent a nadání – jejich rozvoj ve volném čase*. Praha: IDM MŠMT.
- Terman, L. M. (1925) *Genetic studies of genius: Vol. 1 Mental and physical traits of thousand and gifted children*. Stanford: Stanford University Press.
- MŠMT. (2004). Zákon č. 561/2004 Sb. O předškolním, základním, středním, vyšším odborném a jiném vzdělávání (školský zákon).
- MŠMT. (2004). Vyhláška 27/2016 Sb. o vzdělávání žáků se specifickými potřebami a žáků nadaných.