Training Effectiveness Requirements for Simulation

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NDIA Human Systems Conference
Springfield VA 7-8 Mar 2017
How do we develop requirements that better insure the acquisition of effective new LVCG training systems?

- Process oriented requirements.
  - Must involve researchers, analysts, acquisitions, and combat developers.

- Need new approaches to:
  - System design
  - System development
  - System utilization.
Traditional Simulation Design Philosophy

Provide realistic, safer, cheaper alternatives to training with live systems.

**Engineering Focus**

Success = Replication of the Operational Environment
Outcome Focused Simulation Design

Philosophy

Provide an integrated training environment to maximize individual and unit performance.

Outcome Focus

Success = Improved Performance, Effectiveness, Readiness
Comparison of Philosophies

Traditional Design Philosophy

• Training approach: Substitute/Replace live with VC
• Design: maximize fidelity
• Utilization: either/or

Outcome Focused Design Philosophy

• Training approach: Use LVCG as a system so that KSAs can be developed using strengths of each.
• Design: driven by training needs.
• Utilization: must use systems together.
Process Centered Approach to Development

**Training Strategy Analysis (TSA)**
Defines Capability Needs for Simulator

**Training System Front End Analysis (TSFEA)**
Defines system requirements and design

**Training Effectiveness Analysis (TEA)**
Measures Training Outcomes

- What does the system need to train? Who is the training audience? How will the system be used?
- What are the system level requirements needed to provide identified capability needs?
- Are outcomes meeting expectations? Is sim being used as intended?
Process Timeline for Training System Development

Cost of Change
Availability of Trainee Data
Potential for Change

Research and Analysis Community: Identify technologies, methods, and processes that yield effective training systems.

Combat Developer Community: Describe requirements needed to implement technologies, methods, and processes identified by the research and analysis community.

Acquisition Community: Understand and know how to implement requirements needed to implement technologies, methods, and processes that yield effective training systems.