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Development of mathematics competency in primary school children in Sri Lanka

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Development of mathematics competencies in primary school children was measured longitudinally in a sample of 1021 students (girls = 45.6%; boys= 54.4%) (Sinhala = 68.8%; Tamil = 17.96%; Moor = 7.7%; Indian Tamil= 5.5%) from 43 classes from 41 government schools (Type 1AB=4; 1C=11; 2=14; 3=12). Competencies were measured continuously between 2002 and 2006, based on activities designed on the themes of identifying numbers, counting, arithmetic, money and transactions, shapes and space, measurements, directions, time and data handling. Class teachers collected data with the help of a researcher. Means and percentages were calculated for each activity to display the patterns of development. Influence of independent variables was calculated using a regression model. There was an increase in competency from grade 1 to grade 2 as students become familiar with numbers and counting. Thereafter there was a decline until grade four as the topics that the students were taught became more complex. From grade 4 to grade 5 there was a significant increase. This is possibly because of the extra preparation the students get for the Grade 5 Scholarship examination. Gender was not a significant differential in mathematics competency. In some years boys scored more, in other years girls scored more. It was only in grade 2 that there were significant differences, specifically in three themes, where girls did significantly better than boys. There were significant differences in the mean scores of urban, semi-urban and rural sectors. The rural sector showed a poor performance in general while the urban sector was generally the best. Performance of the semi-urban sector fluctuated. While the differences between gender and medium were either not there or had disappeared by grade 4, the differences by school type emerged strongest in grade 4. Type 1AB generally had the best results, type 2 generally the worst. Type 1C was normally the closest to the national average. It was only in grade 2 (when there were significant differences by medium and by gender) that there was no significant difference between the school types. Grade 2 was also the year when overall performances were best. Difference between Sinhala and Tamil medium declined as the students grew older.

Acknowledgement: UNICEF for financial assistance

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