



## **MONITORING OF FUNCTIONAL LITERACY FORMATION: MAIN DIRECTIONS AND PRELIMINARY RESULTS**

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### **Annotation**

In the article, we present the early results of the first analysis of functional literacy, evaluated with the help of the "Stesting" electronic platform. Through the analysis, the problems faced by students at the level of literacy and their causes have been discussed.

**Keywords:** STesting, electronic platform, PISA research, functional literacy, diagnostic results

### **Relevance of the Topic:**

Recent years a lot of changes have taken place in all sphere, including education in Uzbekistan. Nowadays Uzbekistan is the transformation phase, the approved Decrees, Resolutions of the President of the Republic of Uzbekistan and other legal and practical activities directed to build new era for the country and its nation. It is not secret that the education is the key point the future prosperity of any country. And, the quality of school education is the core root for development. In this regard, to improve the quality of school education is the prior task for all people who live in the country. The action includes any stage of the activities, such as introducing advanced teaching and learning technologies, methods and techniques, training and upgrading teacher's professional knowledge and skills, studying advanced international foreign experience, adapt and introduce into the education system, as well as fostering established a new monitoring system for evaluating the quality of education, based on identification and comparison with the help of international assessment programs.

Towards this goal, the decision of the Government of the Republic of Uzbekistan was adopted, and in accordance with it, the tasks of ensuring the participation of general education institutions of the Republic of Uzbekistan in the International programs as Program for International Student Assessment - PISA, PIRLS – Progress in





International Reading Literacy Study, Trends in International Mathematics and Science Study - TIMSS, and in Teaching and Learning International Survey - TALIS. On the basis of the "Concept of Development of the public education system of the Republic of Uzbekistan until 2030", the issue of participation in these programs has been reinforced. According to the target indicators of the concept, in the rating of the PISA assessment program, the goals of Uzbekistan to enter the ranks of the first 30 advanced countries by 2030 have been put forward.

Under these target indicators, the following goals as developing the national education system of Uzbekistan, increasing its reputation, and creating a national assessment system aimed at assessing the literacy level of students in reading, mathematics and sciences have been put forward.

Since the international studies on the assessment of the quality of education are new for the educational system of Uzbekistan, and in 2021 and 2022 the students' first time participation in them, it is very important to increase the awareness of teachers and students of educational institutions, employees of the educational system and parents about the content and concept of these programs,

### **The Main Part**

It was expected that a number of problems would appear in order to ensure the appropriate participation of the students of our country, who are participating in international assessment programs as it was the first year participation that we mentioned above. In particular, the fact that the relevant educational curriculum and programs in practice do not match to the PISA programs, and the tests and assignments of the international assessment programs are aimed at assessing not only knowledge and comprehension, but also their application to life situations, that is, they are different from the usual issues presented in our textbooks - mathematics, reading and when performing tasks designed to assess comprehension and skills on literacy of science, and creative thinking. For doing such type of assignments students face the following difficulties:

- The unusualness and complexity of expressing and reflecting the problematic situation in scientific language, which is described in the context;
- The complexity of the problem solution method (from single-stage to multi-stage);
- Providing information about the presented situation in unusual and different ways;
- The large size of the text described the presented situation;





- Providing more than essential information in the context and difficulties in extracting the necessary ones from among them;
- The uncertainty of which unit of the subject the content of the tasks belongs to;
- Conducting tests on a computer;
- Complexity of logical thinking in some assignments.

For the purpose of formulating skills in working with tests and assignments within the framework of international assessment programs PISA, PIRLS and TIMSS, training of teachers and students, enhancing their knowledge, skills and competencies, as well as developing students' creative and cognitive thinking and improving their literacy in relevant subjects, and in order to develop their literacy and provide practical and methodological support to teachers, "STesting" electronic platform (<https://stesting.uz>) was developed by National Research Institute (NRI) named after A.Avloniy.

"STesting" is an innovative platform that includes an electronic system and videos aimed at forming students' skills in working with assignments within the framework of international assessment programs (PISA, TIMSS, PIRLS).

Through the STesting electronic platform, teachers and students can test their knowledge in an electronic testing system that incorporates the tasks of international assessment programs, and parents can familiarize themselves with video products designed for them. This is an opportunity for them to get acquainted and prepared for international study programs.

By using this electronic platform, students, teachers and parents are able:

- ✓ To develop applying acquired knowledge in real life, analyzing and interpreting, reflecting and cognitive thinking skills;
- ✓ Check their knowledge by doing the tasks of international assessment programs;
- ✓ To get acquainted with video products in the framework of preparation for international studies;
- ✓ To free download and use of electronic platform materials to ensure interdisciplinary integration in the educational process;
- ✓ To have the opportunity receiving methodical assistance in the formation of 21st century skills (functional literacy, problem solving, personal qualities).

2,800,000 readers have used the platform from February 1 to March 10, 2022.

If we focus on the preliminary data on the dynamics of PISA reading literacy results, up to date, 629,089 students have tested their knowledge in PISA reading literacy.

The emergence of new technologies day by day requires students to develop new competencies. In the PISA study, the competencies of reading literacy, comprehension of finding the necessary information (open and closed), being able to





use this information, reflecting on it, and drawing conclusions based on the information are formed. The tasks on this platform dynamic type of texts are used a lot. Through these tasks, students ability of working with texts from several sources, integrating the necessary information, comparing the information, evaluating the reliability of the source, and drawing conclusions about the content and form of the text has been studied.

The analysis of the tasks posted on the platform showed that the students did not face any major difficulties in working with a single-source text.

Open-ended questions in the text are often fully answered, because our teachers use such questions in the native language and literature classes. For example, almost 90% of students answered correctly the question given on the topic "The Flu".

Which of the following services are recommended through the "Akol" immunization program?

The answer to this question is given open in the text and the students who read the text carefully have chosen the answer A. In the answer given the following statement: "Do morning exercises every day during the winter"

Below in the chart (Figure 1) given the result of the students answers in percentage.

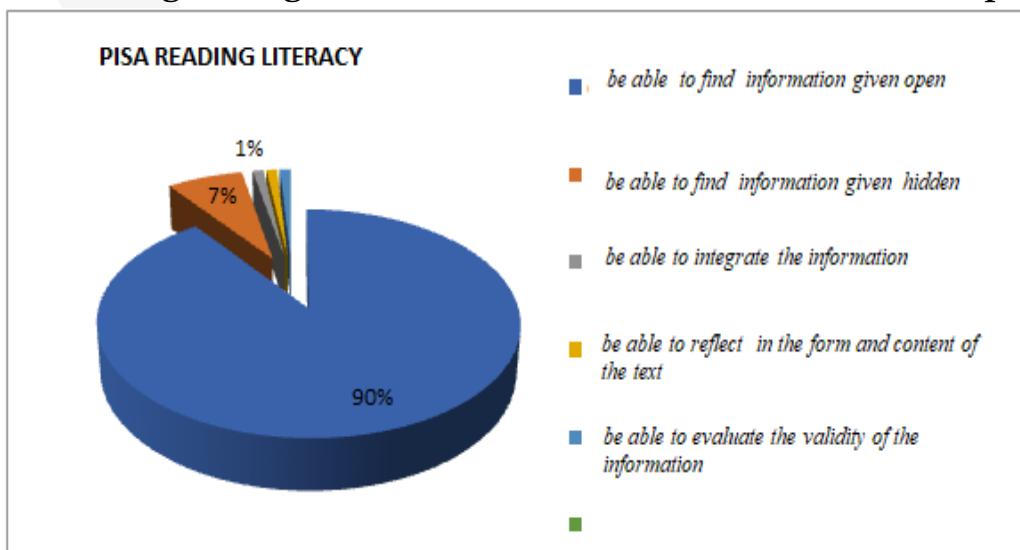


Figure 1. Reading Literacy results on PISA

As you can see, our students' abilities and competence such as to analyze the texts they have read, to interconnect the information with each other and make conclusions based on them, to define the influence of each given construction on the content of the text, to evaluate the reliability and the quality of the provided information are not well formed.



PISA is one of the most influential studies aimed at assessing functional literacy. Until now, based on the study results of the PISA, the participating countries have introduced various changes and new approaches in their education system. In most cases, these reforms are giving positive results. The PISA study determines the actual state of the education system and gives an realistic conclusion about it. It shows “where the education” is and “where it should go”. Through this, there will be an opportunity for strategic planning of education development.

The preliminary results of the assessment of students' functional literacy through the "STesting" platform in the regions are presented in the figure below.

The students of Syrdarya region worked on the most assignments in this direction, while in Andijon region no assignments have been done in this direction yet.

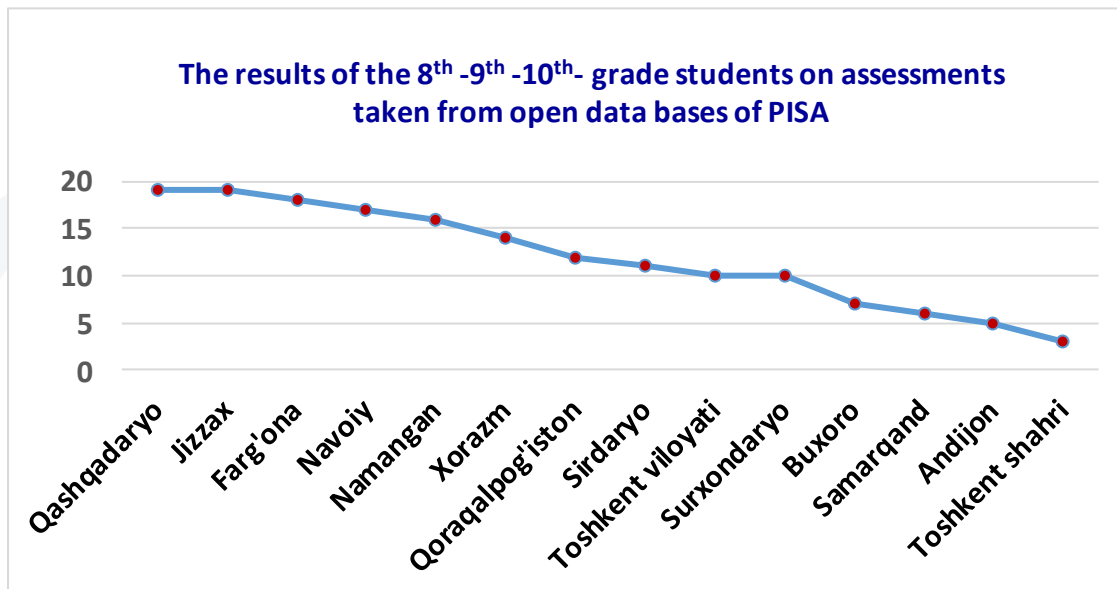


Figure 2 The results of the 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup> grade students on assessments taken from open data bases of PISA

As a result of the analysis of the answers given by students in the direction of natural and scientific literacy, the following preliminary conclusions were reached:

- ❖ Students had difficulties applying even the simplest concepts to new situations or when asked to suggest ideas.
- ❖ When students are asked to answer a question based on graphical information given in an assignment, they often do not understand such instructions.
- ❖ When students are asked to explain or justify an assignment, they give the impression that they do not understand it. This indicates that the students have not read much fiction literature and have problems in understanding the tasks by reading.



- ❖ They prefer to respond quickly without serious analysis of events and make mistakes.
- ❖ 10-15% of students' performance of assignments about the purpose of practical sessions and what methods and tools to use. It can be seen that laboratories and practical trainings in physics, chemistry, geography, and biology are not sufficiently organized in schools, and the development of practical skills of students is at a low level.
- ❖ Lack of computer literacy among students was also known.
- ❖ The low level of manifestation of critical and creative thinking among students is also related to the insufficient formation of knowledge in subjects.

### **Recommendations based on the conclusions of the analytical results of STesting:**

- + Strengthening training courses for teacher-specialists;
- + Development of textbooks, methodological manuals within the framework of international assessment study programs;
- + Preparation of higher educational institutions (hei) gradulators for international assessment programs;
- + Increase the scope of coverage of stesting and develop new content bases.

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