Remedial measures needed to elevate the achievement levels in mathematics at the G.C.E. (Ordinary Level) examination

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In Sri Lanka, the national level examination that admits the highest number of candidates is the G.C.E.-Ordinary Level (OL) examination. The students who deviate from the main academic stream (G.C.E.-AL) to pursue vocational and career guidance courses also decide their relevant fields depending on their OL results. Moreover, to pass the OL examination it is necessary to get a minimum of simple pass for mathematics. However, the passing percentage of mathematics at the OL examination is low (less than 47 %) compared to other subjects and therefore it needs to be investigated. This study is to investigate students' achievement levels in mathematics at the OL examination and their selection patterns with respect to subject contents of the questions. Also this study aimed at proposing remedial measures, which can improve the students' achievement levels in mathematics at the OL examination. Experimental research methods were used to achieve the above objectives.

Three schools in the Colombo district and three schools in the Ratnapura district were chosen for the study. Instruments used for the collection of data were pre-tests, post-tests, interview schedules, OL teachers' opinion and questionnaires. Taken as a whole, by analyzing OL mathematics results question-wise from 1998 to 2002, we have noted that more than 70% of the students have selected algebra sections but they had low (< 42%) achievement levels in those sections. Thus a Preferential -Learning Teaching (PLT) programme was designed on the section of algebra for grade 11 classes. The mean of the marks scored by the students at the pre-test was 30 and it has increased to 63 at the post-test. The gender of the students had no specific influence in the achievement levels. The results of the paired t-test confirms that improvement due to the PLT programme is significant with confidence level more than 95%, which shows the essentiality of a PLT programme as a remedial measure. Since algebra content is the dominant part (approximately 2/3 of the content) of the OL syllabus and the OL question papers and also the students' selection patterns indicated that algebra sections have the highest preference level at the OL examination, we can infer that there can be a significant difference in the achievement levels in OL mathematics if we adopt PLT programmes for Algebra at the national level.