



U.S. Army Research Institute for the Behavioral & Social Sciences

FACT SHEET



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New Assessment Tool for Aviator Assignments

The Track Assignment Classification Tool

A new computer-based test developed by the U.S. Army Research Institute (ARI), called the Track Assignment Classification Tool (TACT), may help the Army to replace the traditional order-of-merit aircraft selection process. Currently, aviators are assigned to their missions and aircraft during flight school based on an order-of-merit list from academic and flight grades. A classification method that matches student attributes to the specific aircraft (utility, attack, cargo, scout) and missions can provide greater student success in training and reduce student attrition.



Army utility helicopter (UH60L)



Aircraft for the right pilot (TACT Classification Tool)

To develop the test, researchers identified individual attributes that were relevant to success in training and on-the-job, then determined which of these differentiated success for the operational aircraft included in FSXXI. Key attribute areas that are measured in the TACT are highlighted in the text box.

Some of the assessment measures use a multiple choice format, while others are more similar to playing a video game. In one assessment, for example, the student tracks two "targets" on the computer screen while listening for specific cues on a headset in a dichotic listening task. The test requires complex multi-tasking to simulate what is required by helicopter pilots during real world performance.

WHAT DOES THE TACT MEASURE?

- Mechanical Comprehension
- Spatial Apperception
- Demographics
- Personality Characteristics
- Perceptual Speed and Accuracy
- Multi-tasking and Directional Orientation

Testing the Prototype

The prototype system is under evaluation and will be completed in October 2007. Before the test is recommended to the Army, researchers will test at least 120 test subjects – Instructor Pilots and Standardization Pilots with at least 500 flight hours. This will provide data on 30 pilots from each of the four advanced aircraft, establishing performance profiles for experienced aviators against which student performance will be compared using a computerized algorithm. It is expected that some of the components currently under consideration will be dropped from the final version if they do not differentially predict success for the different training tracks.

Anecdotally, test subjects have said the test is difficult, but is right on the mark in terms of measuring the relevant attributes and abilities.

Implementation

ARI expects to have a final TACT product to recommend to the Army in November of 2007. Army Aviation typically attempts to put accepted measures into practice within about six months after completion of prototype testing by ARI.

The immediate payoff for the implementation of this tool will be higher rates of success for aviation students, but the long term payoff is potentially

even greater. By assigning students to the aircraft and mission type for which they are best suited, based on their skills, abilities, and temperament, we have the potential to improve pilot job satisfaction, increase pilot retention, and maximize the likelihood of a pilot completing a successful career as an Army aviator.



Army attack helicopter (AH64D)

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