ATIVE ANALYSIS ON THE PERFORMANCE OF CvSU GINEERING STUDENTS ON THE QUALIFYING EXAMINATION FROM A.Y. 2002-2006

SPECIAL PROBLEM

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COMPARATIVE ANALYSIS ON THE PERFORMANCE OF CvSU ENGINEERING STUDENTS ON THE QUALIFYING EXAMINATION FROM A.Y. 2002-2006

A special problem submitted to the
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ABSTRACT

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The study was conducted to: (1) determine which among the subjects included on the qualifying examinations highly affect the results of the examination; (2) compare each academic year and determine which performs best and which performs least based on the results of the qualifying examination; (3) formulate the logistic regression equation between the examination results (dependent variables) and the grades on the different subjects on the examination (independent variables). The independent variables considered were the different subjects included on the qualifying examination such as Algebra (X_1), Trigonometry (X_2), Analytic Geometry (X_3), Differential Calculus (X_4), Integral Calculus (X_5), Chemistry 1 (X_6), Chemistry 3 (X_7), Physics 1 (X_8), and Physics 2 (X_9).

It was found out that there were six subjects included in the qualifying examination which affected the result of the qualifying examination with the use of point-biserial correlation coefficient. These were Algebra (X_1), Trigonometry (X_2), Analytic Geometry (X_3), Differential Calculus (X_4), Integral Calculus (X_5), and Chemistry 3 (X_7). Among these subjects, Trigonometry (X_2) with t – value of 4.036, highly affected the result of the qualifying examination while the subject Physics 1 (X_8) with t – value of 0.357 had the least effect on the result of the qualifying examination from the critical value of the t – test statistics of 1.96.

Among the performances of each academic year on the qualifying examination, A.Y. 2001 – 2002 had the best performance after taking the qualifying examination with 41 (87.23 %) students who passed and six (12.77 %) students who failed while the least performance on the qualifying examination was recorded during A.Y. 2003 – 2004 with 28 (50. 91 %) students who passed and 27 (49.09 %) students who failed on the said examination.

The derived logistic regression model was:

logit (Y) = 7.632 – 1.097 x Algebra (X_1) – 1.357 x Trigonometry (X_2)

The logistic regression model showed that Algebra (X_1), and Trigonometry (X_2) were the predictors which highly affected the probability of the students to pass the qualifying examination in College of Engineering and Information Technology.

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[1/]A special problem submitted to the faculty of the Physical Science Department, College of Arts and Sciences, Cavite State University, Indang, Cavite in partial fulfillment of the requirements for graduation with the degree of Bachelor of Science in Applied Mathematics (with specialization in Statistics). Prepared under the supervision of Prof. Renelyn R. Cordial.

INTRODUCTION

Quality education is the best thing that an institution or school can give to produce best students and become the best professionals in the near future. However, in order to have these best professionals, the school needs to produce best students. This is the reason why Cavite State University, one of the premiere universities in the historic province of Cavite, has a way of choosing these best students in their program. The College of Engineering and Information Technology in this institution conducts qualifying examination every year to determine who among the incoming third year engineering students are allowed to continue the degree of their interest or choice such as BS Electronics and Communications Engineering, BS Civil Engineering, BS Electrical Engineering, BS Agricultural Engineering, BS Industrial Engineering and BS Computer Engineering. To pass this examination, the examinee should get at least 70 percent of correct answers. However, the college also gives incentives like exemption in taking the qualifying examination. If a sophomore student has a Grade Point Average (GPA) of 2.25