

Identification of Factors that Affect the Grade of the Mathematics Subject at Ordinary Level Examination with Reference to Uva Province

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In Sri Lanka, education has to play a key role in social and economic sectors. The Ministry of Education in collaboration with the other relevant ministries is working relentlessly to achieve the development of the education sector. Mathematics is one of the main subjects in the education section in Sri Lanka which is used to select students for their higher education. According to a previous research, it was found that the average pass rate at the ordinary level examination is 37% in our country, and it is around 31-32 in the less developed provinces such as North-Eastern, North-central, Uva and Central. To attempt the decisions in education sector in Uva province in future, it is really important to identify the significant factors that affect the ordinary level Mathematics subject. The main objective of this study is based on identifying the main factors which can affect the results of Mathematics subject. In this study, data were acquired by using multistage systematic sampling method. Generalized Linear Model (GLM) was fitted to final marks of the grade eleven students to identify the main factors that affect the final grade. It was noted that students' attendance to school, performing mathematics exercises, getting help from their parents, grade five scholarship and time spend for the mathematics subject at home were significantly affecting the students' results of the ordinary level Mathematics subject. According to the factor analysis results, it was found that the factors of the fitted model significantly affect the students' marks in Mathematics subject.

Keywords: Mathematics, Education, Ordinary level, Generalized linear model