

# The Possibilities of Developing Students' Intelligence

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## ABSTRACT

In this article, we also found it necessary to focus on the study of intelligence in private, synchronized with the general intelligence of students. To do this, we used their understanding of complex logical relationships and abstract relationships in the "complex analogies" test, the "identification of essential features" test of how thinking behaves when solving problems related to concepts, the "study of visual intelligence" test, which processes and logically summarizes information through vision, as well as the "study applied intelligence" in assessing the level of development of applied intelligence. The results of the tests are given. Pedagogical innovation has a positive effect on the person receiving education, especially on his mental progress. The degree of this influence depends on several factors, including the individual-psychological characteristics of the receiving person, the successful structure of the program of pedagogical technologies, as well as the educational person and his training, which are influenced by pedagogical technologies.

**Key words:** pedagogic innovations, opinion, intelligence, ability

## INTRODUCTION

Despite the fact that in the science of psychology there are a number of scientific concepts about intelligence and intellectual activity, scientific research in this regard, regardless of some contradictory cases, serves to determine a person's mental progress, predict it, measure it, reform the path and means of development. Since the indicator of intelligence and intellectual ability (coefficient) in most cases is measured by tests, tests, test surveys and test complexes (complexes, batteries) are often created by representatives of foreign psychology, in most of them the principles of test composition are fully observed and can meet all their requirements, they are very convenient, purposeful to adapt to local, godly environments and conditions.

The organization of activities based on pedagogic innovations is individual and creative in nature. At the same time, the use of new pedagogical technologies in establishing the educational and educational process can be a factor that positively affects the formation of personality traits, the development of general and emotional types of intelligence. This allows students to develop their personality and adapt.

## METHODS

The article diagnoses the intelligence of students in several ways. When measuring the levels of development of intellectual actions in the performance of various mental tasks, they were used to determine indicators of mental operations, types of thinking, attitudes to conclusions and logical patterns, the state of information in the process of its vision and practical implementation. The first indicator of students' own intelligence is what is reflected in the test results by analogy. According to the nature of the test, 20 pairs of words were presented to assess whether students understood complex logical relationships and abstract dependencies. Their task, on the other hand, was to determine the logical dependence of the six types.

Despite the fact that in the science of psychology there are a number of scientific concepts about intelligence and intellectual activity, scientific research in this regard, regardless of some contradictory cases, serves to determine a person's mental progress, predict it, measure it, reform the path and means of development. Since the indicator of intelligence and intellectual ability (coefficient) in most cases is measured by tests, tests, test surveys and test complexes (complexes, batteries) are often created by representatives of foreign psychology, in most of them the principles of test composition are fully observed and can meet all their requirements, they are very convenient, purposeful to adapt to local,

godly environments and conditions. A specific psychological approach to the educational process encourages students to think independently, to freely state their opinion. This serves as a factor in the development of students' intellectual abilities. From the results of our study, we can conclude that the choice of interactive educational methods is more influenced by the level of social activity of students than by the general intellect of them. Such a situation will be an important factor in the formation of the personality of students, increasing the level of social and emotional intelligence. The organization of pedagogical activity on the basis of a technological approach is individual and creative in nature. At the same time, the use of new pedagogical technologies in establishing the educational and educational process is a factor that positively affects the formation of personality traits, the development of types of social and emotional intelligence. The organization of activities based on pedagogic innovations is individual and creative in nature. At the same time, the use of new pedagogical technologies in establishing the educational and educational process can be a factor that positively affects the formation of personality traits, the development of general and emotional types of intelligence. This allows students to develop their personality and adapt. Pedagogical innovation has a positive effect on the person receiving education, especially on his mental progress. The degree of this influence depends on several factors, including the individual-psychological characteristics of the receiving person, the successful structure of the program of pedagogical technologies, as well as the educational person and his training, which are influenced by pedagogical technologies.

## RESULTS AND DISCUSSION

The first of the students' private intelligence indicators is reflected in the results of the analogy test. According to the nature of the test, 20 pairs of words were presented in students to assess their understanding of complex logical relationships and abstract correlations. Their task was to determine a logical link of six types.

**Table 1.** Results of the diagnosis of pupil intelligence

Types of intelligence	M	U
Analogy	5,85	1,45
Separation of concepts according to their important signs	5,39	2,03
Visual intelligence	28,42	3,25
Applied Intelligence	17,17	2,79

According to the results of the first test, the indicators of students in terms of their ability to identify logical dependencies are on average-theecan ( $5.85 \pm 1.45$ ) (Table 3.1). It can be seen from this that, although they have their own understanding of logical assignments, they have allowed diligence in the execution of certain tasks, haste in reasoning, rather than gathering thoughts together, the witness that it has dispersed has been divided. Perhaps this is due to the short length of time given to complete the test task and the inability to find an opportunity for operational thinking. We believe that in the diagnostics of the general intelligence of students, assignments based on the principle of analogy, the positivity of their results is mentioned, and a slight tendency to sluggishness in determining complex logical dependencies should not remain a basis for a negative assessment. While the two-case assignments also involve finding an analogy, when the first-case principle goes to the same continuum (by forms), typifying them in the representation of the logical connection with the concepts (separating belonging to the six types) may have led to a distraction of readers' opinion. But the results are generally limited by the average level of progress.

Being able to distinguish students according to important signs of concepts indicators ( $5.369 \pm 2.03$ ) are slightly higher than the average, indicating that thinking in a clear - situational style prevails over abstract, logical observation. In fact, students would have to move from clear situational reasoning to abstract-logical observation in the process of education and mastering their exact subjects. Perhaps this is due to the fact that when educators take into account the organization of the educational process, they also achieve a transition to abstract-logical thinking in situational thinking in students. Because, mastering professional concepts and terms, interpreting them, describing them and being able to give examples in a suitable way depends on the share of abstract reasoning.

The role of visual intelligence is important in students' (visual) processing and logical inference of information through vision. The results of studies of visual intelligence in students also showed that it was at a level close to average ( $28.42 \pm 2.03$ ). Spatial objects, illustrations, graphics and drawings in the mental growth of an individual in the educational process, concussions that are allowed in the visual presentation of models are causing students not to look positive in the formation of visual intelligence. The importance

of the visual presentation of information presented in modern pedagogical Technologies is constantly being emphasized. In this regard, it is necessary to support the correction of shortcomings in the organization of exhibition issues in the activities of educators in public educational institutions.

The criterion for assessing the level of intelligence in this methodology, in addition to the correct execution of tasks, takes into account the time spent on their execution. In the process of completing the second and third tasks, a need arises from students for observation, operability and visual reasoning, in addition to the analysis and synthesis operations of thinking. In this aspect, students had to spend too much time completing assignments. We also approached the issue with a comprehensive approach and approached the analysis of the intelligences of students of a deepened school and academic Lyceum in relation to their sexual differences (table 2).

**Table 2.** Results of the diagnosis of pupil intelligence

	Boy		Girl		t
	M	u	M	u	
Analogy	5,36	1,20	6,68	1,50	2,89*
Separation of concepts according to their important signs	5,37	1,90	5,45	2,14	-0,162
Visual intelligence	29,12	2,62	27,73	3,67	1,82*
Applied Intelligence	15,46	1,68	18,88	2,64	-9,60***
* $p < 0.05$ ; *** $p < 0.001$ .					

One thing we must admit. Discrepancies were observed in the private cases of visual ( $p < 0.05$ ) and practical intelligence ( $p < 0.001$ ) indicators of male ( $29.12 \pm 2.62$ ;  $15.46 \pm 1.68$ ) and female ( $27.73 \pm 3.67$ ;  $18.88 \pm 2.64$ ) pupils. To this we recognize that practical assignments in male students can be due to aspects of accomplishment through hand motor skills or because they carry out assignments in everyday life in a practical way. It would be the reason that female students are some time away from this situation that makes them focus more on abstract-logical issues in everyday life.

We have identified correlational relationships between indicators, focusing on ensuring the continuity of the results of our experience and studying the lessons of the relationship between the characteristics of students' intelligence, their internal involvement. The results in this regard were studied on the basis of the relationship between the general intelligence of students and other intelligence characteristics in terms of their general and sexual differences.

Connections between the general intelligence of students and their analogy, separation of concepts according to important signs, visual thinking were not observed. (Table 3).

**Table 3.** Correlation relationship between all intelligence indicators of students

	Total	Analogy	Separation of concepts according to their important signs	Vizual intellekt	Applied Intelligence
Total	1	-0,118	0,107	0,096	-0,272**
Analogy		1	-0,234*	-0,159	0,051
Separation of concepts according to their important signs			1	-0,291**	-0,070
Visual intelligence				1	-0,148
Applied Intelligence					1

An inverse relationship was observed between general and practical intelligence ( $r = 0.272$ ,  $p < 0.01$ ). This can also be due to discrepancies in the performance of practical intelligence tasks with tasks for measuring the mental abilities of students. There is also a similarity aspect between the two orientation assignments, that is, assignments were made on figures, and in the first, similarities between figures, discrepancies, grouping them and ensuring traceability were done visually, but through reasoning. Tasks

for the study of practical intelligence were also carried out on figures, ensuring consistency through observation, agility and vision were carried out on the basis of practical, psychomotoric principles. In the second correlation link observed in general results, too, the ability to separate concepts according to their important signs has formed a link with visual intelligence, but has an inverse link ( $r=-0.291$ ,  $p<0.01$ ). If it is necessary to ensure continuous communication of the intellectual capabilities of the individual in all aspects, this can be achieved due to the features associated with cognitive processes, special training and development of operations. To do this, it will be necessary for students to develop psychological training programs and create methodological guidelines for the development of Special Intelligence.

**Table 4.** Link between intellectual performance of student girls

	Total	Analogy	Separation of concepts according to their important signs	Visual intelligence	Applied Intelligence
Total	1	-0,037	0,052	-0,245	-0,065
Analogy		1	0,482**	0,451**	0,060
Separation of concepts according to their important signs			1	0,375**	0,203
Visual intelligence				1	0,345*
Applied Intelligence					1
* $p<0.05$ ; ** $p<0.01$					

It was also achieved to identify specificity in the intellectual characteristics of schoolgirls. In their intellect, several correlation coefficients were observed, which had an internal relationship with each other. In student Girls, a positive relationship was determined between complex logical relationships in this regard and the ability to distinguish significant ones from secondary, insignificant event-phenomena and objects ( $r=0.482$ ,  $p<0.01$ ), with the ability to make logical conclusions and visual processing of information, that is, visual intelligence, with the ability to distinguish significant ones from

This is evidenced by the high participation of sensory processes in the intelligence of schoolgirls. They even found that the condition not observed in other results of our study was that the ability to distinguish important signs and symptoms of events from insignificant ones was able to form an internal relationship with visual intelligence as well ( $r=0.375$ ,  $p<0.01$ ). So, such connections among the intelligences of schoolgirls mean that they strive to realize their potential in the educational process. As in the analysis of our previous results, the relationship between visual and practical intelligences remained true to its trend ( $r=0.345$ ,  $p<0.05$ ).

And in the results of the student guys, in a different way from the representatives of the opposite sex, general intelligence was able to reflect a positive and correct internal relationship with practical intelligence ( $r=0.374$ ,  $p<0.05$ ). It can be seen from this that the ability to observe, combine, abstract, group in general intelligence, in turn, was facilitated in the process of working with figures in practical intelligence assignments. Such achievements of students were accompanied by complex analogies, their ability to excite concepts according to important signs, their intellect would lead to the manifestation of a higher level of presentability in relation to the requirements imposed in the educational process.

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