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# EMPIRICAL ANALYSIS OF THE IMPACT OF SOCIO-PSYCHOLOGICAL FACTORS ON MASTERY INDICATORS IN STUDENTS

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**Abstract:**

This article examines the selection of gifted students using the method of identifying gifted students and statistical analysis of the interrelated qualities that are manifested in them. In addition, the results of the method of identification of gifted students and the indicators of student mastery of the subject were mpirically analyzed, and the socio-psychological factors influencing the mastery of the subject were studied.

**Keywords:** Talent, ability, intellect, creativity, sociometry, organization, talent, talent, correlation, social activism.

Today, special attention is paid to the youth of our future generations, and all conditions are created for their formation as fully developed individuals and competitive personnel. Talented young people with intellectual potential can make a significant contribution to the development of society with their knowledge and desire to succeed. According to many psychologists, the problem of individual creativity is a problem of the century, and the concepts and abilities close to it (talent, talent, talent, doho) are recognized as a strategic resource of any state, society. Today, not only psychologists, but also representatives of all spheres of society, which contribute to the development, support this idea.

The 21st century is the age of modern technology and information and communication. Especially in recent years, technology has developed rapidly. Modern information and communication tools have a stable place in our lives. The possibilities of computer technology have multiplied. This requires a high level of mental ability to learn from the main sources and the Internet in the independent acquisition of knowledge. Therefore, learners need to be mentally mature so that they can move in the same way in mastering the basics of all sciences.

Today, the identification of pedagogical and psychological laws of expression of the intellectual potential of learners allows students and young people to learn independently and develop their mental abilities. This requires the effective use of special diagnostic tools and new pedagogical technologies to identify and develop mental ability. Easy assimilation of knowledge, ensuring the effectiveness of education and paving the way for creative research require an understanding of the very essence of mental abilities. It is necessary to introduce specific teaching methods to reveal and develop the intellectual potential of pupils and students in the educational process, to teach them to solve problems in rational ways, to prepare them for independent thinking and creative research.

As early as the 1970s, a number of developed countries developed state programs to support talented youth. In his speech at a meeting with young people at the Muhammad al-Khwarizmi School, President Mirziyoyev said: We prepare young people with a broad outlook, creative thinking, who can make the right decisions in difficult situations, to responsible positions. However, our country does not have an effective mechanism for selecting young leaders and offering positions appropriate to their abilities. ” In this regard, the selection of talented young people in our society is one of the most pressing issues today, the development of effective and reliable diagnostic methods in accordance with the national mentality.

Research and practice have shown that talent is delayed at certain stages of an individual’s development and can even disappear if it is not identified or ignored. In this case, pedagogical and psychological assistance is needed to identify and develop a person's abilities at an early stage.

Let us consider here a number of scholars who have conducted research on the subject of ability and aptitude; from foreign psychologists F. Galton studied the hereditary features of ability, J. Locke studied ability as a result of education, the problem of mental development in Russian psychology L.S. Vygotsky, B. G. Ananev, S. L. Rubinstein, B. M. Teplov, N. S. Extensively studied by Leytes, A.N.Leontev, P.Ya.Galperin, V.A.Krutetsky, A.M.Matyushkin and others.

In the scientific works of M.Vakhidov, M.Davletshin, E.Gaziev and other scientists in Uzbekistan, intellectuals have highlighted the peculiarities of the youth, B.R.Kadyrov, A.F. Azimova developed methods to determine the

intellectual ability of students, but little has been studied in the selection of talented young people and the organization of their further education.

In the course of our research, we used a six-question methodology called "Identifying Talented Students" developed by Professor BR Kadyrov to identify young people with intellectual potential in order to study the mental abilities of psychology students at Fergana State University.

This methodology consists of six questions, and in response to each question, respondents are asked to write the names of 3 students in their group. The sequence of answers to the question is important. The most important of the requirements for conducting the methodology is that the group should know each other well and be formed.

Respondents participating in the survey are selected at the following levels:

- the most intelligent, wise, humble and deep-minded;
- good organizer, able to attract the masses, to exert their influence, to stand out from the crowd with their organizational activity;
- strong-willed, hard-working, hard-working, hard-working;
- those who are distinguished by their manners, self-control, good manners and manners;
- those who are distinguished by their creativity, the ability to come up with new ideas, ideas, responsiveness, able to find solutions to problematic situations;
- opens the opportunity to select those who are self-developing in all respects, with the main goal of becoming a mature scientist, highly qualified specialist or head of a large organization in the future.

A total of 73 students from 3 groups participated in this study. The results from each group were calculated separately and evaluated on the basis of three criteria, namely, low, medium and high. The results of the whole group were then summarized. The results from the respondents are presented in Table 1 below.

Table 1

The general result of the method of sociometry "Identification of gifted students."

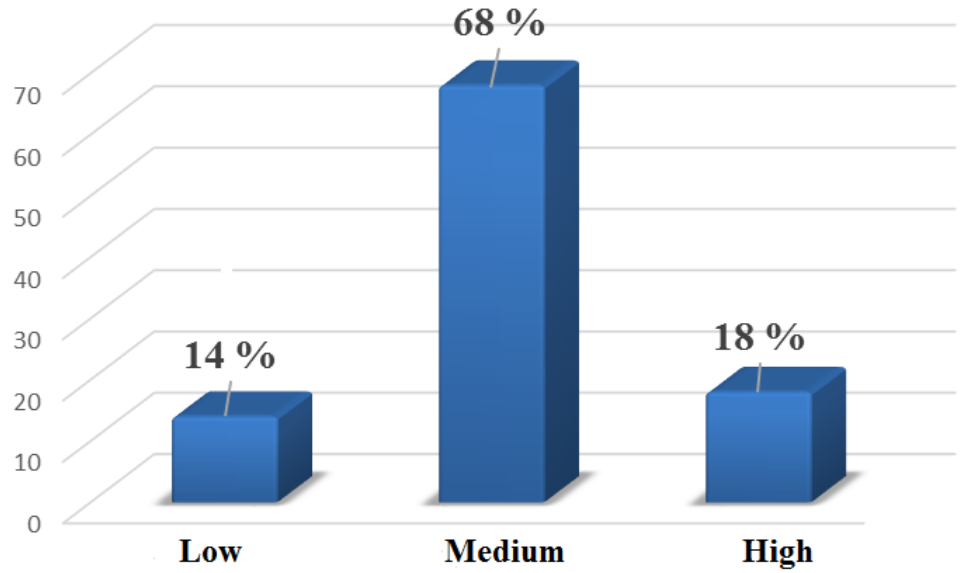
| № | Degree | Quantity | Percentage |
|---|---|---|---|
| 1 | Low | 10 | 14 |
| 2 | Medium | 50 | 68 |
| 3 | High | 13 | 18 |
| Total: | | 73 | 100 |

Analyzing the results, we can see that 10 out of 73 respondents, or 14%, had low votes in their groups and their abilities were assessed as "low". Out of a total of 73 respondents, 50, or 68 percent, had a "moderate" grade in their group, which makes up the majority. We can see that 13 out of 73 respondents, or 18%, had their abilities rated "high" in their groups. Also, the fact that the average coverage is more than 68% of the total number of respondents shows that the results of the study are consistent with the law of normal distribution.

When we plotted the general results of the sociometric method "Identification of gifted students", it looked like this (Diagram 1).

Diagram 1

**The general result of the method of sociometry "Identification of gifted students."**




If we analyze our research by gender, out of a total of 73 respondents, 54 are men and 19 are women. In percentage terms, 74 percent are men and 26 percent are women (Table 2).

Table 2

The results of the sociometric method "Identification of gifted students" by gender.

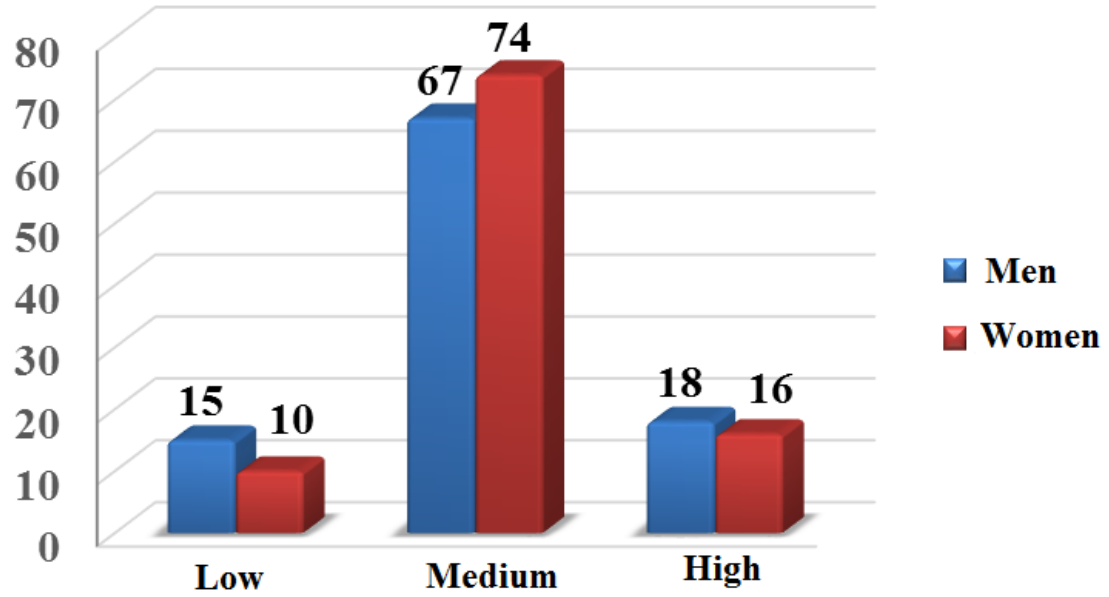
| № | Level | Men | | Women | |
|---|---|---|---|---|---|
| | | Quantity | Percentage | Quantity | Percentage |
| 1 | Low | 8 | 15 | 2 | 10 |
| 2 | Medium | 36 | 67 | 14 | 74 |
| 3 | High | 10 | 18 | 3 | 16 |
| Total: | | 54 | 100 | 19 | 100 |

Of the 54 male respondents, 8, or 15 percent, had low turnout in their groups and were rated "low". Out of a total of 54 respondents, 36, or 67 percent, had a "moderate" grade in their group, which makes up the majority. Out of a total of 54 respondents, 10, or 18 percent, rated their abilities as "high" in their groups.

Of the 19 female respondents, 2, or 10 percent, had low turnout in their groups and were rated "low". A total of 14 of the 19 respondents, or 74 percent, had a "moderate" grade in their group, which makes up the majority. In total, 3 out of 19 respondents, or 16%, rated their abilities as "high" in their groups (Diagram 2).

The results of the sociometric method "Identification of gifted students" by gender

Diagram 2




Although the differences between the sexes in the results obtained were present as a percentage (Table 3), however, when we conducted a statistical analysis to determine the difference using the student criterion, no statistically significant difference was found between them.

**Gender differences in the results of the sociometric method "Identification of gifted students"**

Table 3

| № | Level | Men | Women | The difference in percentage |
|---|---|---|---|---|
| | | Percentage | Percentage | |
| 1 | Low | 15 | 10 | 5 |
| 2 | Medium | 67 | 74 | -7 |
| 3 | High | 18 | 16 | 2 |
| Total: | | 100 | 100 | 0 |

+ Dominance in the performance of male respondents.

- Dominance of female respondents.

During the study, a statistical analysis of the correlation between the questions of the sociometric method "Identification of gifted students" was performed (Table 2). According to him, we can see that the correlation between the questions of the method of sociometry "Identification of gifted students" was only reliable and was led by positive coefficients.

Table 2.

**Question-correlation coefficients of the sociometric method "Identification of gifted students"**

| | 1 question | 2 question | 3 question | 4 question | 5 question | 6 question |
|---|---|---|---|---|---|---|
| 1 question | 1 | | | | | |
| 2 question | -0,001 | 1 | | | | |
| 3 question | 0,722*** | 0,006 | 1 | | | |
| 4 question | 0,171 | -0,083 | 0,364** | 1 | | |
| 5 question | 0,589*** | 0,355** | 0,298* | -0,068 | 1 | |
| 6 question | 0,602*** | -0,096 | 0,785*** | 0,316** | 0,169 | 1 |

*p<0,05, **p<0,01, ***p<0,001

Mental qualities of students with such qualities as "intelligence, wisdom, humility and deep memory" ("strong will, hard work, hard work, endurance of difficulties") (r = 0.722, p <0.001), creativity, new ideas, thoughts ability to give, responsiveness, ability to find solutions to problematic situations ”(r = 0.589, p <0.001),“ setting high goals and developing oneself towards this goal ” formed correlation coefficients. This means that students with such qualities as ingenuity, wisdom, humility and deep memory, have a strong will, endurance to work and hardship, creativity, the ability to come up with new ideas, quick thinking, the ability to find solutions to problematic situations. to stand out and develop oneself towards that goal.

Positive qualities of students such as "organization, ability to influence others, organizational activity", "creativity, the ability to come up with new ideas, ideas, responsiveness, the ability to find solutions to problematic situations" (r = 0.355, p <0.01) formed relative correlation coefficients. This means that the organizer is distinguished by organizational creativity, active students who are able to influence others, their creativity, the ability to come up with new ideas, quick thinking, the ability to find solutions to problematic situations.

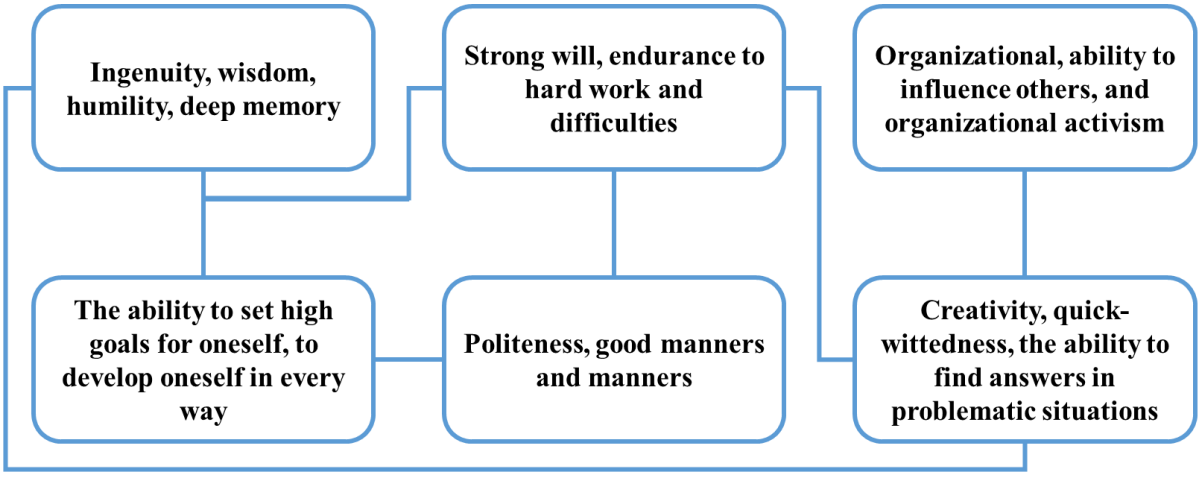
Qualities such as "strong will, endurance to work and difficulties" in students, with "good manners and behavior" (r = 0.364, p <0.01), creativity, the ability to come up with new ideas, quick thinking, problem-solving ability to obtain ”(r = 0.298, p <0.05),“ set a high goal and develop oneself towards that goal ”(r = 0.785, p <0.001). This means that students who show such qualities as strong will, endurance to work and hardship, their creativity, the ability to come up with new ideas, quick thinking, the ability to find solutions to problematic situations and to set high goals, develop themselves towards this goal and this together we can see that he stands out from the others with his beautiful patterns of behavior.

Students' good behavior and demeanor produced positive correlation coefficients (r = 0.316, p <0.01) with qualities such as “setting high goals and developing oneself towards them”. This means that students who set high goals for themselves also stand out from the crowd with their beautiful demeanor and demeanor.

Based on the analysis of the correlation coefficients between the questions of the sociometric method "Identification of gifted students" above, we can propose the following module (Figure 1).

Figure 1

**Features that underlie the selection of gifted students**




It is well known that students do not have the same performance in mastering academic subjects. Because the individual characteristics of each person are different. Psychologists and educators often explain this phenomenon by the intellectual level of students, educational motivation, abilities, high self-esteem, and psychological characteristics. If we take ability, then a lot depends on its personal characteristics, how abilities take place in its system of vital

values and how they affect the development of other personal qualities. In this case, it is necessary to distinguish relatively independent components in the structure of abilities, such as general intelligence, social intelligence and special abilities. A high level of ability can have a positive impact on the success of learning activities. A low level of ability, on the other hand, often has a negative impact on the successful sharing of learning activities.

During the study, we performed an empirical analysis of the relationship between students' mental ability and their academic performance.

Initially, the indicators of mastering academic subjects of the respondents who participated in our study were obtained (for example, the average performance of Kamilov Husniddin in 9 subjects was obtained). In order to bring the performance of students in the same way as the indicators of sociometry, we conditionally changed the grades "3", "4", "5" to "low", "medium" and "high". These results were tabulated with the results obtained using the sociometry method (Table 5).

**Indicators of students' mastery of sociometry and academic disciplines**

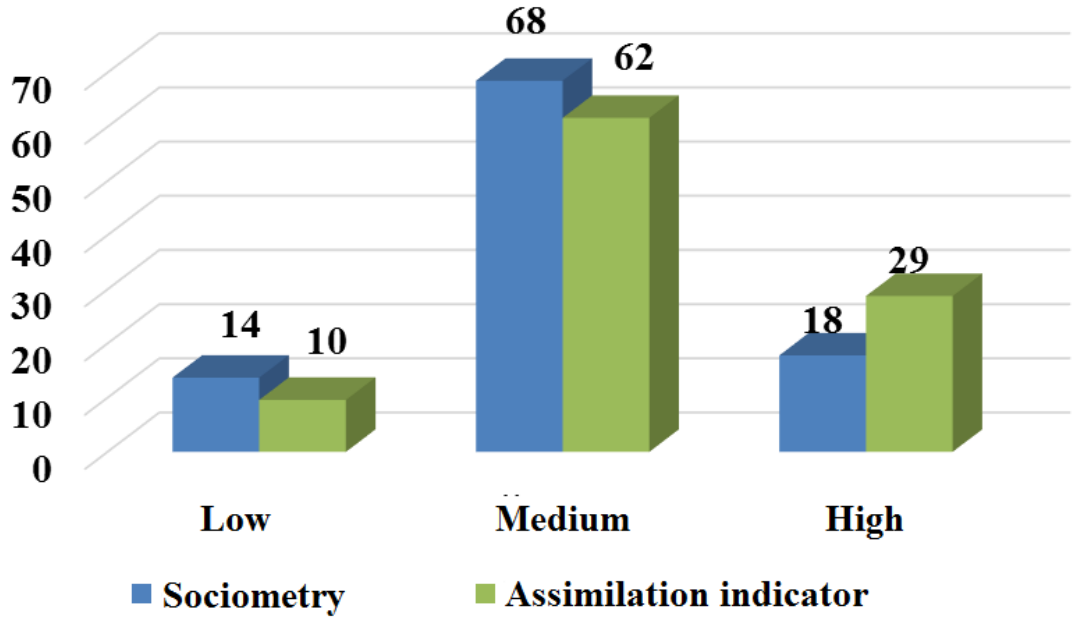
Table 5

| № | Level | Sociometry | | Assimilation indicator | |
|---|---|---|---|---|---|
| | | Quantity | Percentage | Quantity | Percentage |
| 1 | Low | 10 | 14 | 7 | 10 |
| 2 | Medium | 50 | 68 | 45 | 62 |
| 3 | High | 13 | 18 | 21 | 29 |
| Total: | | 73 | 100 | 73 | 100 |

The results of the sociometry method obtained from the respondents and the diagrammatic representation of the indicators of mastering the sciences were as follows (Diagram 3).

Diagram 3

**Indicators of students' mastery of sociometry and academic disciplines**




Correlation coefficients between the results of the method "Sociometry" conducted by students and the indicators of mastering the subject

Table 5

| № | Name of the conducted method and number of respondents | Assimilation indicator |
|---|---|---|
| 1 | Sociometry is the general result (n=73) | 0,247627* |
| 2 | 1 question (n=73) | 0,250816* |
| 3 | 2 question (n=73) | 0,030544 |
| 4 | 3 question (n=73) | 0,280472* |
| 5 | 4 question (n=73) | 0,242578* |
| 6 | 5 question (n=73) | 0,118797 |
| 7 | 6 question (n=73) | 0,147098 |

***p<0,05**

If we consider the correlation coefficients between the results of the method "Sociometry" conducted in students and the indicators of mastering the disciplines (Table 5), the correlation coefficient between the results of the method "Sociometry" and the indicators of students' mastery of disciplines had. It can be seen that the level of mental ability of students affects their level of mastery.

We also examined the extent to which each of the 6 questions in the Sociometry method had a correlation coefficient with students' mastery of the subject. According to the results of the study, there was a correlation coefficient between question 1 (the most intelligent, wise, humble and deep memory) and the performance of students ($r = 0.251$ ($p < 0.05$)). This means that students' intelligence, wisdom, humility and depth of memory have a positive effect on their mastery of the subject. Question 2 (good organizer, able to follow the majority, able to influence, distinguished from others by organizational activity) and the fact that students did not have a correlation coefficient ($r = 0.03$ ($p > 0.05$)). From this result, it can be seen that the organizing students are not always able to master the academic subjects in a positive way. Question 3 (those who have a strong will, work hard, do not shy away from hard work, difficulties) and had a correlation coefficient ($r = 0.28$ ($p < 0.05$)) between students' mastery of the subject. This means that students who have a strong will, work hard, do not shy away from hard work and difficulties, can positively master the sciences. Question 4 (those who are distinguished from others by their manners, self-control, good manners and demeanor) and the correlation coefficient ($r = 0.243$ ($p < 0.05$)) between the students' academic performance. From this result it is clear that well-mannered and well-mannered and well-mannered students can master the sciences positively. The study found that there was no reliable correlation between students 'creativity, new ideas, ability to give ideas, now responsiveness, ability to find solutions to problematic situations (Question 5), and academic performance. Perhaps this situation is related to the crisis situation during adolescence. There was also no reliable correlation between the performance of students (Question 6), who were stated to be self-developing in all respects, with the main goal of becoming a mature scientist, highly qualified specialist or head of a large organization in the future.

In conclusion, it can be said that students may not have the same performance in the process of mastering academic subjects. One of the main reasons for this may be the diversity of their individual characteristics. This phenomenon is explained by researchers by the level of intelligence, learning motivation, abilities, high self-esteem and psychological characteristics of students. It depends on how the abilities take place in the student's life value system and how it affects the development of his or her other personal qualities. In this case, it is necessary to distinguish relatively independent components in the structure of abilities, such as general intelligence, social intelligence and special abilities. From the statistical analysis of the results of the study, it became clear that a high level of ability has a positive impact on the success of educational activities. Low levels of ability, on the other hand, have been shown to have a negative impact on the successful sharing of learning activities in most cases.

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