



U.S. ARMY
RDECOM

Effectiveness of Simulation-Based Training

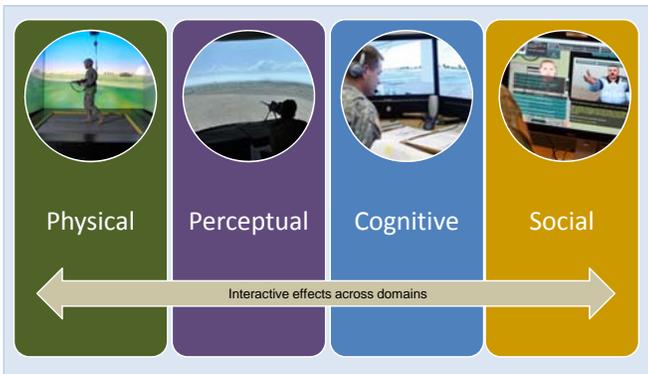


S&T Campaign: Human Sciences
Human Capability Enhancement

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Research Objective

- Understand the underlying principles influencing the effectiveness of simulation-based training across all domains (physical, perceptual, cognitive, and social)
- Develop new theories and models of the effectiveness of simulation-based training



Training Domains

Challenges

- Defining and measuring transfer of training to the operational environment
- Accounting for individual differences that may effect learning such as: aptitude, learning style, experience, motivation, self-confidence, attitude, and expectation



Soldier Training in an Immersive Simulator with a CAVE display and Omni-Directional Treadmill mobility interface

ARL Facilities and Capabilities Available to Support Collaborative Research

- Experimental laboratory facilities:
 - APG, MD
 - Tactical Environment Simulation Facility (TESF)
 - Command, Control, Communications, Computers Intelligence, Surveillance and Reconnaissance (C4ISR) Laboratory
 - Soldier Performance and Equipment Advanced Research (SPEAR) Facility
 - Orlando, FL
 - Learning in Intelligent Tutoring Environment (LITE) Laboratory
 - Dismounted Soldier Training Technologies Testbed (DST3)
- Specialized modeling/simulation tools and facilities:
 - Institute for Creative Technologies - Army University Affiliated Research Center
- Unique ARL expertise:
 - Simulation and Training Technology Center – Conducts simulation and training technology research and development to enhance Warfighter effectiveness



Training Environments

Complementary Expertise/ Facilities/ Capabilities Sought in Collaboration

- Training Effectiveness
- Training Theory
- Learning Theory
- Motor Learning
- Adaptive Training
- Machine Learning