
Ways to Assess and Improve the Quality of Educational Materials Based on PIRLS Results

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Abstract: This article evaluates the quality of educational materials in Uzbekistan's primary education system based on the results of the PIRLS 2021 international study. The analysis shows that national textbooks place excessive emphasis on factual knowledge, while opportunities to develop interpretation, evaluation, and critical thinking skills are insufficient. In countries that have achieved high results in international studies, textbooks are distinguished by the diversity of texts, open-ended questions, project-based tasks, and discussion-oriented activities. The article offers recommendations for improving educational materials in Uzbekistan, including expanding text types, enriching the system of questions, developing methodological guides, and strengthening international expertise.

Keys words: PIRLS, educational materials, textbook, reading literacy, quality of education, critical thinking.

Introduction

In today's era of globalization, improving the quality of education is a key factor in the socio-economic development of countries. Reading literacy formed at the primary education level serves as the main foundation for mastering all subsequent subjects. To assess students' literacy levels, a number of international studies are conducted worldwide. One of them is PIRLS (Progress in International Reading Literacy Study), which evaluates the reading literacy of primary school students every five years at the international level. Educational materials—textbooks, workbooks, and methodological resources—play a crucial role in improving education quality, as students acquire knowledge and develop reading literacy competencies through them. International studies (PIRLS, PISA) show that the quality of educational materials is directly related to students' learning outcomes.

The PIRLS 2021 results indicated that Uzbek students scored below the international average. This highlights the need to improve the quality of textbooks and methodological resources in the national education system. Textbooks are not only sources of knowledge but also tools for developing independent thinking, analysis, and logical reasoning skills. This article analyzes Uzbekistan's educational materials based on PIRLS results and proposes ways to improve them. The novelty of this study lies in the analysis of Uzbekistan's primary education textbooks based on PIRLS indicators and their comparison with international best practices. The practical significance of the study is reflected in the development of methodological recommendations for teachers and opportunities for modernizing educational materials. The practical importance of the research is that the results can be used to improve the quality of educational materials and align them with international assessment standards. The

recommendations developed in the study contribute to enhancing students' reading literacy, improving the content of textbooks and methodological guides, and enabling teachers to effectively apply modern pedagogical approaches. In addition, the conclusions can be used for strategic planning to improve education quality and enhance diagnostic and assessment systems.

Methodology

The study is based on an in-depth analysis of PIRLS 2021 international assessment results and their comparison with Uzbekistan's education system. The following approaches were used:

1. Statistical analysis – Uzbekistan's PIRLS 2021 results were compared with international averages, focusing on information retrieval, integration and interpretation, and evaluation and critical thinking.
2. Content analysis – Primary school textbooks, workbooks, and guides were analyzed in terms of their compliance with PIRLS indicators, focusing on text types and task formats.
3. Expert evaluation – National textbooks were compared with best practices from high-performing countries (Canada, Finland, Singapore).
4. Pedagogical observation – Interviews with primary school teachers were conducted to gather additional information on the effectiveness of using educational materials in practice.

Results

The analysis revealed the following results for Uzbek students:

- Information retrieval skills – Relatively satisfactory, due to the prevalence of memorization-based tasks; however, they promote superficial knowledge rather than deep analysis.
- Integration and interpretation skills – Low level, as tasks encouraging comparison, inference, and generalization are insufficient.
- Evaluation and critical thinking skills – The weakest area, due to a lack of questions requiring justification of opinions and analysis of arguments.
- Diversity of text types – Textbooks mainly emphasize literary texts, while informational and visual texts (tables, graphs, infographics) are limited.

These results indicate that current textbooks mainly develop lower-level cognitive skills and insufficiently support higher-order skills such as analysis, interpretation, evaluation, and creativity.

Discussion

The quality of Uzbekistan's educational materials does not fully meet international standards. International experience shows that high-performing countries' textbooks are characterized by:

Diversity of texts (literary, scientific, informational, and visual);

Open-ended and critical questions,

Project-based and collaborative tasks.

For example, Finland emphasizes open-ended questions and personal expression, Singapore focuses on problem-based learning and projects, and Canada develops evidence-based reasoning and contextual analysis skills.

In contrast, Uzbekistan's textbooks are overly focused on theoretical knowledge, limiting opportunities for critical thinking and independent conclusions, which negatively affects learning outcomes.

Conclusion

The analysis based on PIRLS 2021 results shows that current textbooks in Uzbekistan emphasize memorization of factual knowledge and do not sufficiently develop critical and creative thinking. As a result, students struggle to achieve the higher-level reading literacy competencies required by

international standards.

The root of the problem lies in limited content variety, uniform question systems, and traditional methodological approaches. To address this, it is necessary to diversify texts, increase critical-thinking tasks, and adapt international best practices to local contexts.

Thus, educational materials should serve not only as sources of knowledge but also as tools for developing analysis, interpretation, evaluation, and creativity. Improving textbook content, methodology, and task systems is essential for preparing students according to international standards.

Recommendations

1. Expand text types (scientific, informational, and visual materials alongside literary texts).
2. Enrich the question system with analytical, comparative, evaluative, and creative tasks.
3. Develop methodological guides aligned with PIRLS indicators.
4. Introduce international best practices adapted to local conditions.
5. Strengthen national and international expert collaboration in textbook development.

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