



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

# FACT SHEET



ROTARY-WING AVIATION RESEARCH UNIT • OCTOBER 2007

## Selection Instrument for Flight Training (SIFT)

### Background

The Army has been using the Alternate Flight Aptitude Selection Test (AFAST) since 1988 to screen applicants for flight training. The ability of the AFAST to correctly screen candidates has declined over the decades, as the attributes required of Army Aviators changed with Aviation Branch missions and equipment. The Aviation School requested help from the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) to review the existing selection instrument and create a new instrument that identifies candidates with the highest potential for success.



*Instructor pilot and student*



Photo Caption: Initial entry rotary-wing training

*Initial entry rotary-wing training*

### Development of a New Selection Tool – SIFT

A set of critical attributes for aviator selection was identified based on an analysis of the job performance requirements and a review of existing research. An initial draft of the Selection Instrument for Flight Training (SIFT) was developed, using ten draft subtests. To minimize development, administration, and maintenance costs, ARI collaborated with the Naval Operational Medicine Institute (NOMI) to use five subtests of their Aviator Selection Test Battery (ASTB) and to access their web-administered Automated Pilot Examination (APEX) system already being used for Navy selection.



*Academic helicopter training*

## SIFT Evaluation

The draft SIFT measures were tested using a sample of 240 incoming Initial Entry Rotary Wing (IERW) students. Scores on the tests were assessed for their ability to predict eight measures of training performance, such as overall academic average, number of hours needed to complete flight training, and instructor and evaluator ratings.

Based on the evaluation, ARI recommended six subtests for the operational SIFT battery. These six (listed in the table) are the subtests that were consistently among the best predictors across the criterion measures.

### RECOMMENDED SIFT SUBTESTS

- Mechanical Comprehension
- Spatial Apperception
- Math
- Reading Comprehension
- Army Aviation Information
- Perceptual Speed & Accuracy

Further validation of the test will commence once the test is in operation in order to monitor the predictive capabilities of the test.

### THE SIFT

- ✓ Computer-based web administered test
- ✓ Predicts successful aviator candidates
- ✓ Easily maintained and operated
- ✓ Establishes multi-service cooperation
- ✓ Cost effective

*For additional information, please contact Dr. Larry Katz at [Lawrence.C.Katz@conus.army.mil](mailto:Lawrence.C.Katz@conus.army.mil).*