Effective Presentation Media for Passenger Safety: Comprehension of Briefing Card Content, Perspective, and Presentation

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Motivated by recommendations from the National Transportation Safety Board and research showing declining passenger attention to safety information, the current study was conducted in 2008 to evaluate airline safety briefing cards and their comprehension by the flying public. The study included 41 briefing cards containing pictorials and pictograms designed by the airlines that were the state of the art at the time for cabin safety information conveyance to passengers. Responses about these briefing cards were collected from 785 participants recruited from high schools, public and Federal offices, cabin safety workshops at the Civil Aerospace Medical Institute, and the SAE International Cabin Safety Provisions Committee, S-9. Due to the density of the data collected, the results of the study were separated into multiple reports, each focusing on different interactions and interpretations of the results. This report contains the comprehension results of 13 of the 41 pictorials and pictograms in this study. Participant responses to the briefing cards were sorted by three independent judges based on correctness and then transformed using a weighted algorithm into standardized comprehension scores. For the cards contained in this report, these scores ranged from 18.13% to 70.04% comprehension. These scores were compared to two acceptance criteria standards; the International Organization of Standards (ISO) acceptance threshold (67%) and the American National Standards Institute (ANSI) standard (85%). Of the cards in this report, only one exceeded the ISO criteria, and none exceeded the ANSI criteria. Results of this data show that factors about how the pictorials/pictographs are arranged on the card and their perspective orientation appear to play a role in comprehension. Also included in this set are briefing cards which use pictures of live humans performing the required safety actions instead of drawn depictions of people of various levels of detail. Results showed that, comparing the comprehension scores of cards showing pictures to pictographs yielded results contrary to the hypothesis that pictures would be easier to comprehend than depictions, though neither series were able to breach the acceptance thresholds. Finally, results are consistent with the previous reports that individual details of the briefing cards are correctly interpreted more often than the briefing card as a whole. Recommendations based on the results of this study include a redesign of briefing cards by non-cabin safety experts, as the novice flying public were not able to accurately interpret the information presented.