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LEARNING STYLES AND MATHEMATICS ACHIEVEMENTS AMONG HIGHER SECONDARY SCIENCE STUDENTS

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This study was conducted to understand the learning styles and its relationship to mathematics achievement among higher secondary students. Two hundred forty seven grade eleven science students from two higher secondary schools at Kathmandu, Nepal, participated in the study. We used the Felder-Soloman Index of Learning Styles (ILS) to inquire the students at the beginning and at the end of the academic year 2012/13. The questionnaire has a set of 44 dichotomized items, and the ILS has four dimensions that include processing (active/reflective), perceive (sensing/intuitive), input (visual/verbal), and understanding (sequential/ global). We also created a Mathematics Achievement Test (MAT) based on 50 items and 100 marks in order to measure student's achievement. This test was administered at the end of the academic year along with ILS. We used basic descriptive statistics for our data analyses. The findings revealed that the majority of the students tend to balance learning styles among active, sensing, visual, and sequential. The MAT score of the students varies from 38.9 to 48.5 with a mean score of 42.9 and standard deviation of 13.5. We also found a moderate relationship between pre and post learning styles. However, students whose learning styles dimension changed from visual to verbal scored higher in MAT followed by sensing to intuitive, and lower from verbal to verbal.

keywords: learning styles, mathematics achievement, science students, higher secondary school.