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CONSIDERATIONS ON INTELLECTUAL GIFTEDNESS IN NATIONAL AND GLOBAL PRACTICE

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Abstract

Today, there is a demand for a creative, gifted person with non-standard thinking and social responsibility. Education and upbringing of gifted children is one of the tasks of schooling. The paper deals with the issues of childhood giftedness, learning and teaching practices at educational institutions for gifted children. Learning technologies in educational activities are emphasized to create conditions enabling to disclose intellectual and creative abilities of gifted students. The paper provides a theoretical review of foreign and domestic literature on childhood giftedness. The concepts of intellectual and creative abilities of gifted students are analyzed in light of upbringing and development in modern society. The author accentuates major trends in scientific views, concepts and theories of giftedness. The authors believe that one of the most relevant innovative learning technologies is critical thinking technology. It makes classes exciting, emotional and developing. The idea is that younger students tailor the learning process themselves, they monitor their progress and measure their performance. The innovative critical thinking technology focuses on the development of thinking skills; the ability to analyze various sides of phenomena; the ability to make comparisons; the ability to interpret information; the ability to find cause and effect relationships; ability to creatively process information.

Keywords: Creative skills, development, individual, intellectual giftedness, intellectual development, methods and technologies to work with gifted children

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1. Introduction

Modern society features multiple global changes in all spheres of life, which places high demands on an individual of the new age. Today, there is a demand for a creative, gifted person with non-standard thinking and social responsibility. Education and upbringing of gifted children is one of the tasks of schooling. That is why intellectual giftedness becomes the main component of pedagogical activity at educational institutions. Curricula are developed to promote intellectual abilities of students, various clubs and hobby groups for development of talented children are opened. The educational standard is aimed at creating conditions to promote intellectual giftedness, which makes childhood giftedness a pertinent issue in psychological and pedagogical practice.

Since the 19th century, foreign and domestic scientists and psychologists have been concerned with intellectual giftedness. The English psychologist Francis Galton believed that giftedness is a result of hereditary factors (Yahyaeva, 2018b). He conducted a study on the facts from the biographies of prominent people from 300 English families and concluded that a clue to high performance can be traced back to an individual and is inherited from generation to generation. According to F. Galton's statistical analysis, for every ten famous people who have relatives, there are 3–4 outstanding fathers, 4 or 5 gifted brothers, and 5 or 6 gifted sons. In the 20th century, the French scientist Alfred Binet suggested that giftedness could be intellectual. He developed a series of tests to detect childhood giftedness. Childhood giftedness was particularly developed by American scholars.

Theory of Intelligence that falls into three parts. The first part analyzes cognitive mechanisms and correlates intelligence with the inner world of an individual, and this part of the theory includes types of information processing theory: learning to act; planning to act; performing to act. The second part of Sternberg's concept deals with situations and tasks in a person's life that require gifted abilities. The third part correlates intelligence with an individual's external environment, defining three groups of actions: adaptation to the world around, active shaping or choice of environment. Summarizing R. Sternberg concept, giftedness is a multidimensional phenomenon, a result of a combination of various factors. Different people have different giftedness (Kuznetsova, 2013).

In Russian psychology whose scientific publications have been used in pedagogical developments, explored children's giftedness. Russian psychology understood giftedness as a qualitative combination of abilities that make a person be successful in life. In his opinion, talent resides in some kind of activity.

Russian psychology believes that giftedness is a qualitative aspect expressed in the level of talent or genius. Talent is viewed as the ability to achieve a higher order, while genius implies the ability to create something new. Talent and genius are an individual's abilities. The significance of ability in the process of development is indicated by the pace, speed of progress, ease of mastering. To judge giftedness, it is necessary to assess progress results in accordance with its conditions. In his opinion, giftedness is a willingness to perform activities and a level of excellence.

Russian psychology believes that giftedness is an individual's creativity. He understood creativity as a mainspring of development, a fundamental property of the psyche. The structural components of giftedness are encouragements for cognition, creative, research activity. Talent is creative features exposed in finding original solutions.

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Leites and Kholodnaya evaluate gifted children by indicators of intelligence tests; children with a higher level of creative abilities (musical, artistic, mathematical) are talented children. Giftedness is an individual combination of abilities that allow a person to master the skills and abilities for a particular activity (Tobolkina & Remez, 2014).

2. Problem Statement

In today's hyper-informed environment and digital technology, childhood giftedness is one of the most controversial issues. There are two extreme views on this issue. The first suggests that "all children are gifted", while the second states that "just few children are gifted." As per the first view, provided that favorable conditions are created, nearly any healthy child can be developed to a gifted child. Whereas, supporters of the second view mainly search for gifted children, as they consider giftedness to be a unique phenomenon. Owing to features of children's psychology, their mental abilities are extremely malleable, which creates conditions for shaping various types of giftedness. Moreover, even in the same type of activity, different children, being involved in its different dimensions, can discover their original talents. Thus, when analyzing child's behaviors, educational agents including parents, teachers, psychologists should understand that giftedness can be expressed in different children in a more or less obvious form, but there are children whose giftedness they have not been able to see yet.

3. Research Questions

Observations show that gifted children quickly adapt to a new environment, do not have any difficulties in learning; their interests, developed from childhood, serve as the groundwork of personal self-determination.

Social background also has an effect on intellectual giftedness. A very important condition for development of giftedness is family composition, the style of parent-child relationships. Scientists are unanimous that the style of family relations, based on cruel control, does not provide an opportunity for the development of a gifted personality. Teachers and psychologists consider cooperation to be the most effective style of family relations. The family becomes a unity for the child where they feel confident and comfortable. Relations here are built on trust and involve the child in joint activities. In a family where this style of family relations prevails, the child develops such personality traits as mutual assistance, respect for a friend, and trust.

A gifted child needs respect, love, acceptance, affection.

4. Purpose of the Study

The paper provides a theoretical analysis of childhood giftedness in global and national practice. Understanding the significance of the issue in psychological and pedagogical science is due, on the one hand, to a societal need for the younger generation who can competently and safely develop in the information space. On the other hand, the pedagogical and scientific community is concerned about the said issue due to clip thinking and isolation of modern children and adolescents from the real world.

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With the above in view, the paper aims to analyze global and national practices of studying childhood giftedness as a psychological, pedagogical and social phenomenon.

5. Research Methods

A review of psychological and pedagogical literature suggests that creativity, a system of abilities displayed in activities, is an indicator of intelligence giftedness.

The author believes that giftedness is an individual's sustainable quality displayed in reasonable, search activity, in the ability to find rational ways to solve educational problems. Childhood giftedness is displayed in research activity, curiosity, in the form of abilities in various branches of science (technical, mathematical, sports, art, etc.). Intellectual, personal development of learners is at the heart of childhood giftedness.

In addition to the above, modern learning practices for working with gifted students include developmental teaching and problem-based learning, information and communication technology, mental arithmetic technology, critical thinking technology. Developmental teaching is aimed at brain activity, creative abilities and intellectual properties. It is based on scientific concepts, organization of collective group intellect. To do this, the teacher practices discussions and debates in the classroom. Developmental teaching is an integration of development, education and training (Muskhanova & Yakhyaeva, 2016).

Problem-based learning focuses on engaging students in solving open-ended problems that require summoned up knowledge, ability to set eyes on the phenomenon hidden behind the facts. Students learn to see the phenomena and processes of the world around them and express their views in verbal form. Problem-based learning involves defining problems, setting a collaborative tone for a solution, finding solutions, reflecting. Learning tasks are offered as cases that encourage students to find solutions. The quest for solutions to problems is a way to bring a person to the path of development. This learning technology is focused on the development of intellectual, creative abilities of gifted children.

Information and communication technology is widely used in working with gifted children. ICT is mainly tasked to increase creative, intellectual activity of gifted students, integrate various types of educational activities.

The main uses of information and communication technology in the learning process involve:

i. organizational that includes group or teacher-centred learning, training in an individually developed curriculum;
ii. content is the creation of visual educational material (presentations, posters, tables) on a specific topic;
iii. motivational that creates conditions to respect individual capabilities in the learning process, increases students' interest, encourages and unlocks creativity in children;
iv. assessment and control is tests that allow the assessment and control of students' learning outcomes (Agatova et al., 2020).

Thus, ICT applied in educational activities help to create an effective learning environment, to get students interested in learning material.

Today, mental arithmetic is just coming in. In the psychological and pedagogical literature, mental arithmetic is considered as a method for developing intellectual abilities, skills for differentiating

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information through learning how to calculate with abacuses. An abacus or soroban is an instrument that looks like a rectangular frame with rows of beads strung on a wire that indicate units, tens, hundreds, thousands, etc. from right to left. Students can perform arithmetic operations when they learns to replace a physical abacus with its image, with a "virtual" abacus. Over time, an association with the abacus is weakened and the imagination is reinforced, and after a few lessons, children can perform the simplest arithmetic operations in their minds, imagining the abacus. The idea of mental arithmetic is that in the process of performing actions, the child simultaneously moves the beads of the abacus with the fingers of both hands and such actions contribute to the development of both hemispheres of the brain. Thus, children first learn to perform arithmetic calculations at the level of physical perceptions, and then they learn to manipulate an imagined abacus in the mind.

Mental arithmetic originated about 2000 years ago in Japan, when its basic principles were outlined, which are significant today: the use of an abacus to develop practical calculations; development of both hemispheres of the brain. The importance of mental arithmetic is to improve the child's brain, gradually increasing the load, the more actively the child trains the brain, the faster he copes with new mental exercises. Mental arithmetic contributes to the creation of cognitive images, visualization of the calculation procedure.

Performing mental arithmetic calculations contributes to the development of spatial thinking, imagination. When children practice mental arithmetic, the brain is actively functioning, neural connections are strengthened and conditions are created for the successful personal development of primary schoolchildren. Mental counting skills enrich the intellectual capacity, develop cognitive and communication skills, which meets the requirements of the Federal State Educational Standard of the Primary Education provided for universal learning skills to be developed.

6. Findings

The authors believe that one of the most relevant innovative learning technologies is critical thinking technology. It makes classes exciting, emotional and developing. The idea is that younger students tailor the learning process themselves, they monitor their progress and measure their performance. The innovative critical thinking technology focuses on the development of: thinking skills; the ability to analyze various sides of phenomena; the ability to make comparisons; the ability to interpret information; the ability to find cause and effect relationships; ability to creatively process information.

The authors of this innovative technology are American educators Ginny Steele, Curtis Meredith, Charles Temple and others, who understand critical thinking as the development of one's own point of view on a particular problem, the use of research methods, and children's curiosity. The critical thinking technology is based on the learning theory by Vygotsky "... any reasoning is the result of an internal dispute, talk, as if a person were projecting onto himself those behaviors that he had previously projected onto others" (Yahyaeva, 2018a, p. 99).

The methodological aspect of this technology is a system of strategies that combine teaching techniques by types of learning skills. The critical thinking technology is divided into 3 stages. Stage 1 is Challenge. Children ask themselves "What do I know?" within the topic under study. Stage 2 is Comprehension. Children, guided by the teacher and with the help of classmates, answer the questions

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they ask themselves in the first stage. Stage 3 is Reflection i.e. reflecting on "what I learned" in the class. At each stage of the class, the teacher uses certain teaching methods that help to engage students in collaborative activities. At the stage of Challenge – it is a story-assumption; graphic arrangement of the material, true and false beliefs. The stage of Reflection is aimed at maintaining interest in the topic while dealing with new information. A "work in groups" leaning method is a technique when primary schoolchildren qualitatively master what they further put into practice after receiving new information. A "brainstorming" method stimulates primary children, helps to resolve a problem and shapes a non-standard type of thinking. The method does not put the student in the framework of correct and incorrect answers. Children can express any suggestions that help find a way out of difficult situations (Yahyaeva, 2018a).

Thus, teachers in the classroom attach great importance to innovative educational technologies that develop gifted children. At all stages of work, both individual and group forms of work are used. During the lesson, the teacher rewards the children for the work done.

The project and research technology is used to work with gifted students not only in class, but also in extracurricular activities. The following methods are included in the project and research activities: role-playing games, discussions, brainstorming. These methods aim to encourage independence, initiative, creativity and imaginative skills. Extracurricular research activities involve lesson-journey, lesson-experiment, mini-projects, intellectual games, competitions. Clubs and hobby groups are of great importance for development of talented children. This is an environment to fulfill social, emotional, cognitive needs of gifted students (Yahyaeva, 2018b).

Thus, creativity of primary school students is displayed through imagination, novelty of activity as the originality of thinking. The development of a creative personality depends on parents' support, they need to develop their child's creativity. The organized parent-teacher-student interaction is an educational process aimed at shaping and developing the creativity in primary school students.

7. Conclusion

Analyzing the above, pedagogical practices towards the development of childhood giftedness is relevant in the modern educational environment. The main indicators of children's giftedness include research activity, curiosity, intellectual abilities in various branches of science (technical, mathematical, sports, artistic, etc.). Creativity lies at the core of the development of gifted students. Psychologists note that creativity must be developed from the age of 3. Parents play a significant role in the development of a gifted child, need to respect their interests, support the sprouts of creativity, and pay attention to their child's individual characteristics. The properly constructed relationships between gifted students and the world around them will allow children to most fully demonstrate their intellectually gifted abilities.

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