

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.