

# Practical Proposals and Results of The Science And Pisa International Assessment Programs for The Development of Natural Literacy of Pupils in Uzbekistan

Mirzaeva Nodira Abdukhamidovna

Tashkent region Chirchik, State Pedagogical Institute,  
Teacher of the Department Of genetics and evolution of biology

[nodirabegim.2018@mail.ru](mailto:nodirabegim.2018@mail.ru)

+998909611067

**Abstract:** *The article describes the assessment of the quality of education in Uzbekistan within the framework of the international program PISA for 2022, as well as the implementation and results of international assessment programs with its participation. Tasks and developments were given by the State Quality Control of Education on the topic "participation in international research-a factor in the development of human capital" to improve the national system for assessing student literacy and the practical implementation of the science and international PISA assessment programs.*

**keywords:** students, natural literacy, SCEINCE, Pisa assignments, National system, Biology, International assessment programs, basic schools.

## INTRODUCTION.

Decree of the president of the Republic of Uzbekistan "on measures to ensure more effective organization of international research in the field of assessing the quality of education in the system of Public Education" No. 997 adopted in 08.12.2018, is the priority goal of organizing international research in the field of assessing the quality of education in the system of public

In this regard, Progress in international reading and Literacy Study (PIRLS) on international assessment programmes — in order to assess the level of reading and understanding of text in primary 4th graders, Trends in International Mathematics and Science Study (TIMSS)-in order to assess the level of mastering of mathematics and Natural Sciences in 4th and 8th graders, The Programme for International Student Assessment (PISA) — Learning International survey (Talis) — international research for the study of the teaching and learning environment and the working conditions of teachers is organized in the general secondary educational institutions of the head and teaching staff.

## LITERATURE REVIEW

Students of our country will participate in the major international research - PISA program on the assessment of the quality of education in 2021. This study will also provide us with valuable information and analysis that will motivate us to carry out major reforms in the educational system, as well as to compare the level of knowledge of students of our country with the knowledge of children of the world. That is, Uzbekistan will also be represented in the PISA rating in 2021 among 85 countries. This in turn encourages students with 15 years of age in our country to be adequately prepared for the study.

The PISA international research program, organized by the organization for Economic Cooperation and Development (OECD), provides analytical and comparative data on the general secondary education system, as well as important information on the decision-making of countries' educational policies. The PISA study, which has been conducted every 3 years since 2000, assesses the literacy of 15-year-old students in the areas of reading, mathematics and Natural Sciences. In the 2018 year of research, 600 thousand readers from 79 countries took part, the highest places in the ranking were China and Singapore, while the countries of Kosovo, Dominican Republic and the Philippines were among the last in line.

## DISCUSSION.

In order to improve the national system of assessment of literacy of students, systematically conduct tests aimed at assessing the formation of practical skills in 2019 — 2021, scientific practical seminars named "the role and importance of base schools in preparation for international studies" were organized by The Tashkent Regional Department of public education of the state Academy of control of quality of Education.

Systematically conducting tests aimed at improving the national system of assessment of literacy of students established in the Yangiyul District of Tashkent region and assessing the formation of practical skills in 2019-2021 years, carrying out scientific research aimed at the development and introduction of innovative methods of development of literacy level in natural sciences, based on the results of International Studies, master classes were organized in order to create a national database of questions on the directions of international research evaluation programs in the subjects of Natural Sciences and integration into educational programs, as well as to improve the skills of teachers of secondary schools attached to the base schools.



Picture 1. Fragments from the PISA training

The natural-scientific worldview of students is a system of compartments for the preservation of the role of living organisms in the organic world, the preservation of biodiversity, the attitude of individuals to the surrounding reality, self-esteem, scientific views, bioecology, understanding and analysis of the "nature-society – human" coevolution. The worldview is a reflection of the landscape of the organic world in the human mind, which means the existence of an independent life and the direction of future professional activity as a sum of the philosophical, scientific, socio-political, moral, aesthetic system of views, which the individual has mastered throughout his life .

The development of natural literacy in students is a specific complex pedagogical process, a single scientific mind, a culture of thinking, emotions and emotional relationships, the ability to strive for a goal and to operate independently are decided.

It is worthwhile to study the taxonomies of pedagogical psychologists who have studied well-known educational methods in the development of the level of natural literacy of international research programs. D.Kolb taxonomy is the basis of PISA. The basis of the International Assessment Program is knowledge of experiments and Natural Science, logical thinking. D. development of natural literacy in students.Kolb and B.Based on the integration of the Blum taxonomy, the logically structured task and assignments will be the basis for students ' interest rates to go up.

#### RESULTS.

The ability of students to conduct mathematical reasoning on various issues, to apply mathematical knowledge in solving the problem, and to be able to use the solution of the problem in the interpretation and evaluation of the Real situation "mathematical literacy", when a person develops his knowledge and potential, to understand, use texts in order to achieve the goal of finding his place in society, , the ability to solve problems related to natural sciences as an active person is called "natural-scientific literacy". Creative thinking also means the ability of readers to create different ideas, to find effective, original and innovative solutions to the problem as a result of reflection on ideas. Below are the PISA assignments and CAS tasks based on the 11th grade biology textbook that focuses on the development of students 'natural literacy as logical tasks in the acquisition of students' natural literacy.

Scientists from the University of Utah, on the principle of Garrison, studied parasites in pigeons. According to the principle of Garrison, the larger the volume of the boss's body, the parasites in it will be both large and large. In the experiment, the parazitlarni 60 generation in the wild and pedigree pigeon body was seen to multiplytirib. From four years of experience, they found that the hares of the two groups of birds differ in size. But scientists did not breed when combining males and females of different sizes, which was proof of a new species dressing. The study was an experimental confirmation of the concept of dressing ecological species proposed by Charles Darwin.



Picture 2. Parasites in pigeons

1-question. In animal evolution Ch.What was Darwin's vision?

2-question. how does the presence of an ecological species dressing affect the evolutionary specialization and transformation of the animal world?

#### CONCLUSION.

"In order to progress, there has been something in the pisa assignments and issue that has been set up for the students, how necessary and necessary is the natural-scientific literacy in the acquisition of digital knowledge and modern information technologies and the rise of human capital. Logical issues ma exercises in the coverage of natural scientific literacy of students are manifested in the integration of their imagination about organic olam with modern knowledge. This gives us the opportunity to go through the shortest path of Ascension.

### Literature

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