

AN INVESTIGATION TO DETERMINE WHETHER THERE IS
A SIGNIFICANT DIFFERENCE IN COGNITIVE ABILITY
BETWEEN THE GROUPS OF A COHORT ENTERING THE
SCIENCE STREAMS AND NON SCIENCE STREAMS OF THE
G.C.E. (A/L) CLASSES

W. Sterling Perera, W. Tulain Fonseka
Dept. of Examinations, Colombo 2.

This study seeks to determine whether there is a significant difference between the students selected to science and non-science streams of the G.C.E. (A/L) classes. The selection to science streams is more restrictive in that passes in science or maths with a credit pass in one of them is also a requirement. It was surmised that this factor together with the general 'prestige' of the science stream, would separate out the cohorts selected to A/L classes into not only streams but also to two distinctive groups of somewhat different cognitive ability.

Those qualifying for entry into the G.C.E. (A/L) classes from the G.C.E. (O/L) 1986 Examination, were identified using the particular circular criteria and then as science and non-science groups. The raw marks of each such pupil in each subject were assigned Stanine Values and the means of each group were obtained school-wise. The examination performance of each group school-wise was later obtained. Separate computations were done to obtain district means and standard deviations, exam-wise and subject-wise (also for the country as a whole)

The results show that:-

The two groups have significant differences in cognitive ability - a standard deviation or more.

The science stream pupil mean in First Language performance is a standard deviation or more above the arts stream pupil mean (similar differences for Social Studies and Religion)

As could be expected there are wide difference in the means for Science and Mathematics.

The divergence of the means of the two groups increases with that of the school performance index.

11th Dec. 1987 (Friday) 02.15. p.m. - 02.30 p.m.