Develop a Virtual and Augmented Reality system to enhance learning and training assembly

ABSTRACT

Teaching, learning and training in assembly or disassembly as well as maintenance operation to new users, employees, engineers or technicians is important for various education sector and industries for them to acquire new skills. However to train those users to efficiently perform new skills is become challenging. It is important to reduce the user's training and working times to avoid cost issues in training, material, unavailable expertise and avoid actual part damage. Therefore, this study is conducted to design and develop a Virtual Reality (VR) and Augmented Reality (AR) system for learning and training platform. The valve assembly system was selected as a task for mechanical assembly system. This study was designed to find the influence of interactive learning method using AR system. The outcome from this study showed that learning and training in AR and VR system resulted in better to user skill performance. User learn and trained in a ARVR group gives positive feedback; very easy, practical and as a solution of the training process without using the actual one. While learning using interactive learning method such as AR resulted with better knowledge with less assembly error.