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### DEVELOPING PUPILS' INTELLECTUAL COMPETENCES THROUGH INTERNATIONAL ASSESSMENT PROGRAMS

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**Abstract.** The article provides information on the content and essence of international assessment programs such as PISA, PIRLS, EGMA, EGRA, TIMSS and TALIS, discusses the issues of developing students' intellectual potential through international assessment programs. Also, government decisions within the framework of international assessment programs and their content are taken into account.

**Keywords:** international assessment programs, PISA, PIRLS, EGMA, EGRA, TIMSS, education, intellectual potential, foreign experience.

### РАЗВИТИЕ ИНТЕЛЛЕКТУАЛЬНЫХ КОМПЕТЕНЦИЙ УЧАЩИХСЯ ПОСРЕДСТВОМ МЕЖДУНАРОДНЫХ ПРОГРАММ ОЦЕНКИ

Абстрактный. В статье представлена информация о содержании и сути международных программ оценки, таких как PISA, PIRLS, EGMA, EGRA, TIMSS, а также рассматриваются вопросы развития интеллектуального потенциала учащихся посредством международных программ оценки. Правительственные решения и их содержание также учитываются в рамках международных программ оценки.

Ключевые слова: международные программы оценки, PISA, PIRLS, EGMA, EGRA, TIMSS, TALIS, образование, интеллектуальный потенциал, зарубежный опыт.

**INTRODUCTION** : Education is an important process in the life of each of us. It plays an important role not only in personal development, but also in social development, helping a



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person find his place in life. Education is the process of transferring knowledge, preparing students for life, developing thinking skills and teaching them independent thinking.

It would not be an exaggeration to say that today the educational process has become an integral part of our lives. Indeed, today civilization has reached its peak, and in order to adapt to the demands of time and the world, develop and become a qualified specialist in your profession, education must be continuous and of high quality. In order to improve the quality of education, it is important to study foreign experience, use its necessary parts that are suitable for our mentality, conduct a comparative analysis of the education systems of Uzbekistan and abroad, and establish cooperation with international educational organizations. The organization of the educational process on the basis of international cooperation is of great importance in the training of competitive personnel and the comprehensive development of the country. Review of relevant literature: The article uses the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 997 "On measures to organize international research in the field of assessing the quality of education in the public education system", as well as the work of U. Ismatov "International experience of assessment and its role in education" and related articles in the introduction to the article.

#### **Research Methodology**

Several international assessment programs have been implemented to improve the quality of education, compare education systems of countries around the world, eliminate shortcomings in the education system, determine the level of students' knowledge, educate a new generation of creative thinkers and increase their intellectual potential. Each of these programs has its own place and is carried out by age or class, assessing students in a specific subject. Below we will present several international assessment programs:

PISA (Programme for International Student Assessment) is a program that assesses the knowledge of 15-year-old students in reading, mathematics and natural sciences. This program was introduced in 1997 and was first conducted in 2000. The frequency is 3 years. The PISA survey is organized in partnership with the OECD (Organization for Economic Co-operation and Development). The survey asks questions on reading, mathematics and science, and tests students' ability to apply and use their knowledge in practice. PISA questions have 4 answer formats:

1. Single-answer tests;



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2. Multiple-choice tests;

3. Short- or long-answer questions;

4. Student opinion on the issue, i.e. the ability to apply their knowledge in life.

The PISA survey not only tests students' knowledge, but also encourages them to think creatively

PIRLS (Progress in International Reading Literacy Study) is a program that assesses the reading literacy and reading comprehension of 4th grade students, and its frequency is 5 years. The PIRLS study was first conducted in 2001. The international assessment program PIRLS is conducted by the IEA (International Association for the Evaluation of Educational Achievement). The PIRLS study allows for international comparisons of the reading skills and reading comprehension of primary school students. During the study, students are provided with a text. The text will consist of an average of 500-800 words and 400-500 words for countries with low reading literacy levels. The first PIRLS study in 2001 included 35 countries. The 2021 PIRLS study has expanded its coverage and now includes 57 countries. Uzbekistan also participated in the 2021 PIRLS study for the first time. EGMA (Early Grade Mathematics Assessment) is a program that assesses the knowledge and skills acquired by primary school students in mathematics. The main goal of EGMA is to develop logical thinking skills, develop mental arithmetic and improve mathematical literacy of students in grades 2-4. The study is conducted by USAID (United States Agency for International Development). EGMA questions are divided into the following types:

- Number identification (number detection);
- Thinking about size;
- Addition and subtraction, etc.

EGRA (Early Grade Reading Assessment) is a survey that measures the reading literacy of primary school students and was first developed in 2006. To date, the survey has been conducted in more than 70 countries. The goal of the study is to determine how reading skills are developing, to determine reading literacy and to conduct a comparative analysis. The EGRA survey is conducted individually, a specially formed committee consists of a researcher and a student. It would not be an exaggeration to say that the international assessment program EGRA is a preparatory stage for the PIRLS study. However, EGMA, unlike PIRLS, is taken orally. The study identified the following student abilities:



- The student's ability to understand the text he or she is reading;
- The student's ability to read the text and answer questions about the text;
- The ability to pronounce sounds correctly, read fluently and expressively.

TIMSS (Trends in International Mathematics and Science Studies) - assesses the achievements of students in grades 4 and 8 in mathematics and natural sciences. TIMSS is organized by the IEA (International Association for the Evaluation of Educational Achievement). The TIMSS survey is conducted every 4 years. The first periodical edition was founded in 1995. TIMSS assesses the knowledge and skills, academic performance and interests of students in grades 4–8 in mathematics and natural sciences. The methods of the international assessment study TIMSS include:

- Positive test results;
- Surveys;
- Methodological support;
- Software.

TIMSS not only assesses students, but also studies factors related to the learning process, educational content, teacher capabilities, and student families.

The above-mentioned international assessment programs play an important role in enhancing students' intellectual potential. These programs test the effectiveness of the education system by assessing knowledge and skills based on global standards. In addition, by studying international experience and implementing the best system, students not only gain knowledge, but also develop analytical, problem-solving, and creative thinking skills. International assessment programs are an essential tool for improving the quality of the educational process and maximizing students' potential.

#### ANALYSIS AND RESULTS

International assessment programs compare education systems and student learning levels in different countries and record the results. Uzbekistan also participates in international assessment programs for its education system. In particular, Uzbekistan took part in the TIMSS 2023 study for the first time. As a result, 8th-grade students took 39th place out of 44 countries, and 4th-grade students took 50th place out of 58 countries.



The country also took part in the PISA 2022 study, ranking 72nd out of 81 countries in mathematics and 80th in science. It is no exaggeration to say that the results clearly demonstrate the shortcomings in our country's education system.

In order to organize international research in the field of assessing the quality of education in the public education system of the republic, establishing international relations, comprehensive support and stimulation of research and innovation activities of students and youth, and above all, creative ideas and creativity of the younger generation, the Cabinet of Ministers of the Republic of Uzbekistan adopted Resolution No. 997 of 2018. The main tasks and areas of activity of the National Center for International Studies of Education Quality Assessment under the State Inspectorate for Quality Control in Education for participation in international studies on the above-mentioned international assessment programs are:

noted.

• Uzbekistan in the organization and coordination of international research

Participate as a national representative of the Republic;

• in the education system, reading, mathematics and natural sciences

development of innovative methods for improving literacy and

conducting scientific research aimed at implementation;

• establishing international relations in the field of education quality assessment, international

development and implementation of projects, international scientific conferences and participation in organizing and holding symposia;

• conducting fundamental and applied research in the field of education quality assessment;

• conducting research on education quality assessment, scientifically and methodologically

support;

• participation of general secondary education institutions in international studies ensuring successful participation;

• Registered in international assessment programs of the Republic of Uzbekistan



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comparative comparison of results with the results of other countries;

• systematic implementation of international assessment programs in the educational process

monitoring, dissemination of best practices in this area, as well as

in the development of recommendations and guidelines for educational institutions based

on

participation;

• study using innovative teaching methods,

teaching staff in mathematics and natural sciences

Preparation of educational and methodological recommendations for advanced training.

To this end, a study of the abilities and talents of first-year students of general secondary education institutions will be conducted jointly with the National Center by February 1, 2019.

Identify and develop literacy skills of students, starting from the 1st grade participation in international assessment programs and competitions

A number of tasks were set for the development of the support program.

• based on the results of international studies on reading, mathematics and

natural science programs and educational literature

make changes and additions to the content;

• issues in the field of international research assessment programs

creation of a national database and its integration into curricula;

 improvement of the national system for assessing student literacy and assess the formation of practical skills in the 2019-2021 academic year systematic conduct of target tests;

 issues in the field of international research assessment programs additional methodological manual based on the curriculum it includes and creation of literature;

• The Republic of Karakalpakstan, regional centers and the city of Tashkent



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and conduct international research in each district (city)

Definition of target basic schools;

• prepare talented teachers in secondary schools around the world

participation in scientific research on assessment programs;

• equipping general secondary education institutions with modern information and communication technologies

equipped with tools and connected to the World Wide Web

inventory of the situation and elimination of existing problems

take action;

The decisions taken serve to assess the quality of education in our country and increase its status in the international arena. Also, based on the decisions taken, the education system in schools will gradually develop according to the model of the education systems of developed countries. As a result, Uzbekistan also demonstrates high results in international assessment programs.

The main goal of participation in scientific research is not only to achieve high results, but also to eliminate shortcomings in the education system, develop the intellectual potential of students. The main goal of international assessment programs is to stimulate students' creative thinking, increase their intellectual potential, acquire modern knowledge and prepare competitive personnel.

If we turn to the questions of international assessment programs, the question posed in the PISA study in natural sciences sounds like this: how do you imagine the bicycle of the future? Describe your vision of the bicycle of the future.

It is through this single question that students are encouraged to think, imagine, using theoretical knowledge, and express their inner world outwardly. In addition to developing thinking, the study is aimed at increasing students' intellectual abilities through open questions, choosing the right answer from several and making informed decisions.

#### **CONCLUSION :**



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The above studies are very important for the education system and allow improving the quality of education by assessing and monitoring the development of the education sector, as in foreign countries, as well as implementing a modern and optimal education system using digital technologies. It is important to introduce new assessment criteria into the education system of Uzbekistan, taking a step forward, using international experience.

The implemented reforms not only contribute to achieving high ratings in international studies, but also to increasing the intellectual potential of students. After all, all the reforms that are being implemented today are the cornerstone for the future generation, for the youth of the new era.

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