

Designing a Bag for Computing Students of General Sir John Kotelawala Defence University by Using a Kansei Engineering Methodology

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As computing undergraduates, a bag that can accommodate all personal requirements is essential during university life. The bag itself should possess qualities such as space, durability, comfort, safety, and most importantly, provide proper protection for electronic devices carried by computing students. This study aims to design a bag that addresses the existing problems in the bag provided by the university for computing undergraduates. This paper presents an integrative framework of Kansei Engineering (KE), and the Kano model (KM) applied to produce the design of the bag. To explore the relationship between the quality attributes of the design and Kansei, the Kano model is incorporated into KE, which collects and communicates the emotional demands of the consumer. In this study, the bag used daily by computing students is utilized as a case study to demonstrate how KE and KM are integrated into the product development process. The results of this research were generated from thirteen Kansei words which were produced from a questionnaire. The final design of the bag was developed by evaluating total customer satisfaction. According to the findings of the study, the final design of the bag was of urban shape with a padded top grip and straps. Polyurethane/ Thermoplastic Polyurethane (PU/TPU) was chosen as the outer fabric for durability and water-resistant quality while polyester ripstop was chosen as the inner lining for the bag to make it lightweight.

Keywords: *Kansei engineering, Kano model, university bag, computing students*