Operational Integration of Advanced Distributed Learning into Exercises

Major Niclas Ljung
Swedish Armed Forces

Additional Authors:
Major Tohmas Ax and Biljana Presnall,
Jefferson Institute
FÖRSVARSMAKTEN
Operational Integration of ADL into Exercises

Agenda:

- The Viking 18 and CJSE 19 exercises
- The basic concept
- Lessons Identified
- Summary
- Way ahead - MADLx
The Viking 18 Exercise

- Computer Aided Exercise
- Started 1999 (US-SWE MOU), held roughly every three years (8th time)
- + 2000 participants
- + 60 countries
- + 80 organizations
- 5 remote sites, 4 sites in Sweden
- Its aim is to train and educate participants – civilian, military and police – to operate together for multidimensional crisis responses and peace operations
The Combined Joint Staff Exercise 2019

• Computer Aided Exercise
• Conducted yearly
• + 1000 participants
• + 10 countries
• Its aim is to train military personnel in staff procedures
The ADL effort in Viking 18 and CJSE 19 was the first steps in integrating and maturing these sorts of capabilities throughout multinational exercises. The project involved three main goals:

- **e-Learning**: Provide e-learning resources to enhance pre-training, just-in-time and after-action learning
- **Learning Analytics**: Connect pre-training data with performance data from the execution phase
- **Roadmap**: Identify lessons for further development of the basic concept, to inform a roadmap
e-Learning - Basic Concept

**Level 1:** Mandatory course(s)
**Level 2:** Recommended courses
**Level 3:** Course repository available to all

International e-Learning Working Group
Learning Analytics- Basic Concept

Comparing learning and exercise objectives using xAPI, a Learning Record Store, and a dashboard solution.
Roadmap - Data Collection

Exercise management system

The Viking LMS

Exercise evaluation form

Designated ADL-evaluator

e-Learning working group

FIR/FER

Interviews

Exeval
Lessons Identified – General areas

Formalize

Learning resources

Strategic Communication

Access

Evaluation
Lessons Identified – xAPI and Learning Analytics

• xAPI is ready for timely secure implementation at scale in a complex multinational system of legacy systems.
• Learning analytics should be driven by stakeholder demand signals: learners, operators, planners, and strategic actors.
Summary

• **E-learning:**
  We put together a wide range of resources that helped meet learning objectives and was considered relevant and useful by the participants.

• **Learning Analytics:**
  We were able to successfully connect results from the pre-training phase with performance data from the execution phase.

• **Roadmap:**
  By working collaboratively, the e-learning team and partners have identified a lot of different lessons during the whole process.
I/ITSEC Papers 2018

• Integrating Advanced Distributed Learning into Multinational Exercises
  (I/ITSEC: Ljung et al.)

• Learning Analytics with xAPI in a multinational Exercise
  (I/ITSEC: Presnall & Radivojevic)

niclas.ljung@mil.se
tohmas.ax@mil.se
Maturing ADL in Exercises

An international project led by the ADL Initiative

Five year roadmap: High-level actions and milestones

• Strategic communication
• Learning content
• Delivery systems
• Data analytics and visualizations
• Possible implementation targets (exercises)
Project Main Goal

Enhance military training and education by integrating ADL capabilities with joint and coalition training exercises
Desired Outcomes
Solution

Research prototypes will be tested in several multinational exercises. Each of the target exercises will serve as event milestones to rapidly test, evaluate and promote or discard solutions for core ADL objectives.
TIMELINE ADL in Exercises

2019
- JAN: Develop Concept Step1
- FEB: CJSE 19 Level 2 TLA
- MAR: Learning Content deadline 2020
- APR: ADL Experiment/Exercise
- MAY: Core Planning Team (CPT)
- JUN: CJSE 19 Level 2 TLA
- JUL: Learning Content deadline 2021
- AUG: Core Planning Team (CPT)
- SEP: CJSE 19 Level 2 TLA
- OCT: ADL Experiment/Exercise
- NOV: I/ITSEC Paper(s)
- DEC: Aurora 2020?

2020
- JAN: Test Level 2 TLA
- FEB: CJSE 20 Level 2 Mobile Analytics
- MAR: Learning Content deadline 2021
- APRL: Core Planning Team (CPT)
- MAY: CJSE 20 Level 2 Mobile Analytics
- JUN: Learning Content deadline 2021
- JUL: ADL Experiment/Exercise
- AUG: I/ITSEC Paper(s)
- SEP: ADL Experiment/Exercise
- OCT: ADL Platform opens at FPC
- NOV: Finnish LiveX 2021?
- DEC: Test Level 2.8 TLA

2021
- JAN: Testing Concept
- FEB: CJSE 21 Level 2.8 Mobile Analytics Adaptive (competence?)
- MAR: Learning Content deadline 2022
- APR: Core Planning Team (CPT)
- MAY: CJSE 21 Level 2.8 Mobile Analytics Adaptive (competence?)
- JUN: Learning Content deadline 2022
- JUL: ADL Experiment/Exercise
- AUG: I/ITSEC Paper(s)
- SEP: ADL Experiment/Exercise
- OCT: Learning Content deadline 2022
- NOV: Test Level 2.8 TLA
- DEC: Learning Content deadline 2022

2022
- JAN: Implement Mature Concept
- FEB: Viking 22 Mature Level 2.8 TLA
- MAR: Finnish LiveX 2021?
- APR: Learning Content deadline 2022
- MAY: Viking 22 Mature Level 2.8 TLA
- JUN: Learning Content deadline 2022
- JUL: Learning Content deadline 2022
- AUG: Learning Content deadline 2022
- SEP: Learning Content deadline 2022
- OCT: Learning Content deadline 2022
- NOV: Learning Content deadline 2022
- DEC: Learning Content deadline 2022
Challenges