

## **Inter-Module Relationship of Student Performance: A Case Study of University of Vocational Technology**

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University of Vocational Technology of Sri Lanka offers Bachelor of Technology degrees for National Vocational Qualification holders and students who have passed Advanced Level examination. Engineering Mathematics and Communication Skills are compulsory modules of first semester, since these are identified as modules that provide fundamentals for students to acquire higher level technical content. Those who do well in these two modules are expected to do well in technology modules offered in subsequent semesters. Ex post facto study was conducted among two student groups of the 2017/2018 intake, on their performance in Manufacturing Technology and Mechatronics Technology to investigate the validity of this expectation. It was assumed that both groups had similar entry level of competencies in communication skills and mathematics. Pearson's product momentum correlation coefficient was used as the statistic. Guildford's rule of thumb values were used to interpret the strength of correlations. Student performance in Electrical Technology, Thermodynamics, Strength of Materials and Engineering Mechanics modules of the second semester indicated positive moderate correlations with Engineering Mathematics module of first semester. Student performance in Electrical Technology and Thermodynamics showed similar correlations with Communication Skills module of first semester. These correlations were found as significant with a significance level of 0.01. However, student performance in Strength of Materials and Engineering Mechanics revealed low correlations with Communication Skills. Higher numerical involvements in Strength of Materials and Engineering Mechanics modules could be the reason for these low correlations. Since all other correlations are positive, moderate and significant, findings support the hypothesis. These two modules may have a positive influence on student performance in higher technical modules. Therefore, more attention is required when delivering Engineering Mathematics and Communication Skills modules in the first semester. However, mathematical aptitude and the different entry qualifications of two groups of students may have influenced the observed correlations, which need further investigation.

**Keywords:** Communication skills, Correlations, Engineering mathematics, Undergraduate student performance