

## Understanding Learning Styles of Hong Kong Tertiary Students for Engineering Education

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**Abstract :** Engineering education is crucial to technological innovation and advancement worldwide by generating young talents who are able to integrate scientific principles and design practical solutions for real-world problems. Graduates of engineering curriculums are expected to demonstrate an extensive set of learning outcomes as required in international accreditation agreements for engineering academic qualifications, such as the Washington Accord and the Sydney Accord. On the other hand, students have different learning preferences of receiving, processing and internalizing knowledge and skills. If the learning environment is advantageous to the learning styles of the students, there is a higher chance that the students can achieve the intended learning outcomes. With proper identification of the learning styles of the students, corresponding teaching strategies can then be developed for more effective learning. This research was an investigation of learning styles of tertiary students studying higher diploma programmes in Hong Kong. Data from over 200 students in engineering programmes were collected and analysed to identify the learning characteristics of students. A small-scale longitudinal study was then started to gather academic results of the students throughout their two-year engineering studies. Preliminary results suggested that the sample students were reflective, sensing, visual, and sequential learners. Observations from the analysed data not only provided valuable information for teachers to design more effective teaching strategies, but also provided data for further analysis with the students' academic results. The results generated from the longitudinal study shed light on areas of improvement for more effective engineering curriculum design for better teaching and learning.

**Keywords :** learning styles, learning characteristics, engineering education, vocational education, Hong Kong

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