

Diagnosis of giftedness of schoolchildren in Kazakhstan by the method of "Assessment of giftedness by an expert"

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Abstract. This article presents a new method "Assessment of giftedness by an expert", which highlights the following types of giftedness: academic giftedness, intellectual giftedness, creative giftedness, social giftedness. The presented methodology is designed to assess the giftedness of students in grades 3, 7, 10 and, accordingly, the questions are distributed considering age characteristics. School subject teachers and a psychologist are considered to be the experts in this methodology. The research involved 1200 Kazakhstani schoolchildren. The "Expert assessment of giftedness" method was conducted among 400 pupils of the 3rd grade, 400 pupils of the 7th grade, and 400 pupils of the 10th grade from 14 regions of Kazakhstan.

Key words: giftedness, the method "Assessment of giftedness by the expert", schoolchildren, academic giftedness, intellectual giftedness, creative giftedness, social giftedness.



1. Introduction.

Issues of giftedness are always relevant and important for any society. Kazakhstan is on its way to independent development of psychological science and creation of new approaches and tools of psychological science considering national mentality and peculiarities of different ethnic groups. The program of state support of gifted schoolchildren is approved in the country, in connection with which there is a need to study the potential of each child, and as the head of the state noticed, it is important to pay the most serious attention to the sports and creative potential of the younger generation[1]. Thus, the idea of developing a psychological toolkit to identify school giftedness was very timely.

In our study, we decided to develop and test a new method for identifying giftedness among Kazakh students. The object of the study was the giftedness of students in grades 3, 7, and 10, its types and main characteristics.

The purpose of the study is to develop a new method "Expert Assessment of Giftedness" for use by psychologists.

2. Materials and Methods.

To identify giftedness, we developed an instruction manual for experts and a questionnaire form. The main characteristics are given below.

Instruction: Dear 7th grade teacher! We present a psychological method "Assessment of giftedness by an expert", which allows you to identify intellectual, academic, creative, and social types of giftedness. We ask you, according to these statements, evaluate your students on a 10-ball scale: 0-4 - poor demonstration of giftedness quality, 5-7 - average manifestation of giftedness quality, 8-10 - high manifestation of giftedness quality.

Name of the student _____

School _____

City _____



No	Quality	Kazakh language, Kazakh literature	Russian Language and Literature	Foreign language	Algebra, Geometry	Computer Science	Chemistry	Physics	Biology	Geography	Psychology	Artistic work	History of Kazakhstan, World History, Fundamentals of Law	Physical Education	Self-Knowledge	Total score
1	Academic giftedness															
2	Creative giftedness															
3	Intellectual giftedness															
4	Social giftedness															

Four types of giftedness were identified in the table and their parameters.

1. Academic giftedness:

- Quickness of mind, logical and abstract thinking, rationality. Ability to model tasks in the mind, the structure of the sequence of algorithms of solution.
- Semantic memorization, rich vocabulary. High level of imagination development, impressionability, empathy, and interest in the characters of the stories.
- Active participation in projects related to animal protection, preservation, and love for wildlife. The use of environmentally friendly products.
- Always aware of the latest scientific discoveries, engaged in robotics, keen on creating their own websites, Internet pages.
- Fast mastering of digital sites Kundelik.kz, Zoom.
- Interest in other foreign languages, excellent knowledge of more than 2 languages, high level of visual and auditory memorization.
- Interest in laboratory research, obtaining solutions, chemical reactions, studying cells, studying human anatomy structure.
- Interest in poetry, ability to compose poems, scripting literary works.
- Developed creative, artistic abilities, sense of taste and style, designing layouts, design abilities, drafting skills.



- Aptitude for logical interpretation, knowledge of exact formulas, solving problems and examples, knowledge of the laws of physics, an orientation toward completeness and concreteness.

2. creative giftedness:

- Ability to plan own activities, presence of leadership qualities, ability to correctly set the task to the team, to supervise the task, to distribute responsibilities.
- Artistic ability, transfer of feelings to drawings, interest in drawings, graphics.
- Having musical abilities, sense of rhythm, composing music, musical ear.
- Active participation in dramatizations, concerts, free performance in front of the public, artistry, originality, emphasizing one's individuality.
- Ingenuity in the choice and use of various objects, the ability to think outside the box, to offer unexpected, original solutions.
- A keen interest in sports, active physical exercise, participation in sports competitions, endurance to physical exertion, following sports news.
- Interest in poetry, literature, composing poems, writing essays, analyzing the plot of different works, devoting free time to reading.
- Dancing ability, sense of rhythm, interest in different types of dance art.
- Color perception of objects, artistic ability, prevalence of drawing skills, ability to create an image by description, sense of taste and harmony, creation of something new, individual, original.
- Predominant oratorical quality, developed eloquence, participation in discussions, competitions, project defense.

3. Social giftedness:

- Easy to adapt in a new environment, feels comfortable among peers and in new environments among strangers.
- Capable of resolving conflict quickly, usually the first to make use of it.
- Has authority among his peers, and is often the focus of peer attention.
- Basically, shows empathy for others, and has a high level of empathy.
- Shows interest and is an organizer in many activities, is a leader in class, and is not shy to express his opinion.
- Finds common ground with strangers quickly. He is a sociable person.



- Capable of understanding another person's feelings and recognizing emotions.
- Most of his friends in his environment consider him to be an outgoing, cheerful, open person.
- Can understand relationship situations more often than others and is able to reason out any conflict situation and reconcile classmates.
- Classmates ask for advice, takes responsible decisions for a group of friends more often.

4. Intellectual giftedness:

- Can think logically and consistently. Reasoning and justifying questions, draws accurate conclusions.
- Can quickly remember and understand what he reads and does not need to be repeated.
- Can quickly switch and retain attention, maintain sequencing, and can easily return to a previous task.
- Finds alternative solutions quickly, does not get hung up on one option if something does not work, sees multiple solutions to one task.
- Has creative thinking, developed imagination, and solves complex problems with interest.
- Always demonstrates curiosity, strives to learn, and get more new knowledge.
- He quickly and well grasps the connection between subjects, between cause and effect, understands scientific literature and quotes it.
- Has a rich vocabulary.
- Fastly adapts to new conditions, invents the course of events, and is always open to new possibilities.
- Easily performs mental tasks, has a good memory.

A total of 1,200 Kazakhstani schoolchildren took part in the study. The "Expert Assessment of Giftedness" methodology was conducted on 400 pupils of the 3rd grade, 400 pupils of the 7th grade, and 400 pupils of the 10th grade from 14 regions of Kazakhstan.

3. Results.

During the survey, expert assessments were collected for all classes in Kazakh- and Russian-teaching schools.



In Table 1 and 2 we present the average values of distribution of expert assessments results in Kazakh- and Russian-teaching schools.

Table 1. Indicators for assessing the giftedness of students in grades 3,7,10 in Kazakh schools.

№	Class	Academic giftedness	Creative giftedness	Social giftedness	Intellectual giftedness	Average for all types of giftedness
1	3rd grade	7,4	7,4	7,5	7,5	7,45
2	7th grade	7,7	7,6	7,9	7,7	7,7
3	10th grade	7,7	7,5	7,6	7,6	7,6

Table 2. Giftedness assessment indicators for students in grades 3,7,10 in Russian schools.

№	Class	Academic giftedness	Creative giftedness	Social giftedness	Intellectual giftedness	Average for all types of giftedness
1	3rd grade	7	7,3	7,2	7,1	7,1
2	7th grade	6,7	6,7	6,8	6,8	6,8
3	10th grade	6,7	6,6	7,3	6,9	6,9

Table 3. High scores for giftedness and the percentage of students in grades 3,7,10 in Kazakh schools.

№	Class	Academic giftedness	Creative giftedness	Social giftedness	Intellectual giftedness
1	3rd grade	-	-	-	-
2	7th grade	8,7 (47%)	8,8 (50%)	8,9 (64%)	8,8 (62%)
3	10th grade	8,3 (33,5%)	8,6 (24%)	8,5 (38%.)	8,3 (41%)

Table 4. High giftedness scores and percentages of students in grades 3,7,10 in Russian schools.

№	Class	Academic giftedness	Creative giftedness	Social giftedness	Intellectual giftedness
1	3rd grade	8,8 (26%)	-	8,8 (22%)	9,1 (31%)
2	7th grade	8,5 (7,6%)	8,5 (7,6%)	8,4 (6,3%.)	8,3 (7%)
3	10th grade	8,4 (5%)	8,2 (4%)	8,5 (5%)	8,4 (5%)

**Table 5. Low giftedness scores and percentages of students in grades 3,7,10 in Kazakh schools.**

№	Class	Academic giftedness	Creative giftedness	Social giftedness	Intellectual giftedness
1	3rd grade	-	-	-	-
2	7th grade	-	-	-	-
3	10th grade	4,6 (0,4%)	4.6 (1,3%)	4,8 (0,4%)	-

Table 6. Low giftedness scores and percentages of students in grades 3,7,10 in Russian schools.

№	Class	Academic giftedness	Creative giftedness	Social giftedness	Intellectual giftedness
1	3rd grade	4 (22%)	-	4,3 (2%)	4 (23%)
2	7th grade	4,6 (4%)	4,7 (3%)	-	-
3	10th grade	4,2 (9,4%)	4,2 (12,5%)	4,6 (0,8%)	-

As we can see in the tables, the results of the survey and the experts' evaluation of giftedness indicators have different values between schools with state language of instruction and Russian language of instruction. In the future, we plan to check the normal distribution in the SPSS program.

4. Discussion.

The average values of giftedness, according to the language of instruction, have an insignificant difference, but are within the limits of the average value indicated by us in the instructions scale and are equal in Kazakh schools from 7.4 to 7.9, in Russian from 6.6% to 7.3%.

The low rates of assessment of giftedness and the percentage of students in grades 3, 7, 10 in Kazakh schools is absent, but in Russian schools this indicator is reflected in the results and ranges from 1% to 22% percent, depending on the type of giftedness.

The high scores of giftedness and the percentage of students in grades 3, 7, 10 of Kazakh schools is not noted in the elementary schools, but in the secondary and high schools has a significant figure from 47% to 64% in grade 7, 24% to 41% in grade 10, in connection with which we decided to test the normal distribution in SPSS.



In Russian language schools, on the contrary, there was an increase from 22% to 31% and from 5% to 7.6% in the elementary school.

Thus, our method has according to the scale of intervals three sections of measurement, low, medium, and high, which are confirmed by the results of the application of expert evaluation on a sample of 1200 schoolchildren and is recommended for use in psychological practice. The significance of the work lies in the fact that for the first time the method of "Assessment of giftedness by an expert" was tested on a sample of Kazakhstan's choice.

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6. Conflict of Interests.

Funders were not involved in the study design; in the collection, analysis or interpretation of data; in the writing of the article and in the decision to publish the results.

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