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Presenter:

Name: **Melissa Beben**

Affiliation: **FAA Civil Aerospace Medical Institute, Cabin Safety Research Team**

Topic: Passenger Education and Management: Application of Interactive Media to Safety Information

Title: Evaluation of Serious Games for Passenger Education I: Aircraft Safety Information Retention Across Media Types

Abstract

This study evaluated Serious Games as a tool for passenger education. Serious Games is a persuasive technology application developed by the University of Udine, Italy via OTA No. DTFAC-13-A-00003. The objective of this project was to improve the level of occupant safety and incident survivability by making safety information more transparent and effective to the flying public. This study evaluated information retention results from three topics of passenger education information presented to each participant in three different styles. The three passenger education safety topics presented were brace position, life vest, and oxygen mask. The three media presentation types were a briefing card, a video briefing, and a serious game. Participants were given a pretest (for a baseline), a posttest (i.e., after information was presented), and a second posttest approximately 90 minutes later. The study found a significant difference in retention based on presentation style. After playing the serious game, retention of information was significantly better than after reviewing the briefing card or a video briefing for all assessments. After viewing the video briefing, the retention of information was significantly better than reviewing the briefing card for the life vest topic only. There are significant differences in knowledge retention based upon the presentation style of safety information. Having a participant virtually perform the action being taught creates a better understanding of the action and results in better retention of the information. The finding that knowledge retention is improved with an interactive style of information presentation suggests that passenger safety briefing materials using an interactive presentation may improve passenger knowledge of safety procedures, which could improve adherence to those safety procedures during an emergency.