

Abstract

Across all industries, the expense of training individuals in the operation of the required equipment directly affects the profitability of the company. The construction industry is now trending into this realm of virtual reality (VR)-based simulators, a new cost-cutting, safer technology for training equipment operators. With the cost of computers decreasing, the power of computers increasing, and the cost of fuel skyrocketing, simulators are a logical progression for training. At least four major equipment manufacturers are producing and marketing readily affordable heavy equipment simulators. The effectiveness of any simulator depends on how well the trainee is prepared to complete the real task, or how well the skills transfer from the simulator to the real task. Rather than look at the effectiveness of simulators transferring skills to real life situations. This research explores the question: Does experience with playing video games create an existing skill set that facilitates a person's aptitude for performing effectively on the simulator? Two groups of subjects, one that avidly played video games and one that did not play video games, were utilized. The subjects performed a variety of tasks on a construction excavator simulator. The results showed significantly better performance by the group who avidly played video games. These results led to the conclusion that those who avidly play video games do have better initial ability on the construction excavator simulator than those who do not play video games.