

# **COE TTHP Third Annual Technical Meeting**

**Managing Training Content  
Including Adaptive Learning  
Capabilities Using 21st Century  
Technology**

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# Project Overview

- The goal of this project is to use LMS/LCMS technology to allow for customization and adaptive learning for FAA Aviation Safety Inspectors.
- In the long-term, this will transition from a training environment to a cost-effective workforce development environment.

# Research Design

1. Literature Review on 21st Century Personalized/Adaptive Training
  1. Best practices and methods
  2. Modular content
2. Compare LMS/LCMS software to determine one that would be compatible with the needs of the FAA
3. Determine if the existing LMS used by the FAA is capable of delivering the desired courses in a manner consistent with the intended use for future ASI training.

# Research Design

4. Develop a framework to assist in selecting teaching methods
5. Develop a prototype lesson that will demonstrate the use of modular and mobile adaptive learning with the ability for rapid updating.
  - Includes employees bypassing sections of course with adequate prior knowledge of the topic.
6. Produce a final report outlining the process used and all information determined during the research project that provides recommendations and a roadmap towards a fully integrated system.

# Preliminary Findings

LMS Comparison of 8 different systems using 129 different weighted factors

- Weights were created with input from FAA SMEs

## Results

1. SuccessFactors
2. Blackboard Learn
3. D2L
4. Canvas

The FAA currently uses aspects of both Blackboard Learn and SuccessFactors

# Preliminary Recommendations

- Adopt Blackboard Learn as the main LCMS to implement more adaptive training methodologies and 21<sup>st</sup>-century interactive learning tools
- Supports face-to-face learning, virtual classroom learning, and mobile learning
- Includes the ability to handle adaptive learning, modular learning, evaluation of learning, and rapid content updating
- Continue to use SuccessFactors as the access point for training, competency management, and other human resource activities.

# Anticipated Project End State

- Provide Literature Review on 21st Century Personalized/Adaptive Training
- Provide a framework to assist in choosing course delivery method
- Create a sample course to demonstrate
  1. Modular design with rapid updating capabilities
  2. Adaptive learning
    1. Pre-test to determine prior knowledge

# Value and Impact to the FAA

- Improve upon training methods the FAA uses
- Reduce training time and costs by using adaptive training methods
- Demonstrate how to maximize the capabilities of the current LMS/LCMS used by the FAA
- Allow for rapid updating of courses to provide updated information quickly and efficiently