A statistical survey of study results of students at the Department of Mathematics

Ying Liu[*]

Juni 2010

Abstract

The purpose of this thesis is to investigate the study results (total credit and grade) of students from the course Mathematics I at the Department of Mathematics, Stockholm University. We had observed 149 students that were registered for this course under the fall term 2007 and got a record of total credit until the spring term 2009. The students who had obtained the maximum of total credit, namely 30 credits, would get a passing letter grade, denoted by A, B, C, D and E. We aim to find out the relationships between results and background variables such as age, gender and program. The multiple logistic regression analysis and univariate tests have been used in this study. The results show that: the youngest students receive the highest total credit among all the students and the oldest students receive the lowest total credit; female students have an advantage over male students at obtaining a higher total credit. From the Fisher's and Kruskal-Wallis test, we find that there is a relationship between program and total credit respectively grade. There are no significant difference in grade between age and gender.

[*]Postal address: Mathematical Statistics, Stockholm University, SE-106 91, Sweden. E-mail:yili9939@gmail.com . Supervisor: Jan-Olov Persson.

A statistical survey of study results of students at the Department of Mathematics

Ying Liu

May 2010

Abstract

The purpose of this thesis is to investigate the study results (total credit and grade) of students from the course Mathematics I at the Department of Mathematics, Stockholm University. We had observed 149 students that were registered for this course under the fall term 2007 and got a record of total credit until the spring term 2009. The students who had obtained the maximum of total credit, namely 30 credits, would get a passing letter grade, denoted by A, B, C, D and E. We aim to find out the relationships between results and background variables such as age, gender and program. The multiple logistic regression analysis and univariate tests have been used in this study.

The results show that: the youngest students receive the highest total credit among all the students and the oldest students receive the lowest total credit; female students have an advantage over male students at obtaining a higher total credit. From the Fisher's and Kruskal-Wallis test, we find that there is a relationship between program and total credit respectively grade. There are no significant difference in grade between age and gender.