

## **National Assessment of Achievement of Grade 4 students in Sri Lanka 2009**

*Dr. Chandradasa Wannigama  
Senior Lecturer, Department of Educational Psychology  
Faculty of Education*

Sri Lanka being a member country that has agreed to the world declaration on Education for all strives to enhance the quality of education by implementing procedures that will provide information on students' learning achievements.

The two studies of National Assessment of grade 4 students in 2003 and 2007 conducted by National Educational Research and Evaluation Centre (NEREC) can be considered as such attempts. According to the findings of a studying 2007, a considerable improvement in learning achievements has taken place. However, there was a need to find out whether this improvement is sustained. Focusing on this need, the main objective of the present study was to find out the patterns and trends of the achievement of grade 4 students in 2008.

Desired target population of the present study was 322270 students who had completed fourth grade in the Education system in Sri Lanka in 2008. Excluding the extremely small size schools the defined target population consisted of 309678 students. Multi stage approach was adopted to select the sample. In the first stage schools were selected for the sample. Schools were selected within strata with probability proportionate to size without replacement. At the second stage, cluster sampling method was adopted to select students from the selected schools. Grade 4 classes were considered as clusters. Province was taken as explicit strata. The medium of instruction and school type were considered as the implicit stratum. The calculated student sample consisted of 12690 students.

In the 2009 study, five achievement tests were used like in the 2007 study as instruments to assess the achievement. They are the tests in Sinhala language, Tamil language (First language), English language, Mathematics and TIMSS (Trend in International Mathematics and Science Study). These tests except TIMSS had been constructed to assess the essential learning competencies expected from grade 4 students at the end of key stage 11. Hence the content validity had been the main concern when these tests were constructed.

Test scores were analysed basically on national and provincial basis. Mean, standard deviation and skewness of the distributions were the main statistics calculated to assess the achievement levels and to identify patterns and trends in the achievement levels. Differences in the achievement level were analysed in relation to the medium of instruction, school type, location of schools and gender.

According to the findings, pattern of the achievement of students found in the present study was almost the same as the previous study except small changes. One such change is the shift of the highest performing province from Western Province to the North Western Province. Performance in Sinhala language as the first language is high but the performance in Tamil language is moderate. Achievement in English language is satisfactory and the achievement in mathematics is high. There is a increase in the

achievement in all the subject (except TIMSS). Improvement in the performance of the type two schools and rural schools is another positive trend. Differences of the achievement levels with regard of school type, location of school, medium of instruction and gender can still be seen as in the previous studies. Some of the negative trends with regard to the students' achievements are the continuous low performance of Northern, Eastern, and Uva provinces, declining performance of Male students and the low performance in some provinces in English language.

## **Loosening the tight rein over students and supporting them to think mathematically**

*Ms. Prasadi Jasinghe  
Lecturer, Department of Science and Technology Education  
Faculty of Education*

### **Background**

This paper seeks to answer the question of how the intended mathematics curriculum is interpreted by the teachers and students by analyzing the students' responses to the test items in an assessment tool.

### **Method**

In order to avoid teacher prepared questions to assess the quality of mathematics education of students in primary grades in Sri Lanka, this study used students' written responses to publicly released test items from an international testing agency, called IEA (International Association for the Evaluation of Educational Achievement). The test paper contained 40 items. These items were selected to suit the Sri Lankan fourth grade mathematics curriculum and were translated into Sinhala language.

### **Results**

Overall performance of the Sri Lankan students was average at an international mathematics test items. Students performed well on the test items of 'knowing' cognitive area, but performed poorly in 'applying' and 'reasoning' areas. Students perform relatively well at "number" area and "data display" area in content area of mathematics. However, they performed poorly in "Geometric shapes and measures" area.

### **Conclusions**

The study revealed that,

- teacher prepared mathematics test items pay more attention to 'knowing' area of cognitive domain in mathematics. Therefore students have no challenge in thinking mathematically.
- teacher prepared mathematics test items pay less attention to 'applying' and 'reasoning'. Therefore, students do not know how to apply mathematics in everyday life to enhance students' conceptual understanding of mathematics.