HUMAN FACTORS TRAINING 2

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Improving debriefing: A report on an extensive study into varying techniques used during post-simulation training

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Gaining expertise as an airline pilot typically arises from deliberate and extended practice in an aircraft or simulator. As effective team performance in an airliner sometimes requires individuals to compensate/exploit another team member's deficiencies/strengths, identifying individual areas of need can be difficult to determine when overall team performance is the only measure. As a means of improving the development of expertise amongst individuals— and thus teams—airlines use debriefing as a technique in pilot training.

This study investigated debriefing meetings (n = 29) on two-pilot aircraft conducted amongst five airlines. In two of the airlines, all pilots—senior flight examiners, captains, and first officers—had been trained in assessment techniques. Additionally, one of these two airlines had access to simulator-mounted video-recording technology—a debriefing tool—enabling selected sequences from the flight examiner to be replayed back during the debriefing session. Of the remaining three airlines, one provided limited training to the flight examiner on how to conduct debriefings. Although the remaining two airlines had not provided assessment training, one did have access to a debriefing tool.

For each of the five-and-a-half-hour training sorties (briefing, simulator and debriefing) the two pilots under training and the flight examiner where individually interviewed during the intermediate break of the simulator session, on completion of the simulator session, and on completion of the debriefing. They were asked questions relating to their perception of individual and team performance. On completion of the debriefing, they were asked how they would personally rate the debriefing. To facilitate a fine-grained analysis, all interviews and the entire debriefings were video-recorded.

Initially, a grounded theory method was used to determine general themes. Given the size of the study, it was possible to conduct a 2 (assessment tool: yes/no) x 2 (debriefing tool: yes/no) analysis of variance of several outcome variables.

The study shows that while the current aim of obtaining clear measures of objectivity during assessment is important, understanding how assessment language mediates meeting outcomes is equally import.