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PERFORMING TASKS GIVEN IN TIMSS INTERNATIONAL ASSESSMENT PROGRAM

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Abstract
This article discusses the problems and their solutions in preparing students for the tasks presented in the TIMSS international assessment program.

Keywords: TIMSS, literacy, competence, context, knowledge, skill, competence, practical activity, creative activity, independent thinking, creative thinking, educational technologies.

Introduction

In recent years, improving the quality and efficiency of the education system in the country, forming modern knowledge and skills in kindergarten students, students and young students, close cooperation and integration between education systems and the field of science, education of the integrity and continuity of education Systematic work is being carried out to ensure it.
In the State program for the implementation of the development strategy of New Uzbekistan for 2022-2026 in the "Year of attention to people and quality education", the task of ensuring the participation of Uzbekistan in the TIMSS 2023 international assessment program, which assesses the literacy of students of the 4th and 8th grades in mathematics and natural sciences, is set this year.
TIMSS (Trends in Mathematics and Science Study) is an international monitoring of the quality of mathematics and science teaching at school, conducted by the International Association for the Evaluation of Educational Achievement (IEA) every four years among students of the 4th and 8th grades. The research based on this program aims to assess the level of preparation of students of 4th and 8th grades in mathematics and natural sciences in different countries.
TIMSS provides important information about trends in student achievement over time.
Since 1995, TIMSS data have been an invaluable tool for countries to make evidence-based decisions about their education systems and policies.
Countries can compare their recent results with those of previous periods to measure growth rates, assess the impact of education policies and curricula, and compare their results with those of other countries.
In 2019, 64 countries of the world participated in the TIMSS international assessment program, and in 2023, 70 countries plan to participate in TIMSS 2023.
Educational achievements of students: knowledge, application, reasoning are evaluated with the help of TIMSS.
Until 2019, TIMSS surveys were organized in paper and digital formats, and from 2023 they will be transferred to a fully digital format. This, along with the assessment of students' literacy

in mathematics and natural sciences, will encourage them to adapt to the country's modern requirements and further accelerate the development of the ICT system.

TIMSS tasks are designed to measure students' ability to apply knowledge and skills to real-world problems. Tasks are usually open-ended and require students to think critically and solve problems creatively.

The following main problems may arise when preparing students for TIMSS tasks:

- Assignments may be unfamiliar to students. Students may not have had the opportunity to work on open-ended problems before and may not be familiar with the types of skills needed to solve them.
- TIMSS tasks can be difficult. The tasks are designed to measure students' highest achievement and may be too challenging for some students. This can lead to frustration and anxiety, and ultimately discourages students from doing their best.
− TIMSS tasks can be time-consuming. Tasks may take several minutes to complete, and students may not have time to complete all tasks on the test. This can lead to stress and anxiety, and it can make it difficult for students to perform at their best.

In order to solve the above-mentioned problems in preparing students for TIMSS tasks, the following tasks can be implemented:

- Giving students more opportunities to work on open problems. This can be done by incorporating open-ended questions into regular teaching or by giving students additional practice questions
- To help students develop the skills needed to solve open-ended problems. This can be done by teaching students to think critically, solve problems creatively, and manage their time effectively.
- It is important to support and encourage students. Learners need to know that mistakes are not allowed and that they are not expected to know everything. By supporting and encouraging students, teachers can help them overcome challenges in preparing for TIMSS tasks.

Here are some additional suggestions for preparing students for TIMSS tasks:

- Introducing students to the TIMSS test format.
− Provide students with practice problems similar to TIMSS tasks
- Help students develop the skills needed to solve open-ended problems.
- Support and encouragement of students.

By following these recommendations, teachers can help students perform their best on the TIMSS test.

Effective ways to prepare students for TIMSS tasks include:

TIMSS Focus - TIMSS Fundamentals is a document that describes the basic concepts and skills that students should know and have in math and science. By focusing on the TIMSS framework, teachers can ensure that their students learn the material that will be tested on the TIMSS assessments.

Using TIMSS-adapted materials - There are a number of TIMSS-adapted materials such as textbooks, assessments, and learning resources. These materials help students learn the material to be tested on the TIMSS assessment and prepare them for the test format.

Practice with TIMSS-style questions - There are several websites and resources that offer TIMSS-style questions. By practicing these questions, students can become familiar with the types of questions they see on TIMSS assessments and learn how to answer them correctly.

Creating a positive learning environment - A positive learning environment is one where students feel comfortable taking risks and making mistakes. In such an environment, students are more likely to engage in their learning and face challenges head on.

Using these effective methods, teachers can help their students prepare for the TIMSS tests and reach their full potential in math and science.

In addition to the methods listed above, there are a number of other activities that teachers can do to help their students prepare for TIMSS. These include:

- Ensure that students have a good understanding of basic concepts in mathematics and science.
- Help students develop critical thinking and problem solving skills.
- Encourage students to be curious and ask questions.
- To give students the opportunity to cooperate with each other and learn from each other.
− Creating a supportive and challenging learning environment.

By taking these steps, teachers can help their students succeed on TIMSS tests and in math and science education in general.

In conclusion, identifying the problems of students in preparing for the tasks presented in the TIMSS international assessment program and developing their skills and competencies through the use of effective educational technologies and methods remains a priority task of today's biological education process. Because the main part of the tasks given in the TIMSS international program are tasks related to the assessment of skills and qualifications.

Educational quality monitoring studies, such as the TIMSS study, aim to ensure comparability of results across countries, as well as comparability of results across different time periods using different instruments across different samples of subjects.

Special efforts will be made to implement the first requirement. For example, when forming a sample of students from the population planned for conducting a survey, its representativeness is ensured, that is, the results of the research can be transferred to the entire general population of surveyed students. This means that if 8th graders are selected as the study population, a sample of 8th graders in 1995, 1999, 2003, 2007, 2011, and 2015 can be compared to the total 8th graders in the country in those years. should be recognized as a representative of the population. The comparison includes groups of tasks and questions used in previous years in the development of research tools (tests and questionnaires) for the construction of comparative scales and comparison of the obtained results.

The study was standardized across participating countries to ensure comparability of results between countries. In 2015, the study of TIMSS was conducted in strict accordance with the uniform guidelines and rules developed by the International Coordination Center. Each stage of the research (sampling, translation and adaptation of instruments, tests and questionnaires, data verification and processing) was supervised by international experts. For example, translations of tests and questionnaires were revised by international translators. Observers participated in some educational institutions during the test. Free extended response tasks were checked by experienced teachers, and then a portion of the work (every fourth notebook) was revised by other teachers.

The quality standards of international research are also evident in the analysis of the results of individual countries and the construction of an international scale. If conflicting information was obtained for a number of tasks during the analysis of the performance of tasks in individual countries, and these results were not explained by experts, then such tasks were excluded from the international analysis for all countries or only for one or several countries. Tasks that contained errors such as typographical or translation errors were also excluded from the analysis.

The description of the implementation of the requirements of the IEA standard in the TIMSS study for individual countries is presented in the technical reports of the TIMSS study. At the international level, the study of mathematics is recognized as the main component of school education, because the knowledge of mathematics has a significant impact on the efficiency of human adaptation in modern society and its success in industrial activities. shows. With the development of modern technologies, the number of professions that require the professional use of mathematics or mathematical thinking is increasing rapidly. In this regard, monitoring the quality of school education always begins with the assessment of the quality of mathematical education.

As in previous periods of the TIMSS study, the basis for determining the approaches to the assessment of students' mathematical readiness is the content of mathematics education recognized by the experts of the participating countries as important for the development of primary and elementary school students in their countries, as well as types of educational and educational activities in which students should demonstrate their knowledge and skills. The selected content and activities are based on the document that developed the mathematical part of the international test ("TIMSS 2015 Assessment Frameworks").

International monitoring of the quality of school mathematics and science education (English - TIMSS - Trends in Mathematics and Science Study) is a program organized by the International Association for the Evaluation of Educational Achievements (IEA). This study helps to compare the level and quality of knowledge of mathematics and natural sciences among students of the 4th grade and 8th grade of primary education in different countries and to identify differences in the national education system.

Summary of TIMSS studies. The main task of the TIMSS international research is to provide a comparative assessment of the quality of mathematics and natural sciences education at the school. Every 4 years, the educational achievements of students of the 4th and 8th grades are evaluated, and at the same time, not only their knowledge and skills, but also their attitude to these subjects, interest, and education. allows to compare the motivation of The main plan of the study: for 4 years, the results of the student of the 4th grade until he reaches the 8th grade will be monitored. In this regard, the monitoring of the educational achievements of primary and high school students is carried out.

In the research countries, the content and nature of mathematics and natural sciences education at school and the educational process, factors related to the educational institution, teachers, students, and their families are additionally studied. In addition to the international test, the school administration, students and teachers participating in the study will be given a questionnaire. The obtained data will help to determine the factors affecting the test results, that

is, the knowledge of students, and to show the state of mathematics and natural sciences in the countries participating in the research.

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