Mask Manufacturing Approach Using Case-Based Learning with an Activity-based Costing Method

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ABSTRACT

This research was conducted to (1) investigate the activities and cost drivers in the mask manufacturing process, (2) investigate the effectiveness of activity-based costing lessons, and (3) perform a comparison of learning achievements attained through the case-based learning of mask production using the activity-based cost method. The study results were reported as means, standard deviations, and dependent samples (t-test) results. The analyses revealed that five activity centers are involved in the production of valveless surgical masks and costs were determined by both volume and duration, whereby the Process Efficiency/Product Efficiency (E1/E2) ratio of 82.25/81.55 met the predetermined standards. Moreover, students' academic achievement after completing the case-based learning activity increased at a significance level of 0.01. Thus, these research findings can be of value for teachers aiming to develop lessons for students in accordance with the 21st century teaching and learning strategies.

Keywords: Activity Based Costing; Case-based Learning; Surgical Mask