

Gifted Children in Educational Process of Czech Schooling System

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Abstract

The article provides an overview of teaching gifted children in Czech education system. It discusses how to look for gifted children in schools. It shows the possibility of providing some supportive techniques for a talented child, that are based on appropriate diagnostics. The school should support every child in their abilities, give them a feeling of success and enough impulses. Gifted children need attention, communication and discussion with the teacher. Some good practice examples are presented in the article. Specific examples from individual schools illustrate pedagogical work in the area of language development, natural sciences, support of mathematical - logical thinking, programming, cultivation of logic, development of creativity and artistic talent or movement activities.

Keywords:

communication
development of talent
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gifted child
supportive techniques

1 Introduction

Exceptionally talented people, especially scientists and artists, attract the interest of the whole society. What we mean by being gifted or talented is the natural way of someone's behaviour, thinking and feeling. But talent alone does not guarantee success. Also important are the conditions that an individual has available to develop their talents.

Many famous personalities have been developing their talents since childhood. We all have several specific abilities that are innate and can be recognized in children as young as 3–4 years old. But again, talent alone is not enough. Only with the right support in the area of skills, knowledge and practice can we develop it into personal strengths. Thereafter the first line of every paragraph will be indented by 0.5 cm. There will be no blank lines within the text of a chapter or a section.

2 What is giftedness

2.1 Two models

Giftedness can be defined as a set of dispositions on the basis of which a gifted individual can, under favourable conditions, deliver extraordinary performances.

Single-component models usually define giftedness as an above-average level of cognitive abilities (intelligence), component factors of cognitive abilities (e.g. language or mathematical aptitude) or specific abilities (e.g. sports or musical aptitude).

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Complex models view talent more broadly. They include several personality dimensions. The widely accepted Renzulli's three-ring model assumes that, in addition to above-average intellectual or special abilities, the gifted individual also exhibits a high degree of creativity and commitment to set tasks – internal motivation (Hříbková at al., 2018).

For an individual to realize their talents in specific extraordinary performances, they must also acquire the necessary knowledge and skills, and be given “space to realize their potential”. Therefore, certain conditions must be met by the external environment. Without them, talent could not develop and manifest. In the Czech education system, children diagnosed as gifted are categorized as children with supportive measures. Although we currently have a more sophisticated system for diagnosing pupils with e.g. Asperger syndrome, special learning disabilities or ADHD, there is an increasing number of projects and research teams working to develop diagnostic methods. The aim is to seek out children with exceptional abilities.

2.2 Gifted child diagnostic

Identifying a gifted child may not always be easy. A talented pupil usually does not behave like a “little genius” that would be noticeably different from others. On the contrary, in most areas, they express themselves in the same way as their peers. Children with extraordinary cognitive abilities represent about 3% of the population, which should correspond to 27,000 pupils in the Czech Republic. However, only about 1,000 of them are identified in pedagogical-psychological counselling centres. More than 96% of exceptionally gifted pupils are not identified at all (MEYS, 2020). Most gifted pupils do not seem to have the opportunity to adequately develop at school. One of the reasons is the lack of standardized tests to identify individual types of talent.

Therefore, experts in the Czech Republic are engaged in the creation of new tests and diagnostic tools to identify children with giftedness. At the Centre for Gifted Children Development, they developed the TIM³⁻⁵ test in 2017 (NEI, 2020). This is a test to identify gifted pupils in mathematics. It is a standardized psychodiagnostic method for measuring mathematical abilities in the middle and higher range of the above-average spectrum of pupils of the 3rd to 5th primary school years. TIM³⁻⁵ was created by experts, psychologists of the Centre for Gifted Children Development at the Faculty of Social Studies, Masaryk University in Brno. The aim was to provide teachers and psychologists with a reliable tool for finding mathematically gifted pupils.

At the Centre for Gifted Children Development, experts have also developed the multi-dimensional online diagnostic system Invenio (Gifted children, 2020). Invenio is an online psychodiagnostic system designed for screening the abilities of pupils of the 1st to 5th primary school years. It is based on the most modern psychological theory, according to which intelligence consists of a number of different partial abilities that can be measured and described. The system was based on intensive interdisciplinary cooperation and expert knowledge on the development of abilities in childhood and on the possibilities of their testing. It is based on modern psychometric approaches and the results of a series of statistical analyses of a large data set. As a result, it meets the standards imposed on similar psychodiagnostic methods both in the Czech Republic and abroad (NIE, 2020). At the same time, the system uses a modern approach of gamification testing. It integrates elements of computer games (e.g. gaming story, comic graphics, sounds, point-collecting, etc.), which usually increases motivation, playfulness and reduces potential concerns for tested children.

One of the supports for the identification of gifted children is NTC Learning. It is a project that comes from Serbia and is promoted through Mensa ČR in Czech kindergartens under the name Mensa for kindergartens. A team of specialists in the field of paediatric neurology provides support in the area of stimulating neuronal synapses in the pre-school period, which according to research is the most important aspect for further life development. This method helps to identify gifted children and offers them activities that are of interest to them, but also generally develops the potential of all children in the field of cognitive abilities. The system emphasizes the promotion of motor skills, balance exercises. Regular exercises of rotating around one's axis are carried out as they support the flow in the lymphatic system; cooperation between left and right brain hemispheres is promoted; and activation of brain centres in the area of associative thinking. Puzzles are used, creative thinking is supported and work with music is performed. The learning system has its methodology and only trained educators can work with it. From the perspective of the uninitiated, these can be simple and routine activities. However, its benefits are in the systematic, conscious and regular performance of activities that lead to the activation of the corresponding brain centres. The basic idea is that carrying out small activities frequently and regularly and consciously moves children forward. The results will come soon. It is important to know that the significance of some of the activities is that they are the preparation for the next stages of development at the next level of education. It is systematic long-term learning, aimed not only at the children. The teachers themselves are also undergoing a gradual change in their view of the overall approach to education.

Another tool for the diagnosis of extraordinary (intelligence) giftedness is the Standard of Comprehensive Diagnostics of Extraordinary (Intelligence) Giftedness. It follows the Standard of Comprehensive Examination of Extraordinary (Cognitive) Giftedness in pedagogical-psychological counselling centres. It was created in 2011 in cooperation with psychologists and special educators in order to help the necessary broad extension of quality diagnostics of extraordinary giftedness in pedagogical-psychological counselling centres. The updated 2016 version is a rework and extension of the original text. The standard newly includes the field of pedagogical diagnostics of extraordinary giftedness and pedagogical prediction of giftedness.

IDENA assessment scales and didactic texts are used to search for cognitively gifted pupils. This screening test battery was issued by the National Institute for Education in 2013, the slightly modified 2nd edition is from 2018 (Hříbková et al., 2018). IDENA contains seven assessment scales and two didactic tests. Two assessment scales are intended for searching for gifted pupils at the lower years of primary school and the other for searching for pupils of the 8th and 9th years gifted in the areas of mathematics, Czech language, physics, chemistry and biology. A didactic test is also available for both main subjects, i.e. Czech language and mathematics.

It should be borne in mind that the parents and educators are the first to take note of the child's expressions and abilities. They are the first to diagnose a child's talents, strengths and abilities. Gifted children may face various specific emotional problems, frequently directly linked to their extraordinary abilities. These include, for example, perfectionism or problems with establishing relationships with peers. Talents of gifted children and pupils may include:

- Early readership
- Rich vocabulary
- Good language skills
- Excellent memory
- Great curiosity
- Extensive knowledge
- Problem-solving ability
- Ability to infer and generalize
- A wide range of interests
- Long-term focus and perseverance in the area of interests
- Non-conformity
- High (self)criticality
- Perfectionism
- Favouring the company of older children or adults over peers
- Increased sense of morality and fair play
- Sense of humour

The whole group of gifted children is internally diverse, gifted individuals usually show only some of the above characteristics and manifestations (Šťava, 2012).

3 Dual exceptionality

The so-called dual exceptionality refers to the simultaneous occurrence of extraordinary talent and another diagnosis. These children, who, on the one hand, have exceptional abilities – talents, also suffer from a certain handicap – and are frequently referred to as “twice exceptional”. A common feature of this whole group of children is that it is difficult to identify. Disability and talent are regularly mutually compensating, disguising, and therefore these children are usually identified as average by teachers (Portešová, 2011). Many experiences have shown that some teachers tend to assess a pupil according to their disability rather than seeing a person with exceptional talent.

The most frequent combinations of cognitive talent and diagnosis include:

- Gifted children with specific developmental learning disorders, especially dyslexia, dysortographia and dysgraphia
- Gifted children with ADHD (Attention Deficit Hyperactivity Disorder), ADD (Attention Deficit Disorder)
- Gifted children with Asperger syndrome

However, there are reasons that the talents of these handicapped children are not discovered. Incorrect stereotypes, for example, that children with specific developmental disorders are cognitively below average, still persist. This may be due to the fact that some of them are not able to keep pace with their peers at the beginning of primary school education. They have problems in verbal abilities that manifest in reading and writing. Gifted children can get bored at school, distracted and disturb the class more frequently. Then they are rather perceived as hyperactive, teachers complain about their behaviour. Discovering their true talent is forgotten. Some children

with Asperger syndrome can reach IQs of up to 160, despite having problems in communication, social interaction and imagination. And this is the perspective with which they are primarily assessed (NIE, 2020).

To identify the talent and the second exceptionality, a targeted diagnosis of both exceptionalities is required. It should be noted that there are a number of combinations of types of exceptionalities and their extent and ratios and so recommendations are specific for each case. Early diagnosis, together with appropriate pedagogical-psychological guidance, can prevent potential problems in later periods, especially in adolescence (depression, anxiety, suicidal tendencies). Depending on the appropriate diagnosis, it is necessary to create an individual curriculum, pedagogical support plans and procedures that take into account both exceptionalities.

4 Education organisation options – examples of good practice

Teaching can be carried out in an integrated way, in one classroom with up to 30 pupils. Gifted pupils belong to a group of pupils who are given a certain degree of supportive measures in relation to the results of the diagnosis. The situation is such that usually, a maximum of five pupils with the second to fifth-degree support measures can be part of a class, department or study group. However, the number of pupils with the second to fifth-degree support measures should not exceed one-third of the pupils in the class, department or study group. There are also schools in the Czech Republic that deal directly with gifted pupils by creating a separate class for them.

As the current literature for primary school pupils (textbooks, workbooks, etc.) is not adapted to the requirements of gifted pupils, teachers of these pupils are forced to create their own teaching materials reflecting the current demand of pupils, their knowledge, abilities and interests. In an exceptionally gifted pupil, it is necessary to support the development of the intellect skills throughout the whole range of cognition, not only within the context of the subject.

The teacher prepares materials for them separately and engages with them individually. These children do not want extra work. They need attention, adequate stimuli, communication, discussion with the teacher. In a classroom with numerous pupils, however, these are highly difficult for teachers to provide. The so-called parallel enriching classes are a good answer to this, and they partially solve the problem. In parallel enriching classes, gifted pupils are outside their standard class and with another teacher, and they engage with expanded curriculum according to their abilities and beyond the standard curriculum. Individual approach is used as the teaching format. Social skills and communication with the teacher (authority) improve. This satisfies the requirement of adequate stimuli that a gifted child requires.

Internet resources are used to support teaching in a class with gifted pupils. For example, the educational portal www.proskoly.cz is divided not only by subjects and different levels but also by areas of interest. A large amount of material for the development of logical thinking can be found there, both in the electronic form (solvable directly on the PC) and in the written form (worksheets for download). It offers topics from several subjects (mathematics, Czech, English), but also topics that are not included elsewhere in similar content scope, such as reading literacy, traffic education, class climate and especially cognitive skills – tasks on logic, quizzes and supporting memory skills. Everything is in several difficulty levels, from simple to complex. It is possible to choose according to the real needs of the pupil. The system allows you to generate and enter codes later, so tasks can also be used as homework.

Some publishers such as Didactic or Fraus publish comprehensive workbooks for pupils of the 1st and 2nd levels of primary schools. Online storages are used to share printable materials for kids. Clearly structured database allows for easy task searching. The materials can not only be downloaded from there, but parents or teachers can also upload their works that they want to share with others. For example, the eSchovka repository is dedicated to parents and teachers who save time and effort by sharing the materials they produce. The materials collected in eSchovka can be used by parents at home for their children, as well as by teachers at family and maternity centres, kindergartens and primary schools or leisure time lecturers (NEI, 2020).

Another example of good practice is the possibility of individual education. This must be done in close cooperation with educators and specialists in the field of interest of the child. Smooth and efficient two-way communication is required.

The support of gifted children in many schools takes the form of the Club of Gifted Children, which are established at some schools with project support. Pupils attend the Club of Gifted Children approximately twice a month and focus on various topics in the presence of a teacher or other expert. Topics are always up to date and therefore understandable to children, who are better off finding and making connections and associations. In the Club of Fun Logic that other schools set up, they encourage logical and critical thinking, promote technical interests and abilities.

In some schools, there are study groups that focus on logic, creative writing, geography, robotics, programming, etc. In them, pupils learn from each other and present their findings. Some schools cooperate with universities, for example, the Technical University of Ostrava. There they use their laboratories and classrooms to awaken research interest in technology and science. To develop language skills, schools use bilingual teaching of some subjects, utilise native speakers and bilingual clubs. Today's teaching is based on active involvement, developing communication skills and critical thinking, leading to independence and responsibility.

5 Conclusion

Talent alone will not guarantee success. Only developing it by investing attention, time, skill and practice makes it our strength, which we can bring to a state of excellence. The child's potential needs to be developed in order for the child to experience success and have an internal motivation to learn. School should support every child in what he/she does best. Getting the most out of our strengths in life leads to success, whether that means having the joy of life, recognition from others, financial security or anything else.

References

- Hříbková, L., Nejedlý, P., Zhouf, J. a kol. (2018). IDENA. Retrieved February 11, 2020, from: <http://www.nuv.cz/t/diagnostika/projekt-dis/posuzovaci-skaly-a-didakticke-testy-k-vyhledavani-nadanych>.
- Ministerstvo školství, mládeže a tělovýchovy. (2020). Podpora nadání a rozvoj sítě nadání. Retrieved April 4, 2020, from: <http://www.msmt.cz/mladez/podpora-nadani-a-rozvoj-site-nadani-ze-sablon-esf>.
- Nadané děti. (2020). Možnosti práce s nadanými dětmi ve škole. Retrieved April 4, 2020, from: <http://www.nadanedeti.cz/pro-ucitele-moznosti-prace>.
- Národní pedagogický institut České republiky. (2020). Talnet. Retrieved April 7, 2020, from: <http://www.talnet.cz/mimoradne-kurzy-talnetui>.
- Národní ústav pro vzdělávání. (2020). Péče, rozvoj a uplatnění nadání. Retrieved April 2, 2020, from: http://www.nuv.cz/uploads/didactics_upload_folder/NUV_letak_dite_a_nadani3_nahled.pdf.
- Portešová, Š. (2011). Rozumově nadané děti s dyslexií. Praha: Portál.
- Šťava, J a kol. (2012). Příručka pro práci s nadanými dětmi. Ostrava: VŠB – TUO.