

Constructs of Spatial Ability and Their Influence on Performance with Unmanned Systems

Thomas Fincannon, University of Central Florida

A. William Evans, University of Central Florida

Florian Jentsch, University of Central Florida

Joseph Keebler, University of Central Florida

This study analyzes communication in the context of a distributed UAV/UGV operator team. There was a manipulation as to whether each teammate could only observe video from their own vehicle or whether they observed video from all vehicles. Spatial ability was measured through pretests, and the outcome variable focused on the degree to which a UAV operator told a UGV operator where the UGV was located in the environment. Results indicated the presence of an interaction between the video manipulation and UAV operator spatial ability, such that UAV operators with high spatial ability provided more support when video was shared.