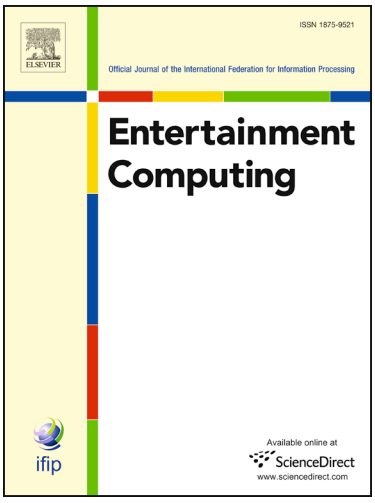

Conceptual Models and Mental Models in Operation: Frustration, Performance and Flow with two different video game controllers

Russell B. Williams

PII: S1875-9521(16)30039-8
DOI: https://doi.org/10.1016/j.entcom.2018.07.004
Reference: ENTCOM 270

To appear in: *Entertainment Computing*

Received Date: 31 October 2016
Revised Date: 20 May 2018
Accepted Date: 15 July 2018

Please cite this article as: R.B. Williams, Conceptual Models and Mental Models in Operation: Frustration, Performance and Flow with two different video game controllers, *Entertainment Computing* (2018), doi: https://doi.org/10.1016/j.entcom.2018.07.004

Conceptual Models and Mental Models in Operation:

Frustration, Performance and Flow with two different video game controllers.

Russell B. Williams, Ph.D.
Assistant Professor
College of Communication and Media Sciences
P.O. Box 144534
Zayed University
Zayed City
Abu Dhabi, United Arab Emirates

russell.williams@zu.ac.ae

+971-50-800-5785 mobile

Abstract

Control devices are an important variable of interest in studies of frustration, aggression, presence and engagement with video games. Findings have been mixed, depending on controller type and associated actions within games. In this study we look at hypothesized outcomes, from the perspective of conceptual models and mental models, in frustration, engagement and performance while playing a driving simulation using two controllers that are based on different conceptual models and have been available for differing amounts of time. Recognizing that conceptual models are exogenous as a part of the device design and mental models operate endogenously to access design features, it was found in this study that there was no difference in frustration or engagement on the basis of conceptual models while performance was better with the older, less-natural, standard-controller. Findings supported the importance of mental models that have developed over time through gaming experience. Frustration, engagement and performance have relationships in this data demonstrating the