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Learning analytics intervention and evaluation of factors associated with student academic performance in SLTC education study programs

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The value of education and its significance is important for human beings as it helps in the personal, social and economic development of the nation. The performance of students plays a vital role in order to develop quality graduates from higher educational institutions and it will eventually lead to increased employment. It is imperative either that diagnostic methodology should be implemented to identify and examine the major factors, which affect the suboptimal academic performance of students. The purpose of this this research is to explore the qualitative and quantitative factors that are associated towards the academic performance of students. Sri Lanka Technological Campus (SLTC) has been offering approved Engineering Degree Program since 2016. Batch 3, 4, 5 and 6 undergraduates from the school of Engineering, were selected as the target population of this study and sample was selected by simple random sampling technique. A questionnaire was distributed among the respective respondents to collect data to identify the qualitative and quantitative factors that affect on student academic performance. The collected data from the questionnaire were analyzed with the Statistical Package Minitab 2017. We collected the data related to learning, teaching, attendance, involvement of extracurricular activities and non-academic activities, course assessment, peer influence and family issues, to identify socially, emotionally or academically unprepared students. Chi-square test, Correlation analysis and multiple regression were used analyze the data. A multiple regression model was fitted to identify the strength of each factor, which affected the academic performance of students using quantitative and qualitative data with the model validation. Furthermore, the fitted model was significant by the P-test. There is a high correlation among the dependent and independent variables as academic performance of student in SLTC, attendance, language of delivering the course and the delivery method, class size of students and non-academic activities. It is recommended that study background and family back ground are highly affected to the student performances. Early identification of factors that affect on student academic performance help to overcome the major problem of higher education, which is the right balance of enrolled and graduated students.

Keywords: Education, Student performance, Factors, Regression model