

## SCIENCE LITERACY (PISA RESEARCH) IS THE PATH OF COMPREHENSION AND IMPROVEMENT OF THE KNOWLEDGE OF THE CRASHED

Shaxnoza Siddikova

Jizzakh State Pedagogical University

### Abstract:

Science literacy is an important competency in today's world, where science and technology play an increasingly significant role in various areas of life. For example, understanding the principles of physics can help in the creation of new technologies and devices, and knowing the basics of biology can help in understanding health and disease.

**Keywords:** PISA, results, education, social life.

Compared to Uzbekistan, 13 countries the same period there were significant changes in education, and these changes were recorded in the results of the PISA-2009 study. The very fact that different countries have demonstrated a significant increase in the level of reading literacy of their students, shows that improving the quality of education perhaps despite the economic conditions of countries and their cultural traditions. Note that this group includes countries with different levels of educational achievements of their students. For example, the Republic of Korea was one of the leading countries in the PISA-2000 study, and in 2009, while maintaining the leading position, the results of Korean schoolchildren rose. The level of reading literacy of Polish schoolchildren in nine years since positions "statistically below average international level" moved to position "statistically above average international". Chilean schoolchildren in 2009 left the group of countries with the most low results.

What contributed to the improvement of the quality of education in these countries? Are there common features of reforms in these countries that contribute to noticeable changes in education? What are the success factors in the leading countries?

In order to explain the results obtained in the PISA study in 2000, 2003 and 2006, numerous research studies have been carried out in many countries in the field of assessing the quality and effectiveness of education. Countries, using the results of the study, were able to identify the strengths and weaknesses of education, see themselves against the background of other countries and identify areas for improving school education. As shown in the publications of countries that have additionally conducted longitudinal studies on the PISA 2000 and 2003 sample, the results of the functional literacy assessment of 15-year-old students have become a reliable indicator of the further educational trajectory of young people.

Uzbekistan participated in all four cycles of the PISA program: in 2000, 2003, 2006 and 2009. The results of the conducted research became the subject of additional analysis by the teams the Academy of Education, the Institute for the Development of Education, the National Fund

for Personnel Training and the Higher School of Economics. The recommendations and materials developed during the analysis were used in the state final certification of school graduates in the form of exams, in the development of second-generation state standards and competence-oriented measures of educational achievements. Based on the results of the analysis, additional studies were initiated, the purpose of which is to explain the differing results in various international studies, for example, PISA and PIRLS.

**Level of reading literacy** In the PISA study, a special milestone for identifying reading literacy was chosen - transition from using reading as a means of learning to using reading to solve a wide range of problems (educational, social, everyday, etc.). This period basically coincides with the transition from the basic level of compulsory education to the senior specialized level of secondary education, when decisions must be made on the choice of a further direction of study.

Reading literacy is the ability of a person to understand and use written texts, to reflect on them and engage in reading in order to achieve their goals, expand their knowledge and opportunities, and participate in social life.

According to the PISA reading literacy levels, 72.6% of 15-year-olds are able to relatively adequately use more or less complex texts to navigate everyday situations (OECD average 81.4%); of these, 14.3% are ready for independent learning with the help of texts in (28.6% on average in OECD countries). They have the highest level of reading literacy (5-6 levels). Those who are not ready to navigate with the help of texts even in familiar everyday situations are 27%, which is 8% more than in OECD countries: these students have not reached the threshold level of reading literacy (the second level on the international scale).

In the countries listed above, the main change came from a significant decline in the number of students who scored below the threshold. This means that in most countries that have improved the quality of reading literacy of their graduates of the basic school, special programs have been implemented on working with students at risk (with insufficiently developed reading and information skills). At the same time, in none of these countries did the level of reading literacy of the elite decrease, and in two countries the number of students with the highest level of reading literacy (levels 5-6) increased significantly: in Israel by 3%, in Korea by 7% (from 5.7% to 12.9%) with an overall increase in the average level of reading literacy by 15 points.

In all 13 countries, the results were higher for girls, and only in five countries for boys. Indicators Chile's experience in improving the quality of reading literacy among boys: Chile found minimal differences in the results of boys and girls in reading literacy among countries participating in the PISA study. In addition, the results of both boys and girls with a slight advantage of boys in three points).

It is advisable to analyze all the reading materials that function in the school, paying special attention to the 5th-7th grades. The fact is that in the international PIRLS study, domestic education demonstrated the extraordinary success of primary school graduates.

PIRLS examines the reading literacy of students who have studied for four years. The fourth year of study is considered to be the most important milestone in the formation of the main result of modern education - the ability to learn. In a favorable educational environment, between the third and fifth years of schooling, there is a qualitative transition in the formation of the most important component of educational independence: learning to read (reading technique) ends, reading for learning begins - the use of written texts as the main resource of self-education.

So we have the following facts:

- Uzbek fourth-graders (according to PIRLS 2001 and 2006) have a high the level of readiness for reading for learning;
- core reading for learning (formerly in total - learning from history textbooks, geography, biology, etc.) starts at grades 5–7;
- to grades 9–10 (according to PISA 2000, 2003, 2006, 2009) the reading literacy of Russian students is significantly below world standards.

It is logical to assume that during the transition from primary to basic school, pedagogical conditions should be provided that turn students' readiness for reading for learning into reading skills that ensure self-learning of young people beyond the school threshold.

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