Workforce Development Design from Authoritative Competency Sources

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Panel:
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• Jeanne Kitchens, CRADA Principal Investigator Credential Engine, Associate Director, SIUC CWD
• Lisa Lutz, President, SOLID
• Fritz Ray, Director of Engineering, Eduworks
The Work We’re Doing in Two Related Navy Projects

Main Theme: Linking Authoritative Sources to Technical Competencies, Tasks, and Curriculum

1. Competencies need authoritative sources (i.e., Maintenance Tasks).

2. Authoritative sources constantly add new versions (i.e., Engineering Change Proposals).

3. Competencies must reliably link to systems, people, and their work (i.e., Configuration Management).

4. Learning is accurate when competencies link to constantly-changing authoritative sources (i.e., Readiness).
Sustainability and Training Object Reference Model (STORM Conformant)

- **Supportability Standards**
  - Products/Engineered Systems: Operation, Troubleshooting and Maintenance

- **Competency Standards**
  - Competency Frameworks

- **Course Standards**
  - Competency-based Courses

- **Credential Standards**
  - Credentials (Military and Commercial)

- **Performance Data Standards**
  - Analytics (System and Learning)

- **Occupation/Task Standards**
  - Navy Personnel
The Projects We’re Doing
Integrating Learning with Navy Systems

Project 1
CRADA: Navy and Credential Engine extracting competencies from maintenance task analysis.

Project 2
OPNAV N12: Creating Acquisition Requirements for Training Transformation (ARTT Project).
Project 1: Cooperative Research and Development Agreement (CRADA)
U.S. Navy and Credential Engine

1. Data Standards Mapping
Product data standards (i.e., GEIA 0007 & S3000L) to open competency frameworks (i.e., CTDL-ASN).

2. AI Development
TLOs extracted from maintenance task analysis using AI.

3. Course Framework Development
Courseware framework (i.e., S1000D) derived from TLO structure.

4. Learning Analytics (TBD))
Question: How are system performance requirements used as baseline for human performance evaluation?
First steps in learning engineering: 1st glance at authoritative maintenance tasks translated through AI into technical competencies.
Project Objectives

1. Improve life cycle management of technical training curriculum.

2. Link training applications to Product Lifecycle Management tools.

3. Create data-driven learning analytics derived from sailor activity streams compared to logistics data using xAPI.

4. Establish ability to conduct training effectiveness evaluation procedures from data-driven human and system performance analytics.
Project 2: Linking People to Credentials, Competencies, and Navy Systems

1. NTC Defines Navy Work
   Navy Task Classification (NTC) System defines work Sailors perform.

2. Need to Ensure NTC Reflects Real-time Competency Requirements
   NTC does not incorporate linked data and cannot interface with other sources in PLM construct.

3. Establish Linked Data Thread
   Create authoritative data system for NTC and incorporate CTDL-ASN.

4. Ensure Interoperability
   Improve real-time notification of potential need for changes in PLM construct.
Project 2: Linking People to Credentials, Competencies, and Navy Systems

1. Need to Assess Competency
   Need for multiple mechanisms to measure competency and gauge Sailors’ ability to perform.

2. Use Military and Civilian Credentials to Assess Competency
   Military and civilian credentials can demonstrate competency.

3. Establish Linked Data Thread
   Incorporate CTDL in Navy systems housing military and civilian credentials.

4. Track Competency Attainment
   Improve competency tracking capabilities, meet Ready Relevant Learning goals, and aid recruiting and detailing.
Closing Q&A

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ARTT Team: Commercial Partners

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**CTC**, Tyler Shumaker, Nancy D’Aneillo  
**EPS Corp (On-boarding)**, Pushpa Merchant, Mary McCarthy, Early Hood  
**GPSL (On-boarding)**, Scott Allshouse, Jeff Stevenson  
**ISS (On-boarding)**, Parker Owen, Leif Gyllstom (Saab)  
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