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CREATIVITY OF LEFT-HANDED SCHOOLCHILDREN: FEATURES OF CONTENT AND AGE DYNAMICS

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Abstract. The publication examines the comparative results of an empirical study of the creativity of primary and secondary school students with a dominant left and right hand. The psychological content of the phenomenon of creativity is revealed, its parameters and specifics of manifestation during the school period are characterized. The features of the dynamics of the creative development of schoolchildren are presented by comparing the data of primary and secondary school students.

Key words: creativity, schoolchildren, left-handedness, functional asymmetry of the cerebral hemispheres, creative thinking.

Introduction.

The modern education system, in its search for ways to increase efficiency, takes into account the diversity of the audience it deals with. An important support in implementing its goals is reliance on the creativity of its wards. Indeed, creativity is a quality that guarantees high academic motivation of students, active personal growth rates, and learning effectiveness. However, an obstacle on this path is the insufficient study of the psychological properties of these different groups of schoolchildren, in particular children with a dominant left hand. Indeed, left-handed people are of particular interest, since there are theoretical prerequisites for linking left-handedness with non-standard thinking. Many striking facts testify to the outstanding capabilities of people with a dominant left hand, including S. Bandera, V. Dahl, M. Matios, S. Vakarchuk, Bill Gates, Nikola Tesla, five of the last nine US presidents. The difficulties created by society for such schoolchildren, in particular the biased attitude of the right-handed majority, stereotypes of the education system with its practice of retraining the hand, the arrangement of household items for the right hand, put forward increased demands on adaptability for such children and catalyze the development of ingenuity, flexibility and non-standard thinking in them – important signs of creativity.

Therefore, the originality of such children, which is manifested in the learning process, is a subject of special scientific interest. Educators-scientists, including M. Bezrukikh, R. Hnatyuk, N. Kovalenko, I. Tsepova, A. Chuprikov, discussed the need for hand correction and considered the consequences of such retraining, which turned out to be mostly negative. The individual psychological characteristics of right-handed children, which arise from the nature of the functional asymmetry of the brain of right-handed dominants and constitute their specificity and potential in the context of educational and pedagogical influence, are devoted to the study of N. Batov, Zh. Zavodnaya, Yu. Mikadze, A. Semenovich, E. Chomskaya, L. Chekanskaya. But the number of scientific works devoted to the experimental consideration of the psychological specificity of creativity of students with a dominant left hand is very limited.

Therefore, *the purpose* of the work is to experimentally study the specificity of creativity of students of junior and middle grades with a dominant left hand.

Main text.

It is known that in psychological science there are three main approaches to defining the essence of creativity – as the ability to create something new and original, as a rejection of stereotypes and as a certain combination of human abilities. The first approach illustrates the definition of R. Holman, who noted that “creativity is a fusion of perception carried out in a new way” [2, p. 109]. The idea of R. Sternberg is characteristic of the second approach, according to which creativity is “tolerance to uncertainty” [2, p. 99]. The third approach is introduced in the works of V. Molyako, where it is noted that “creativity is an ability that reflects the deep ability of people to create original values” [3, p. 27]. But the nature of creativity, its types, individual manifestations are a wide field of unexplored things that have yet to be described. In this sense, schoolchildren with a dominant left hand are a particularly interesting group of subjects, as carriers of a certain strategy of perception and processing of information. This strategy is currently justified by the phenomenon of functional asymmetry of the brain, according to which the right, “artistic” hemisphere, responsible for sensory cognition, figurative thinking and intuition, perceives the situation holistically, works

with images and unlikely events. The development of the skills of the left hemisphere at school age, with the dominance of the right, gives grounds to assert a more balanced, harmonious nature of the growth of schoolchildren-left-handed people in comparison with their right-handed peers.

To confirm this assumption, an experiment was conducted in the gymnasium "Solomon" in Chernivtsi, in which 38 people participated, including 15 junior high school students and 23 from high school. Using the M. Lemak "Informative tests" method, which determines the leading limb, two groups were formed: control (right-handed, 18 students) and experimental (left-handed, 20 people). The other two methods studied quantitative and qualitative indicators of non-verbal (P. Torens's method in the adaptation of M. Lemak, V. Petrishche) and verbal (S. Dmitrieva and N. Gavrylova "Verbal triads" method) creativity of students.

According to the results of the study of non-verbal creativity, the difference was found in the indicator of originality of thinking: its high indicator in left-handed people is higher by 13.4%. It should be noted that this is the only qualitative indicator studied by this method, while the other two (speed and flexibility, for which no difference is presented) are quantitative.

Regarding the development of indicators of non-verbal creativity in different age groups of schoolchildren, it was recorded that in the group of younger schoolchildren the advantage is on the side of students with the leading right hand. They prevail in the indicator of originality by 4%, flexibility – by 6%. But already at the age of secondary school these indicators become in favor of students with the dominant left hand: they prevail in originality of thinking by 25% and in flexibility by 20%. The significant jump in the growth of these qualities in left-handers is noteworthy: the level of originality increased by 40 percentage points, the level of flexibility by 20, while in schoolchildren with a dominant right hand by 11 and 6%, respectively.

These data are complemented by the results of a study of verbal creativity, according to which 47.4% of left-handed students showed a high level of verbal creativity, in contrast to 27.8% of right-handed students, demonstrating a difference of 19.6%. If we compare the age dynamics, the number of students with a dominant left

hand with a high level of verbal creativity increased by 34.8%, while the number of students with a dominant right hand increased by 28.6% (Table 1).

Table 1. Age dynamics of indicators of verbal creativity of schoolchildren

| Level of development of verbal creativity | Left-handed students | | Difference % | Right-handed students | | Difference % |
|---|----------------------|---------------|--------------|-----------------------|---------------|--------------|
| | Elementary school | Middle school | | Elementary school | Middle school | |
| High | 40.2% | 75% | 34.8 | 21.4% | 50% | 28.6 |

Summary and conclusions.

Thus, the assumption of a higher level of creativity development in schoolchildren with a dominant left hand compared to their right-handed peers was confirmed. Indeed, left-handers lead in indicators of a high level of both non-verbal and verbal creativity. It is very indicative, with regard to non-verbal creativity, that the difference is demonstrated precisely in its qualitative parameter – originality. That is, in left-handers, creativity manifests itself more intensely in its first understanding, as the ability to produce something unusual, new, unique, which did not exist before. But the difference between left- and right-handed students was significantly felt when studying the indicators of verbal creativity. Surprisingly, children with a dominant left hand demonstrated a faster flow of thought processes, breadth and activity of the dictionary, despite their right, sensory-figurative dominance.

Regarding the potential for developing creativity, at the age range of "junior high school", left-handed children demonstrate a much more powerful and rapid leap than right-handed ones. Therefore, with the intensification of development processes in adolescence, filled with information entropy of a personal and social nature, by the time of high school, left-handed children can expect a real flowering of creative qualities.

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