



615/E2

**Analysis of undergraduate chemistry scores and the study of sorrelation between
G.C.E. Advanced level Z-scores, with undergraduate chemistry scores in the
University of Kelaniya**

C T Walgama and R C L De Silva*

Department of Chemistry, University of Kelaniya, Kelaniya

This study describes the work done in the area of chemical education by considering the undergraduate chemistry performance in the first two years and relating it to variables such as gender, district, stream of study (physical or biological) and type of assignments (practical or written). A correlation analysis was done between A/L Z-scores and scores for university assignments using a statistical computer application. Over 500 students from three selected batches show weak correlation values(r) between their A/L Z-scores and chemistry scores obtained for assignments faced in the first two years in their degree program. This shows that performance at the Advance Level examination has a very minor relationship to how students perform at chemistry in the university. From comparative studies it is evident that even the correlation values are very weak, male students show relatively higher correlation than the female students while students who have followed the biology stream showing a higher correlation than those in the physical science stream. Analysis of chemistry scores revealed that students in biological science stream obtained the highest total subject average than students in the physical science stream where they could only be able to lead their average in physical chemistry assignments. Fluctuations of average scores by districts were limited to between 50-60 which has no significant difference. Female students were having higher subject average than the male students while all students have scored more marks for their practical assignments than the written assignments. This study was important in identifying academic and social variables that influence the undergraduate performance in chemistry. The correlation analyses revelas that prior A/L performances which is measured by the Z-score system makes no significant contribution to undergraduate chemical education for the selected group of students. The study could be extended to cover other universities in Sri Lanka, to provide an exceptional insight to the professionals involved in developing strategies for national higher education.