

ABSTRACT

AN EVALUATION OF THE SUCCESS RATES IN INTRODUCTORY PURE MATHEMATICS AT THE UNIVERSITY OF THE WEST INDIES, ST AUGUSTINE

Dale Alleyne

The Basic Introductory Mathematics course, taught in semester 1 of year 1 at the University of the West Indies, provides the foundation required for success in advanced Mathematics courses encountered in years 2 and 3. Within recent years there has been a steady decline in performance within this course. The Department of Mathematics and Computer Science observed a reduction in pass rates from 84.8% in 1991 to 60.8% in 1999 and eventually 34.2% in 2006.

This report looks at variables, namely, demographics; Advanced level (A' level) Math rating; year of entry and standardised examination pursued, to determine relationships with success in the Basic Introductory Mathematics course between 1990 and 2008. Chi-square cross-tabulation was used to determine the relationships of these variables with the success rates in the course.

Data collected showed that Advanced level Math rating and age have positive relationships with the success rate, that is, as they increased the success rate increased. However, year of entry was quite the opposite, with success rate being reduced as the years passed. The performance in the course with respect to gender was close, 49% of females succeeded at a first attempt while 42% of males succeeded. Students possessing Mathematics passes from General Certificate of Education (GCE) performed better than students with Mathematics passes from Caribbean Advanced Proficiency Examination (CAPE).

The main objective of this report is to determine the predictors and hence a model for predicting success in the Basic Introductory Mathematics course for the period 2005 to 2008. Binary logistic regression performed showed that year of entry, age, advanced level Mathematics examination pursued, Math rating as well as Total rating minus the Math rating, i.e. (A level –math) rating, were predictors of success in the course. Gender proved not to be a significant contributor to success rates.

Keywords: Dale Alleyne; Success Rates; Basic Introductory Mathematics.