

# Gifted adolescents: Special qualities of the cognitive activities' motivational component

## Adolescentes dotados: Cualidades especiales del componente motivacional de las actividades cognitivas

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#### ABSTRACT:

The purpose of the paper is to identify the features of the motivational component of the creative giftedness of adolescents. The research was conducted in the South Ural State Institute of Arts named after P.I. Tchaikovsky. The participants of the experiment were the pupils of 4-8 grades of pre-professional and general development courses (2016, N = 220). The main methods used were the observation and the interviews of experts, conducted according to the "Scale of behavioral characteristics of gifted schoolchildren" by J. Renzulli, R. Hartman. Other methodological approaches were mathematical statistics methods: dispersion (S<sup>2</sup>) and standard deviation (σ). The research showed that 40.3% of adolescents had a high level of creative giftedness, high motivation for intellectual and creative development, interest in research activities and curiosity. The average level of creative giftedness and motivation for cognitive activity was recorded in 35.3% of participants. Low level of creative giftedness and weak expression of cognitive motivation and interest in research activities and creative tasks were registered in 24.4% of participants. The motivational component of

#### RESUMEN:

El propósito del trabajo es identificar las características del componente motivacional de la dote creativa de los adolescentes. La investigación se llevó a cabo en el Instituto de artes del estado de Ural del sur llamado así por P.I. Tchaikovsky. Los participantes del experimento fueron los alumnos de 4-8 grados de cursos preprofesionales y de desarrollo general (2016, N = 220). Los principales métodos utilizados fueron la observación y las entrevistas de expertos, conducidas según la "escala de características conductuales de los escolares dotados" por J. Renzulli, R. Hartman. Otros enfoques metodológicos fueron los métodos estadísticos matemáticos: dispersión (S<sup>2</sup>) y desviación estándar (σ). La investigación mostró que el 40,3% de los adolescentes tenía un alto nivel de dote creativa, una alta motivación para el desarrollo intelectual y creativo, el interés en las actividades de investigación y la curiosidad. El nivel medio de dote creativa y motivación para la actividad cognitiva se registró en el 35,3% de los participantes. Bajo nivel de dote creativa y expresión débil de motivación cognitiva e interés en actividades de investigación y tareas creativas se

adolescents' creative giftedness included such dominant reasons as an interest toward research tasks and the individual's need for creative activity, as well as emotional pleasure from both the flow of the creative process and the receipt of a creative product.

**Key words:** a gifted teenager, creative giftedness, motivational component, research activity, need for creative activity, emotional pleasure, creative process, creative product.

registró en el 24,4% de los participantes. El componente motivacional de la dote creativa de los adolescentes incluía razones dominantes como el interés por las tareas de investigación y la necesidad del individuo de la actividad creativa, así como el placer emocional tanto del flujo del proceso creativo como de la recepción de un producto creativo.

**Palabras clave:** un adolescente dotado, dote creativa, componente motivacional, actividad investigadora, necesidad de actividad creativa, placer emocional, proceso creativo, producto creativo.

## 1. Introduction

The problems of identification and research of adolescents' creative talents were studied in close connection not only with the educational environment, but also with the social demands of society.

The claimed keywords and methods, used in the study, regard the following research branches:

- the concept of system, its goals, elements and systematically important links (Afanasev, 1981);
- features of gifted adolescents (Fine, 2002, Gensley, 1974, Green *et al*, 1988; Dodonov, 1980; Leites, 2003);
- the phenomenology of creative giftedness (Bogoyavlenskaia, 2015); psychological model of creative giftedness and its motivational component (Gavrilova, 2014; Dolgova, Rokickaya, 2016);
- the essence of research activity and the need for creative activity (Kaiser, Berndt, 1985, Smyth *et al*, 1999);
- emotional pleasure (Dodonov, 1978; Dolgova, V. I., Mamylna, 2016);
- creative process (Ilin, 2011);
- creative product (Dudina, 1996, 2016);
- development of creative talent (White, 2003; Woodward *et al*, 1990; Berezneva, 2015; Dolgova, Salamatov, 2016).

The main components of the creative talent of adolescents under analysis include: motivational, intellectual-creative and emotional-volitional ones.

According to the experts in the field of studying the psychology of giftedness, the motivational component describes the need of the individual in the very process of creative activity, its research activity, as well as the emotional pleasure from the creative process. We believe that it is these motivational dispositions that constitute the psychological basis for the dominance of the cognitive motivation of a creatively gifted child.

The low level of creative giftedness of children of secondary school age was noted in the case when the motivation for cognitive activity, as well as the research activity expressed in discovering new things, in the formulation and solution of problems was extremely poorly expressed, the process of creative activity was not always colored by positive emotions (1). Other features included the solution of creative tasks which was not carried out quickly enough, with a significant share of the teacher's help, the tasks did not differ in originality and in the variety of results (2). Other characteristics were the attitudes to the process of carrying out creative activity, during which a very scanty repertoire of emotional-volitional qualities of personality was diagnosed (3).

The average level of creative giftedness of children of secondary school age was actualized in those cases when the motivation for cognitive activity was expressed at an insufficient level, the research activity was not characterized by a high degree of breadth and stability, and

emotional satisfaction from the process of creative activity was not stable (1). At the same time the participants with the average level were doing creative tasks independently and quickly enough, but not always in an original and diverse manner (2); they demonstrated strong-willed behavior manners, although their personal qualities were expressed unevenly (3).

The high level of creative giftedness of children of secondary school age was noted in the events where they could develop stable motivation for cognitive activity. Their research activity manifested itself in the form of large-scale curiosity about everything new, leading not only to the acquisition of knowledge, but also to the initial understanding that led to the continuation of the research activity. The process of creative activity was accompanied by emotions of "the joy of acquisition" (1). The solution of creative tasks was characterized by speed, independence, originality and diversity of results (2); their strong-willed behavior of the personality was clearly pronounced (3).

The purpose of the study is to reveal the features of the motivational component of the creative giftedness of adolescents.

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## 2. Methods

The study was conducted on the basis of the South Ural State Institute of Arts named after P.I. Tchaikovsky. In the piloting experiment students of grades 4-8 attended the programs of pre-professional and general development courses (N = 220). These groups included 141 musicians (64.1% of the total number of the participants), who were studying at music and folklore departments, and 79 participants (35.9%) who were the students of the choreography department. The average age of the participants was 12 years.

The project was implemented from July (preparatory stage) to November (analytical stage) in 2016.

At the first stage (July-August 2016), the conceptual design of the research was developed, including the definition of the problem, the setting of goals and objectives, the development and justification of the measurement instrumentation complex of the study. At this stage, we also determined the optimal design of the study and the experimental base of the research. Here we also formed a group of participants.

At the second stage (September-October 2016), we conducted a pilot searching experiment and psychological and pedagogical diagnostics of students. We also collected the factual material.

At the third stage (November 2016) we proceeded to the analysis, generalization and systematization of the research materials, interpretation of the results and their design. The system of methods used in the study was determined by the initial methodological prerequisites, as well as the goals and objectives of the entire experimental study and its individual stages.

We decided to utilize the methods of observation and expert opinion, which facilitated greatly our research. In most recent studies, many scholars studied the features of the manifestation of the motivational component of the creative giftedness of adolescents in different ways. For this purpose we used the "Scale of Behavioral Characteristics of Gifted Schoolchildren" (by J. Renzulli and R. Hartman), which made it possible to assess the intensity of cognitive, motivational, creative and leadership qualities of an individual accessible to external observation. The experts performing the assessment were teachers of special and general educational disciplines.

We measured the statistical verification of the research results with the help of processing of mathematical data: dispersion ( $S^2$ ) and standard deviation ( $s$ ). These approaches allowed us to determine the frequency of deviations in the individual values of the experimental sample from the normative data.

### 3. Results and discussion

What stands out from the distribution of students, according to their levels of behavioral characteristics of creative giftedness (Renzulli, Hartman's scale, N = 220), is that a large number of participants demonstrated a high and medium levels of behavioral (motivational) characteristics of the creative giftedness. For example, a very high level of motivation and creative characteristics of giftedness was registered in 13.6% of students (30 students), a high level in 30% of students (66 students), an average level in 28.3% (62 students). According to the experts, the process of educational interaction with these categories of students can often be accompanied by: extreme curiosity in various areas of liberal arts knowledge, persistence and perseverance in achieving learning goals, the presence of one's own opinion and the ability to defend it, the lack of fear of being unlike others. Other important features of students' behavior include the openness to the perception of the unusual in oneself (i.e. a free manifestation of the "female type" in the behavior of boys, and perseverance and independence in the behavior of girls).

Interestingly, we recorded a low and very low level of behavioral (motivational) characteristics of the creative giftedness of personality in 20.5% (45 students) and 7.7% (17 students), respectively. Data from the teachers' observations of these groups of students' behavior showed there was an inadequate degree of independence and independence of one's own judgments, a fairly narrow range of cognitive interests and preferences, a choice of ready-made, not related to the "play of the mind" tasks, and preference for the study assignments which did not require the manipulation of ideas.

Statistical analysis of the obtained data is presented in Table 1.

**Table 1.** The correlation between experimental and normative data in the study of the level of behavioral (motivational) characteristics of adolescents' creative giftedness (Renzulli-Hartman scale, N = 220)

№	Behavioral (motivational) characteristics of creative giftedness	Experimental data		Normative data (gifted children)		Normative data (normal* children)	
		Average deviation, M	Standard deviation s	Average deviation, M	Standard deviation s	Average deviation, M	Standard deviation s
1	Total	25,1	7,1	25,1	7,6	17,1	4,7

Note: \* "normal" children – the term, introduced by J. Renzulli

The statistical analysis of the obtained data indicates that the generalized average data of the children participating in our experiment are close to the normative data obtained by the author of the methodology on a sample of gifted children.

At the final processing of the study results, we discovered three levels of creative giftedness of children of secondary school age. 40.3% (89 persons) of the secondary school age children showed a high level of creative giftedness, characterized by a consistently high motivation for intellectual and creative activity, research activity and broad curiosity about everything new. They also demonstrated the predominance of "the joy of cognition" emotions during educational and creative activities; speed, originality and flexibility of thinking. Their major characteristics were independence, perseverance and emotional stability when the goal was achieved.

We observed the average level of creative giftedness among secondary school age children in 35.3% of children (78 persons). The children in this group demonstrated insufficient level of motivation for cognitive activity, their research activity was not characterized by high degree of breadth and stability, and emotional satisfaction from the process of creative activity was not

stable. In the process of solving creative problems these participants worked quite independently and quickly, but their style of thinking was not original and varied. They did not express evenly their personal creative qualities of giftedness.

We registered a low level of creative giftedness in 24.4% of the participants (53 persons). They demonstrated a weak expression of cognitive motivation and activity in research and creative activities, ambivalent emotions accompanying the educational and creative process. These participants showed repeatable "stiff thinking", inadequate perseverance, determination and confidence in their own judgments and actions.

The overall results of the research are quite informative, which allows us to make a conclusion about achieved goals.

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## 4. Conclusion

There is much evidence that suggests that almost every second of the studied children of secondary school age (40.3%) possesses a consistently high level of creative giftedness, characterized by consistently high motivation for intellectual and creative activity, research activity and broad curiosity for everything new.

In 35.3% of children we fixed the average level of creative giftedness among the children of the middle school age. Their motivation for cognitive activity was expressed at an insufficient level.

24.4% of participants demonstrated low level of creative giftedness, as well as weak expression of cognitive motivation and activity in research and creative tasks.

The results of the study indicate that the motivational component of the creative giftedness of adolescents contains predominantly positive attitudes toward research activity and the individual's need for creative activity, as well as emotional pleasure from both the flow of the creative process and the result of a creative product design.

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