

BIOGRAPHY



Dr. Tia Fechter

Supervisory Research Psychologist, Defense Testing and Assessment Center

Tia Fechter joined the Office of People Analytics' (OPA) Defense Testing and Assessment Center (DTAC) in 2018 as a psychometrician. She currently supervises three branches of DTAC: Language Assessment, Non-Cognitive Assessment, and Data Support. She also conducts personnel selection and classification research—specifically related to the Armed Services Vocational Aptitude Battery (ASVAB). Prior to joining the DoD, she served as a psychometrician at HumRRO, ACT, Pacific Metrics, Measured Progress, and the Charleston County School District of Charleston, South Carolina. She received her Ed.D. in Educational Measurement from the University of Massachusetts Amherst.

Dr. Mary Pommerich
Director, Defense Testing and Assessment Center

Mary Pommerich has been a practicing psychometrician for nearly 30 years. She has been working with the military's testing program since 2002, where she currently serves as the director of the Defense Testing and Assessment Center. Prior to joining the DoD, she was employed at ACT, Inc. She received her Ph.D. in Quantitative Psychology from the University of North Carolina at Chapel Hill.

Dr. D. Matthew Trippe

Supervisory Personnel Psychologist, Defense Testing and Assessment Center

Matthew Trippe has worked at the intersection of personnel selection and psychometrics for the past 18 years. He joined the DTAC team in July of 2023. He previously worked for the Human Resources Research Organization (HumRRO) as research scientist, senior scientist, senior staff scientist, and research manager. He served as both an individual contributor and project manager for applied research for the Procter & Gamble Company, IBM, the Association of American Medical Colleges, the U.S. Air Force, the U.S. Army, the U.S. Navy, the Defense Testing & Assessment Center, and the Defense Language Institute Foreign Language Center. He received his Ph.D. in Industrial-Organizational Psychology from Virginia Tech.

BRIEFING

SLIDES ONLY
NO SCRIPT PROVIDED



CLEARED
For Open Publication

Sep 26, 2023

Department of Defense
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

Defense Testing & Assessment Center (DTAC): A Focus on Diversity and Inclusion Efforts

Presentation to the DACODAI

October 5, 2023

23-S-3432

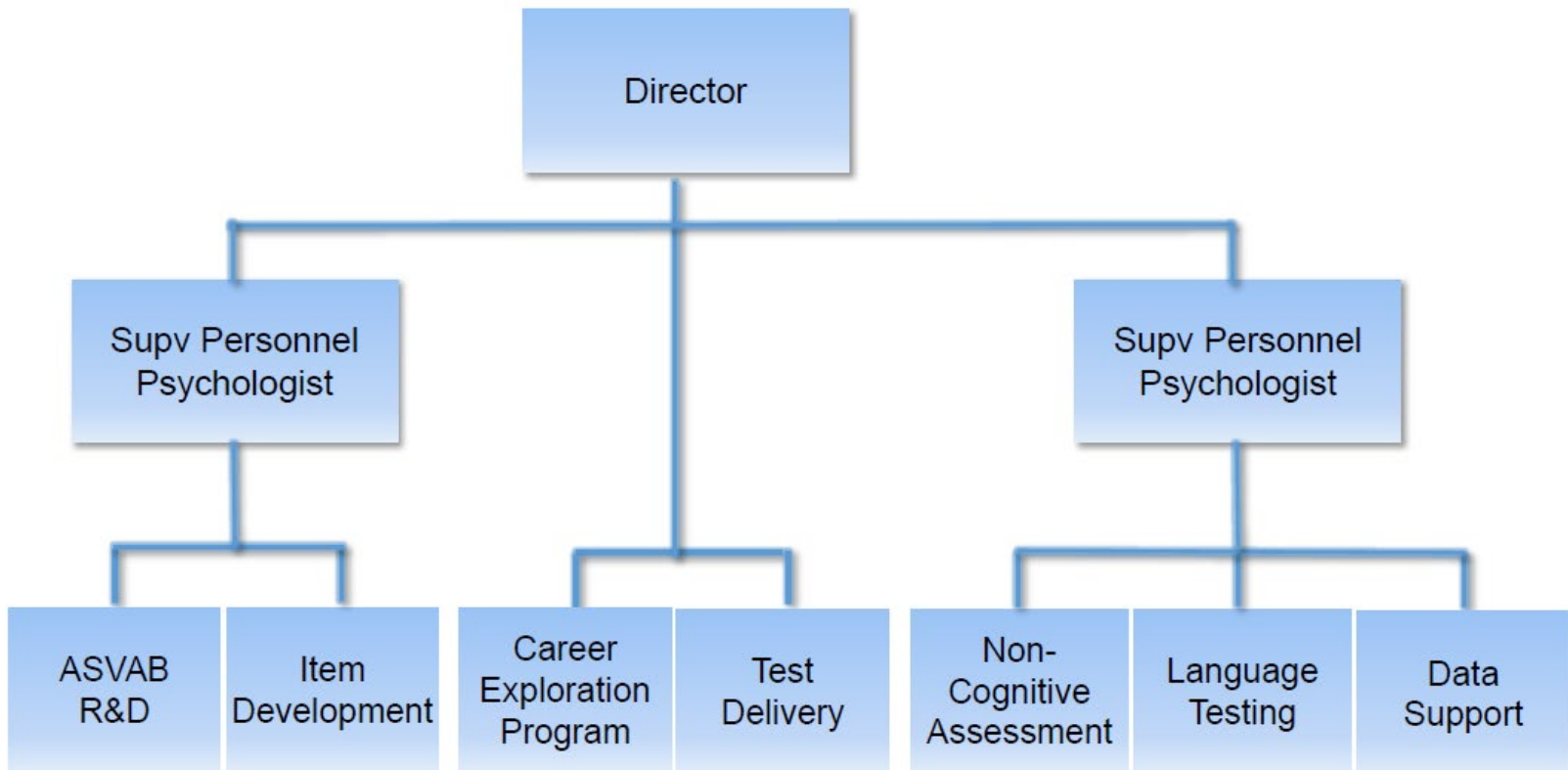
ASVAB/TESTING ROLES AND RESPONSIBILITIES

- **Defense Testing and Assessment Center (DTAC)**
 - Provides research, development, and computer-based delivery for the Armed Services Vocational Aptitude Battery (ASVAB) and special purpose tests
- **United States Military Entrance Processing Command (USMEPCOM)**
 - Conducts testing operations and applicant processing
- **Accession Policy (AP)**
 - Oversight of standards and applicable testing
 - Joint-service oversight—policy and technical input through the Manpower Accession Policy Working Group (MAPWG)
- **Defense Advisory Committee on Military Personnel Testing (DACMPT)**
 - Federal advisory committee—Independent, technical review and recommendations through Accession Policy to the Under Secretary of Defense for Personnel and Readiness (OSD P&R)

ASVAB/TESTING RESPONSIBILITIES & STRUCTURE

- **Defense Testing and Assessment Center (DTAC)**

- Provide research, development, and computer-based delivery for ASVAB (and special purpose tests)



DTAC PRINCIPLE PROJECTS

- Armed Services Vocational Aptitude Battery (ASVAB)
 - Enlistment Testing Program (ETP)
 - Career Exploration Program (CEP)
 - In-Service Testing Program (Armed Forces Classification Test; AFCT)
- Special Purpose Tests (used by specific Services)
 - Primary Role: Test Delivery
 - Secondary Role: Technical Support and Consultation to Services
- Defense Language Testing
 - Tests
 - Defense Language Proficiency Test (DLPT)
 - Defense Language Aptitude Battery (DLAB)
 - English Comprehension Level (ECL) Test
 - Primary Role: Internet-based test delivery
 - Secondary Role: Psychometric consultation

DTAC's ASVAB MISSION

- **Development / Maintenance / Sustainment**
 - Develop Items and Test Forms/Item Pools for the ASVAB
 - Calibrate, Scale, and Equate New ASVAB Forms/Item Pools
 - Develop and Maintain Test Delivery Software
 - Develop and Maintain Cloud-Based Platform
 - Develop and Maintain materials for DoD Career Exploration Program (CEP)
 - Monitor Operational Testing
 - Maintain, Analyze, and Disseminate ASVAB Testing Information
- **Research**
 - Evaluate ASVAB Changes
 - Conduct Research on ASVAB Use
 - Evaluate and Enhance DoD Career Exploration Program
 - Develop and Evaluate New Measurement Methodologies

DIVERSITY & INCLUSION EFFORTS

- Address “Plan to Assess Accession Tests for Barriers that Adversely Impact Diversity”
 - IMPACT: Provides a comprehensive picture in terms of how minority subgroups may be differentially impacted by various ASVAB testing factors
 - See outcomes in this briefing
- Create a Joint-Service Tailored Adaptive Personality Assessment System (TAPAS) that is integrated into a military selection composite
 - IMPACT: Could moderate/reduce observed adverse impact of the AFQT composite in a way that maintains the predictive validity of the AFQT and thereby open the aperture for who is qualified for military service

DIVERSITY & INCLUSION EFFORTS

- Expand testing applications to enable the use of mobile devices for unproctored ASVAB formats
 - IMPACT: A larger percentage of minority group members rely on mobile devices as their only source of internet access and thus opens the aperture for recruiting efforts and access to ASVAB
- Develop Complex Reasoning subtest
 - IMPACT: An avenue for assessing aptitude that does not rely so much on the inequitable distribution of opportunity to learn as the content is not directly taught in schools and therefore may reduce adverse impact
- Research social media-based efforts to enhance recruiting mission
 - IMPACT: Could potentially allow recruiters to prioritize and diversify recruiting lists based on likelihood of potential military candidates scoring well on selection instruments (e.g., ASVAB, TAPAS) if social media content can be used to predict test scores well enough

**ADDRESSING
“PLAN TO ASSESS ACCESSION TESTS FOR
BARRIERS THAT ADVERSELY IMPACT
DIVERSITY”**

**MILESTONE 2:
EVALUATE ENLISTED ACCESSION TESTS (I.E., ASVAB)**

***NOTE: The procedures implemented and analyses presented are a part of DTAC’s ongoing efforts to maintain the ASVAB and are conducted at a regular frequency. The findings presented within this briefing are a representative snapshot**

DIVERSITY & INCLUSION EFFORTS

- Evaluations of group differences and adverse impact
 - Status: FY2019 & FY2021 analyses complete
 - **BLUF**: For the subtests contributing to the AFQT selection composite, the direction and magnitude of overall impact is generally consistent with that observed on comparable SAT and NAEP test sections, which suggests that impact on ASVAB tests may reflect legitimate differences in the studied groups.
- Evaluations of differential prediction and test bias
 - Status: AFQT differential prediction and test bias studies complete
 - Service Composite studies due September 15, 2024
 - **BLUF**: Of 664 military occupation/training course-by-subgroup contrast combinations examined, 79.1% yielded no statistically significant evidence of differential prediction for the AFQT. Most of the remainder exhibited small or very small prediction differences.

DIVERSITY & INCLUSION EFFORTS

- Item reviews to prevent bias and ensure fairness
 - Status: Sensitivity, Differential Item Functioning, and Panel reviews for newly developed ASVAB test questions is complete
 - **BLUF: Of 4,900 items reviewed for sensitivity and bias, 9 items were found to be problematic. Of 600 items screened for DIF, 12 were identified and removed for potential bias.**
- Small device evaluation
 - Status: Score comparability, subgroup differences, and implementation monitoring plan are complete
 - Operationalization Plan due September 30, 2023
 - **BLUF: No notable performance differences were found when examinees are familiar with the device they use for testing and the test delivery interface is designed to be responsive to various device types.**

DIVERSITY & INCLUSION EFFORTS

- ASVAB testing time limits
 - Status: Quantitative review of testing time limits are complete
 - **BLUF: To keep completion rate around 99% for each ASVAB subtest for all minority subgroups, time limits were increased for GS, MK, and AO subtests.**
- English Language Learner study
 - Status: Evaluation of the implications for conducting standardized testing in English on the English learner population is complete
 - **BLUF: An extensive evaluation of non-native English speakers (NNES) and the ASVAB revealed that being a NNES was not found to be a significant factor in influencing performance on the ASVAB. A Spanish version of the ASVAB was NOT recommended.**

NOTEWORTHY REMINDERS

- JAMRS has found that of the total youth population (Ages 17-24), only 1% are disqualified due to Aptitude alone
- Aptitude is primarily what ASVAB measures