

## **GIFTEDNESS: THE PROBLEM OF GENOTYPIC DETERMINATION**

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### **ABSTRACT**

*The article deals with the origin of abilities and the development of views on this concept in psychology. There is a change in views on the abilities of F. Galton to A. A. Loseva. The results of an experimental study of the intellectual development of students are presented.*

**KEYWORDS:** *Abilities, Learning, Giftedness, Children With Advanced Development, Mental Development.*

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### **INTRODUCTION**

For many centuries, views about the supernatural origin of human abilities have dominated. After some time, 2 types of factors were identified, each of which can take a leading place: genetic and cultural-pedagogical factors. The founder of the first factor is the English scientist F. Galton, a psychologist and anthropologist. F. Galton, as we described above, created a special scientific discipline designed to study the conditions and ways to improve human nature. He called this industry "eugenics". F. Galton developed the following methods - the "twin" method and intelligence testing, which are still used today. The followers of F. Galton - K. Pearsons, C. Spearman, S. Burt, A. Binet, T. Simon - accepted the point of view of their teacher and were sure that "general mental giftedness" is necessarily expressed in "physical intelligence", i.e. in innate. In the Soviet psychology of the 30-40s of the twentieth century and until the 70s, an approach was formed that interpreted that "in the composition of the higher mental functions of a person there is and cannot be absolutely nothing innate, genetically inherited" (Ilyenkov E.V., 1970).

The founder of this approach was the outstanding Soviet psychologist L.S. Vygotsky. In his theoretical works, this scientist wrote that the psyche of a modern person is the result of the interaction of the processes of biological maturation and learning. Considering the genesis of mental functions, he wrote that this process is based on two forms: innate (natural) and acquired (cultural). Such a theory, like any other, needed creative development based on new scientific data. But the followers of L.S. Vygotsky turned it into an object of worship, a teaching with a strict set of unchanging dogmas. One of the consequences of this phenomenon was that most of the supporters of this doctrine believe that there is no such thing as "giftedness". Such scientists call gifted children the term "children with advancing development".

As noted by A.A. Loseva, the degree of genetic predetermination of the rate of maturation of the cognitive functions of the individual, in accordance with the data of psychogenetic studies, is exactly the same as that of the final level. Despite the importance of environmental factors, hereditary factors have a priority place. However, the influence of the environment can have such a negative connotation that, under certain circumstances, it can even stop ripening. This can take place from various injuries to negative psychological and pedagogical impact. The notion that a creatively gifted person can overcome any negative influence is completely wrong. That is, a talented person, no less than a sick or disabled person, needs a favorable environment, conditions so that his genetic abilities can develop. The value of a personality is determined not only by what

it represents at the moment, but also by the possibilities for further development and improvement inherent in it. Any activity requires a person to possess specific qualities that determine his suitability for it and ensure a certain level of success in its implementation.

### **Materials and methods**

Significant difficulties in defining the concepts of "ability" and "giftedness" are associated with the generally accepted, everyday understanding of these terms. So there are myths about abilities, which, perhaps, are more than about other properties and characteristics of a person. The main ones of these myths are as follows: • Abilities are inherent in a person from birth; • Any abilities can be formed; • People are initially equal in their abilities; • Ability=talent, ie. Ability and talent are synonymous. One teacher at a fairly middle age conducted the following experiment on himself. He had no musical ear at all. And he began gradually, spending a lot of time and effort on this, to learn Bach's many-voiced fugues in parts. And he succeeded and developed a good ear for music. This suggests that any activity can be formed, but with great effort. However, what the teacher has formed in himself is still not an ability.

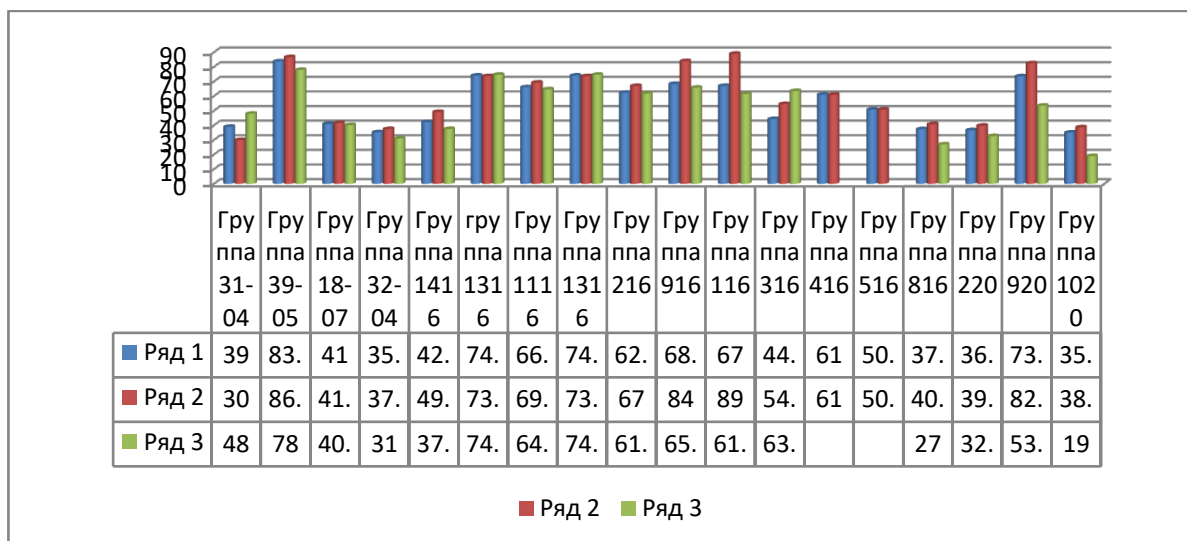
In psychology, abilities are understood as "the individual psychological characteristics of a person, which are a condition for the successful implementation of one or another productive activity." Abilities are only the possibility of a certain development of knowledge, skills, and whether it becomes a reality depends on various conditions. What are these conditions? Firstly, the interest of the family - parents, relatives - in the development of the child's abilities. Secondly, special education. Thirdly, caring, creatively working teachers. If the above conditions are absent, then the child's abilities may stall, die, without developing. It is like an outlandish flower that requires appropriate care, and in its absence, it gradually fades. If we consider abilities in connection with successful activity, then the fundamental difference between capable people and incapable people lies in the faster development of activities, the achievement of greater efficiency in it. And, despite the fact that outwardly abilities are manifested in activities (skills, abilities and knowledge of the individual), but at the same time, abilities and activities are not identical to each other. A person can be technically trained and educated, but little capable of any activity. For example, phenomenal calculators are individuals who perform complex mental calculations with extreme speed, while possessing very average.

B.M. Teplov distinguishes three signs of abilities: 1. Individual psychological characteristics that distinguish one person from another. 2. Not any individual characteristics, but only those that are related to the success of any activity or many activities. 3. The concept of "ability" is not limited to the knowledge, skills and abilities that a given person has already developed. Abilities as individual psychological characteristics help to achieve success in the educational activities of schoolchildren. Abilities as psychological abilities of a student are characterized by the following facets: • orientation of abilities; • versatility of abilities; • ability level; • dynamics of abilities; • intensity of abilities. Thus, the concept of "ability" should be attributed only to those manifestations of human activity that are associated with individual, successful and undeveloped skills of a person. Regarding mathematical abilities.

### **RESULT AND DISCUSSION**

Our study was conducted with students of the Fergana Polytechnic Institute and the Fergana Medical Institute of Public Health. The following methods were used in the study: STUR test (K.M. Gurevich et al., adaptation by V.M. Karimova et al.), biographical questionnaire. Of the 5 groups of students of FerPI and 13 groups of students of the PMIOS studied by us, the total number of students studied was 222 people, in 14 groups the average overall score of mental development (UR) turned out to be higher in girls than in boys (Fig. 3) (in two groups 416 and 516 were girls only).

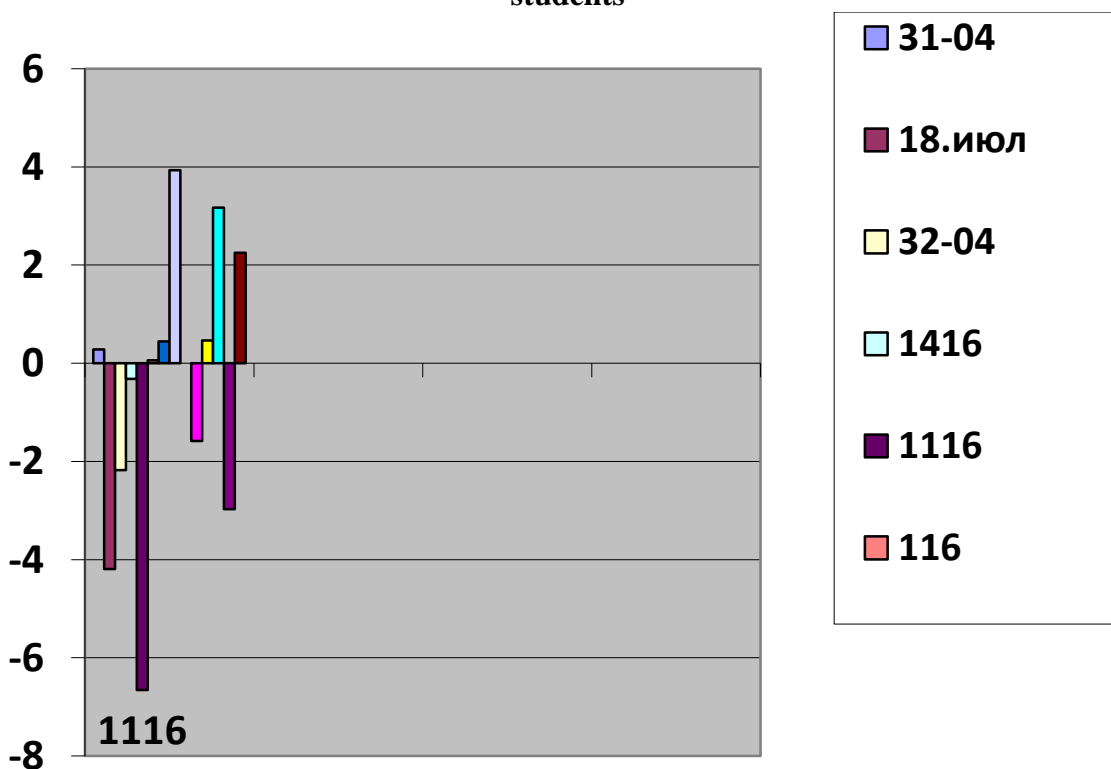
Fig.1 Mental development of students depending on gender



Row 1 - average SD score for the group, row 2 - average SD score for girls, row 3 - average SD score for boys. Thus, we can conclude that in adolescence, the level of mental development in girls is higher than that of boys. Also, from our study it follows that human intelligence is not related to gender (female or male), but is related to the heredity and origin of a person.

Now let's build a diagram by inserting the values of the correlation coefficients for each group (see Fig. 2).

Fig. 2Dependence of the correlation coefficient of mental development on the social origin of students



## CONCLUSION

As can be seen from this diagram, out of the 16 groups of students studied by us, in 8 of them the

value of  $r_{xy}$  is less than 0 and in 8 of them it is more than 0. Thus, we have come to the proof of our hypothesis : “In girls and boys, the average level of mental development depends on their social origin. The higher the education of the students' parents, the higher their average level of mental development.

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