STUDENTS' LEARNING STYLES AND PREFERENCES IN LEARNING SELECTED STATISTICAL TOPICS BASED ON INTERVIEW AND MULTIDIMENSIONAL SCALING TECHNIQUE

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Abstract

Students very often perceive statistics as a difficult subject to learn and have generally shown very little interest in it much to the dismay of educationists and instructors alike. This study investigates the problems students face when learning certain statistical topics by firstly relating these learning difficulties with the effort put in when understanding the topics. This is followed by categorizing students' learning styles and preferences based on Kolb's Learning Model. Phase 1 explores these levels of learning difficulty, while Phase 2, the case study of 22 students, further investigates the students' learning styles. The analysis is based on a content matrix of students' learning of statistical topics using Kolb's Learning Model, Qualitative Data Analysis (QDA) and Multidimensional Scaling. The study results indicate that learning difficulties can be overcome by employing different learning styles. The majority of the students fall into the 'Converging' category as they prefer to do practice exercises and study on their own. A small number of students fall into the 'Accommodating' and 'Diverging' group, as they prefer to study in small groups and consult lecturers when the need arises. Finally, an even smaller number comes under the 'Assimilating' group as they prefer to read textbooks and look up for notes from other sources from the internet. Other factors such as prior knowledge in statistics, ability to work with statistics and personal effort are also found to support students' interest in learning statistics.

Keywords: Learning Difficulties, Learning Styles, Kolb's Learning Model, Qualitative Data Analysis (QDA) and Multidimensional Scaling (MDS).