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The Role of Using International Assessment Programs with Primary Students

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Abstract: This article discusses the purpose of the EGMA international assessment programs and the assessment model through them, which is to develop students' verbal calculation skills, develop logical thinking skills, and increase mathematical literacy.

Keywords: EGMA assessment model, mathematical literacy, literacy, international programs, model, reasoning.

Introduction: The development of the public education system of the Republic of Uzbekistan until 2030 envisages achieving the following indicators:STEAM subjects and critical thinking, taking into account the special emphasis on the development of competencies and skills in independent information search and analysis, General education programs and new state educational standards will be introduced that meet the requirements of a modern innovative economy; The Republic of Uzbekistan will ensure its continuous participation in international programs and studies on the quality of education (PISA, TIMSS, PIRLS, etc.) to assess the level of knowledge of students in the public education system; New generations of didactic materials and multimedia products are being developed for in-depth study of foreign languages, computer science, mathematics, physics, chemistry, and biology; [1].

This assessment system is used in more than 70 countries around the world. For example, the assessment system does not measure other aspects related to reading skills. For example, "motivation, attention, memory, reading strategies, effective vocabulary, comprehension of multiple text genres, fluency, etc". EGMA was also developed by the Research Triangle Institute in 2008 and approved by (USAID). In these elementary grades, oral math focuses on numbers and operations. EGMA's international assessment program involves 14 countries, including "Democratic Republic of the Congo, Dominican Republic, Ghana, Iraq, Jordan, Kenya, Liberia, Malawi, Mali, Morocco, Nicaragua, Nigeria, Rwanda, and Zambia" [2].

These studies help improve the learning of primary school students and identify gaps in the educational process. Also, the importance of EGMAs is directly related to the development of international assessment studies such as PISA, PIRLS, and TIMSS.

These studies are being conducted by the Ministry of Public Education of the Republic of Uzbekistan in collaboration with the United States Agency for International Development (USAID). This project is the first component of a five-year development goals agreement signed between the HTV and USAID on September 28, 2019 for $50 million [2.1].

The EGMA (Early Grade Mathematics Assessment) includes the following: number identification (number recognition); reasoning about magnitude (number

discrimination); number recognition (missing number); addition and subtraction; first and second grade and word problems.

Our country is taking its rightful place among the developed countries striving for a great future. The ability of elementary school students to apply their knowledge of mathematics in real life is the key to future success. To develop mathematical knowledge, skills, abilities, and competencies in preschool and primary school students. These concepts are socially recognized as key to the future economic lives of individuals in mathematical knowledge.

EGMA (The Early Grade Mathematical Assessment) The goal of the assessment model is to develop verbal calculation skills, logical thinking skills, and mathematical literacy of students in grades 2-4.

The essence of the EGMA program is as follows: The EGMA international assessment program helps to determine children's mathematical literacy, measure their numeracy skills, and determine what approach is effective in their education process. The following objectives are achieved through this evaluation system:

- Assessing students' arithmetic skills.
- Identifying and eliminating shortcomings in the educational process..
- Developing effective methodological recommendations for teachers.
- Improving the quality of education and bringing it into line with international standards.

The importance of the EGMA program for primary school students is the foundation of the primary education system. The use of the EGMA program at this stage provides the following advantages:

- **Early detection and correction:** The program identifies which topics students are learning well and which ones they are struggling with.
- **Adaptation of curricula:** Based on the results, textbooks and methodological materials are adapted to students.
- **Increasing student motivation:** With the help of a proper assessment system, students are encouraged to work on themselves.
- **Improving the quality of education:** Teachers can choose teaching methods according to the needs of students.

Unlike the EGRA, the EGMA mathematics assessment is not intended for cross-national comparison. The main reason for this is that the EGMA aims to assess student performance in line with the local curriculum. Providing information about EGMA programs and using them in the classroom is also important for the development and maturity of primary school students, as well as the formation of independent thinking skills. Until now, education has only taught students to acquire ready-made knowledge, but now, through EGMA programs, they are taught to search for, analyze, and even draw conclusions from the knowledge they acquire.

Our ultimate goal is to achieve results through EGMA tasks. We will complete the Early Grade Mathematics Assessment (EGMA) task on number identification (number recognition):

<table>
<tr><td>Task 1: Identify the number</td><td>A</td><td>60 seconds</td></tr>
<tr><td colspan="2">As you can see, here are some numbers. I want you to point to each number and tell me what it is. I'll tell you when to start and when to stop.
-[pointing to the first number]
Start here. Are you ready?… Start.
-What number is this?</td><td>*When the stopwatch runs out (60 seconds).

*If the child stops on something (for 5 seconds).</td></tr>
<tr><td colspan="2">(/) Incorrect or no answer
(]) After the last number is read
<table><tr><td>3</td><td>7</td><td>0</td><td>1</td><td>8</td></tr><tr><td>33</td><td>45</td><td>39</td><td>79</td><td>52</td></tr></table></td><td></td></tr>
</table>

108	246	47	963	321
123	111	908	357	852
150	520	109	159	789

Time remaining (seconds):

What language(s) did the child use for this activity? [check all that apply]

Language 1 | Language 2 | Language 3 | Language 4

Language 5 | Language 6 | English | Other

We will complete an assignment on Early Grade Mathematics Assessment (EGMA), reasoning about magnitude (number discrimination):

Task 2: Number discrimination	🕮 B2 & B3	x

Look at these numbers. Tell me which number is bigger.

[Repeat for each item]

(☑) 1=Correct.

(☑) 0=Incorrect or no response.

*If the child makes 4 successive errors

*If the child doesn't respond after 5 SECONDS.

6	5	6	1	0	94	78	94	1	0
11	24	24	1	0	194	78	194	1	0
59	49	59	1	0	994	788	994	1	0
68	55	68	1	0	999	998	999	1	0

What language(s) did the child use for this activity? [check all that apply]

Language 1 | Language 2 | Language 3 | Language 4

Language 5 | Language 6 | English | Other

These tasks aim to develop verbal calculation skills, develop logical thinking skills, and increase mathematical literacy in 2nd and 4th grade students.

CONCLUSION

The EGMA international assessment program is important for improving the learning process of primary school students, developing their mathematical skills, and increasing the quality of education. Through this program, students' abilities are accurately assessed and the most appropriate approach is applied to them. Therefore, it is necessary

to widely implement the EGMA program in the education system. The timely and high-quality implementation of the tasks presented in the article will ensure the integration of our country's education system into the international educational process, will help identify gaps in the field, change education to a certain extent, and define new tasks. Most importantly, we will achieve fair and transparent assessment of student learning. At the same time, we will create a solid foundation for our future by teaching emerging primary school students to think independently and express their ideas freely.

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