U.S. Army
Explosive Ordnance Disposal
Team Leader Certification

IDE 712: Analysis for Human Performance Technology

Professor Rob Pusch

April 15, 2021

Presented by: Donny Petrie
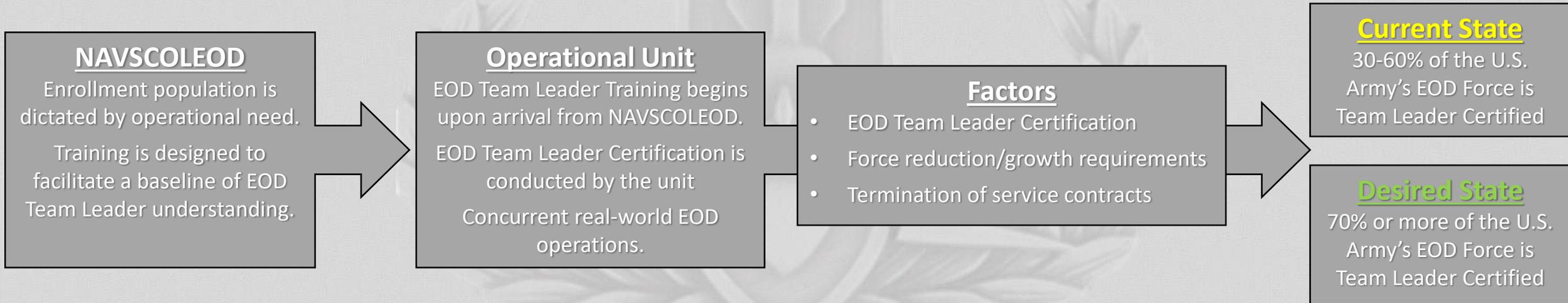
Performance Problem Context

With the ever-changing geopolitical climate, forecasting combat-related involvement of EOD forces is difficult if not nearly impossible. U.S. Army EOD Soldiers comprise one of the few military components that maintains a real-world peacetime mission. The peacetime mission of EOD Soldiers is as equally involved as EOD combat operations and requires the same training, knowledge, skills, attitudes, certifications, and preparation as combat operations.
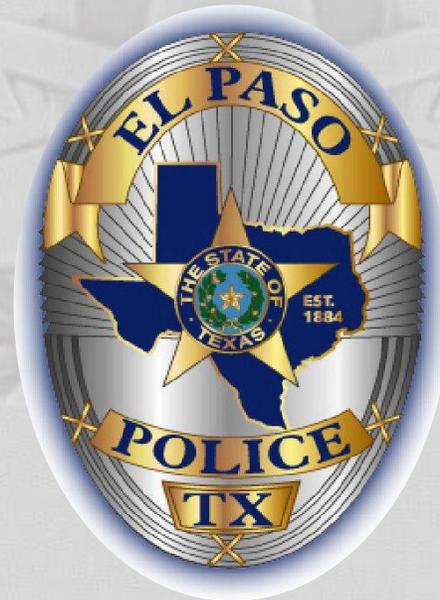
Problem Statement

The success rate of U.S. Army Explosive Ordnance Disposal (EOD) prospective Team Leaders during EOD Team Leader Certification is less than 30% during initial assessments. To maintain a corps of Certified EOD Team Leaders and to meet the demand of EOD operations, this rate must be maintained at 70% or higher.

NAVSCOLEOD
Enrollment population is dictated by operational need.

Training is designed to facilitate a baseline of EOD Team Leader understanding.

Operational Unit
EOD Team Leader Training begins upon arrival from NAVSCOLEOD.

EOD Team Leader Certification is conducted by the unit

Concurrent real-world EOD operations.

Factors
- EOD Team Leader Certification
- Force reduction/growth requirements
- Termination of service contracts

Current State
30-60% of the U.S. Army's EOD Force is Team Leader Certified

Desired State
70% or more of the U.S. Army's EOD Force is Team Leader Certified

Problem Importance

Due to the life-threating nature of explosive response incidents and the necessity to protect personnel and property from the effects of explosives, a sufficient amount of certified EOD Team Leaders is required. The certification process includes demonstration of EOD proficiencies to an established and concrete standard. The responsibility for preservation of life lies heavily with the EOD Team Leader and as such, must be granted to only those who demonstrate the capacity to successfully perform under the most stressful and challenging conditions.

FEA Plan Overview

Dr. Thomas Gilbert's BEM

BEM Applied

ENVIRONMENT	INDIVIDUAL
Data	*Knowledge*
Are prospective EOD Team Leaders provided with guidelines and standards indicative of adequate EOD Team Leader Certification process performance? **Note**-Utilize EOD-LCS and EOD-IMI responses to focus a data/content analysis of organizational curriculum, doctrine, regulation, and policy.	Does the curriculum provided to EOD students at NAVSCOLEOD align with the expectations of knowledge at the organizational level? **Note**-Utilize EOD-LCS and EOD-IMI responses to focus a data/content analysis of NAVSCOLEOD curriculum, doctrine, regulation, and policy.
Resources	*Capacity*
Are prospective EOD Team Leaders resourced with adequate time, tools, materials, and space to conduct EOD Team Leader training?	Are prospective EOD Team Leader's training paths scaffolded from reception through EOD Team Leader Certification assessment?
Incentives	*Motives*
Does the U.S. Army recognize and properly incentivize the extra effort and increased responsibility inherent with the duties of an EOD Team Leader?	Are EOD Soldiers aware of the duties and responsibilities expected of them as future EOD Team Leaders?

FEA Plan Overview Continued

Environmental Analysis Flowchart

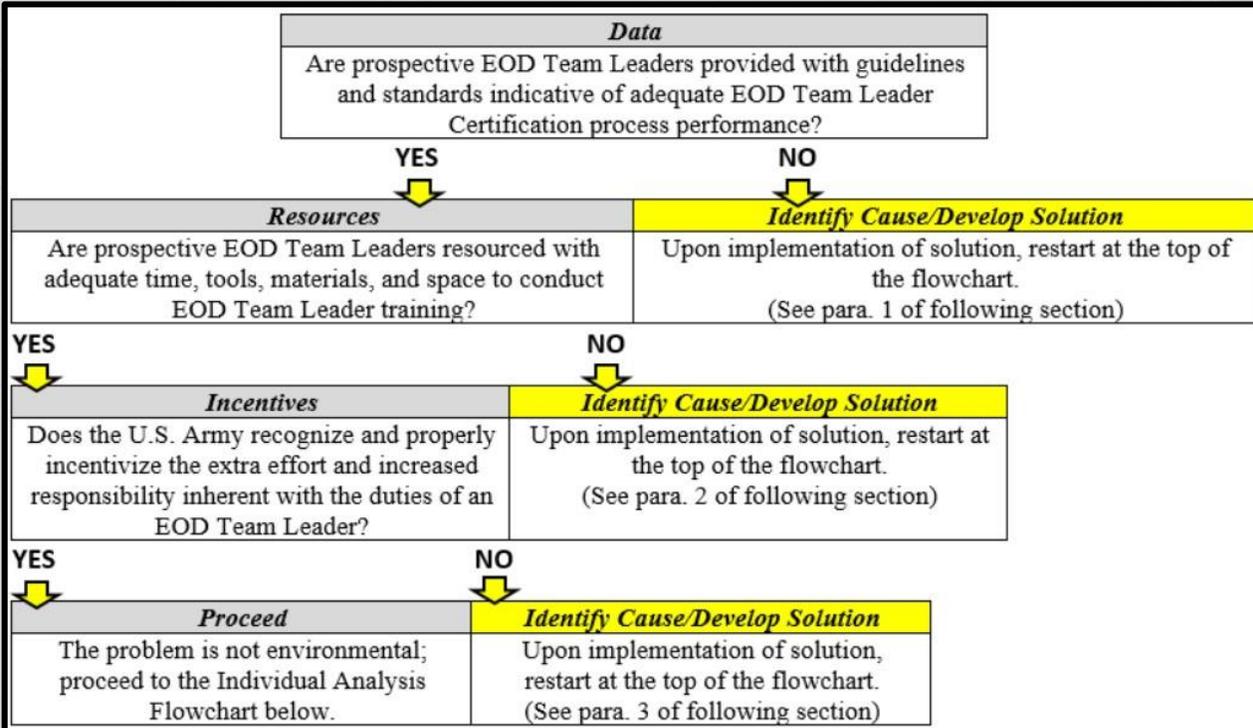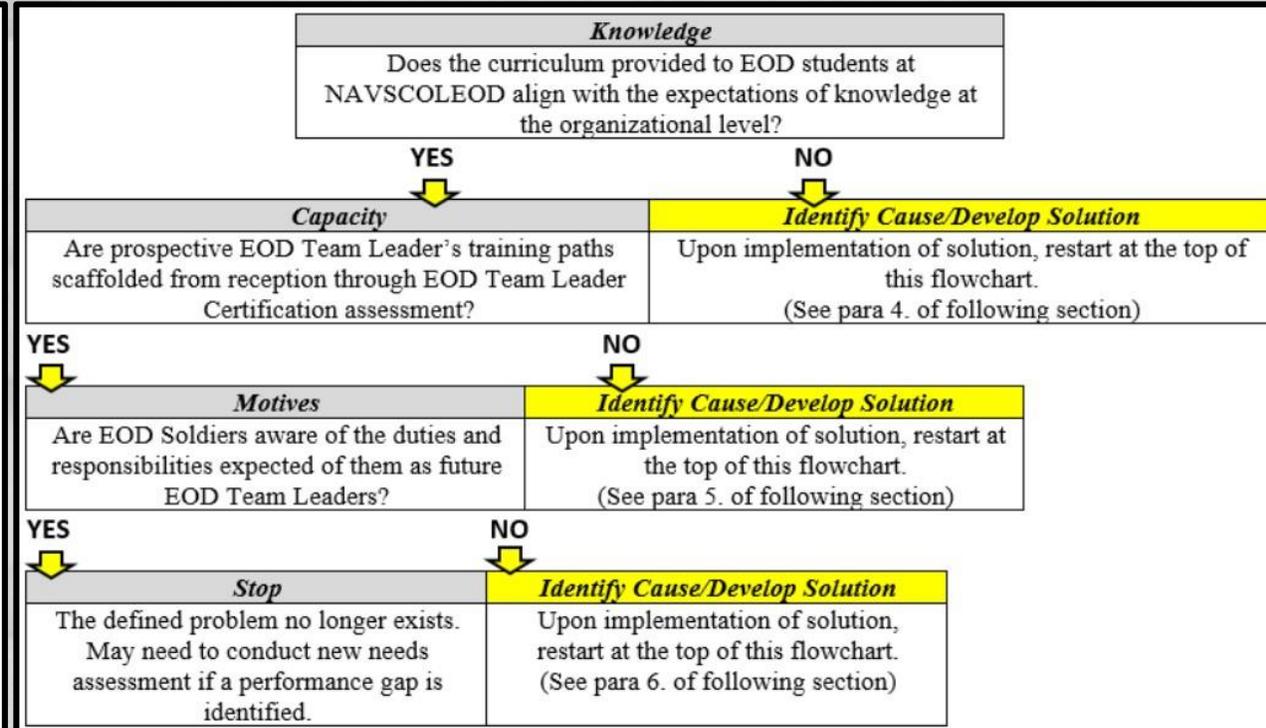| Data	
Are prospective EOD Team Leaders provided with guidelines and standards indicative of adequate EOD Team Leader Certification process performance?	
YES	**NO**

Resources	Identify Cause/Develop Solution
Are prospective EOD Team Leaders resourced with adequate time, tools, materials, and space to conduct EOD Team Leader training?	Upon implementation of solution, restart at the top of the flowchart. (See para. 1 of following section)
YES	**NO**

Incentives	Identify Cause/Develop Solution
Does the U.S. Army recognize and properly incentivize the extra effort and increased responsibility inherent with the duties of an EOD Team Leader?	Upon implementation of solution, restart at the top of the flowchart. (See para. 2 of following section)
YES	**NO**

Proceed	Identify Cause/Develop Solution
The problem is not environmental; proceed to the Individual Analysis Flowchart below.	Upon implementation of solution, restart at the top of the flowchart. (See para. 3 of following section)

Individual Analysis Flowchart

Knowledge	
Does the curriculum provided to EOD students at NAVSCOLEOD align with the expectations of knowledge at the organizational level?	
YES	**NO**

Capacity	Identify Cause/Develop Solution
Are prospective EOD Team Leader's training paths scaffolded from reception through EOD Team Leader Certification assessment?	Upon implementation of solution, restart at the top of this flowchart. (See para. 4. of following section)
YES	**NO**

Motives	Identify Cause/Develop Solution
Are EOD Soldiers aware of the duties and responsibilities expected of them as future EOD Team Leaders?	Upon implementation of solution, restart at the top of this flowchart. (See para 5. of following section)
YES	**NO**

Stop	Identify Cause/Develop Solution
The defined problem no longer exists. May need to conduct new needs assessment if a performance gap is identified.	Upon implementation of solution, restart at the top of this flowchart. (See para 6. of following section)

Data Collection Tools

EOD IMI

Prospective EOD Team Leader Intrinsic Motivation Inventory

Question	Always False	Often False	Sometimes False	Sometimes True	Often True	Always True
1. I believe that becoming an EOD Team Leader is of value to me.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
2. I believe I have choices about becoming an EOD Team Leader.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
3. While completing EOD Team Leader training events, I found my efforts to be rewarding.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
4. I believe that becoming an EOD Team Leader is a personal aspiration of my own.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
5. I have no choice regarding my training path as a prospective EOD Team Leader.	6 ☐	5 ☐	4 ☐	3 ☐	2 ☐	1 ☐
6. I want to become an EOD Team Leader.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
7. EOD Team Leader training is rewarding and beneficial to me.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
8. I find little interest in EOD Team Leader training.	6 ☐	5 ☐	4 ☐	3 ☐	2 ☐	1 ☐
9. EOD Team Leader training and certification is merely a requirement of my chosen profession.	6 ☐	5 ☐	4 ☐	3 ☐	2 ☐	1 ☐
10. I find personal satisfaction in EOD Team Leader training.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
11. I know that EOD Team Leader training will provide me with benefits beyond my service as a Soldier and into my civilian life.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
12. EOD Team Leader certification is an honor and a privilege.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐

EOD OLCS

EOD Organizational Learning Climate Survey

This survey contains items that are related to your experience with your EOD Team Leader certification trainers and evaluators. Trainers and evaluators have different styles in dealing with prospective EOD Team Leaders, and gaining perspective regarding your encounters with your trainers and evaluators is imperative to the development of the EOD Team Leader Certification Program. Please provide substantiating comments for "Strongly Disagree" and "Strongly Agree" responses. Your responses are confidential. Please be honest and candid.

1. I feel that my trainer/evaluator provides me choices and options during EODTLC training, so that I may learn from my successes and failures.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

Substantiating Comments:

2. I feel that my current and potential capabilities are understood and considered by my trainer/evaluator.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

Substantiating Comments:

3. I am able to be open and engage freely regarding questions and my own ideas and perspectives with my trainer/evaluator during training events.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

Substantiating Comments:

Tool	Data/Information Collected
EOD OLCS	• Data/Content analysis of NAVSCOLEOD and Organizational curriculum, doctrine, regulation, and policy • Relationships between EOD Team Leaders and their learners • Attitudes of prospective EOD Team Leaders • Perspective of the training environment, as viewed by the learners
EOD IMI	• Data/Content analysis of NAVSCOLEOD and Organizational curriculum, doctrine, regulation, and policy • Levels of learner motivation • Understanding of the environmental motivations as perceived by the learners
Data/Content Analysis	• Existence and status of organizational guidelines and standards indicative of adequate EOD Team Leader performance. • Expectations of organizational level and NAVSCOLEOD graduate knowledge. • Alignment of NAVSCOLEOD and organizational educational practices. • Analysis of current NAVSCOLEOD and organizational curriculum.

Causes and Solutions

	Problem	Potential Cause(s)	Proposed Solution(s)
ENVIRONMENTAL	Prospective EOD Team Leaders are not provided with guidelines and standards indicative of adequate EOD Team Leader Certification process performance.	• Organizational failure to construct and publish a comprehensive document establishing the duties and responsibilities of prospective EOD Team Leaders focused on EOD Team Leader Certification.	• Organizations utilize SMEs to identify and codify a standard operating procedure to outline the duties and responsibilities of prospective EOD Team Leaders. • The EOD-IMI and EOD-LCS will provide a focus for content and data analysis efforts to support product development and will serve to confirm the existence of established guidelines and organizational policies. • Organizations disseminate the developed product amongst the organization as required reading.
	Prospective EOD Team Leaders are not resourced with adequate time, tools, materials, and space to conduct EOD Team Leader training.	• Misallocation of funds, resources, and equipment intended for EOD Team Leader Certification training may exist.	• Organizations identify and segregate appropriate equipment for all prospective EOD Team Leaders to utilize during training. • Organizations allocate organizational funds towards the purchase, maintenance, and replacement of lost, broken, or antiquated equipment and other resources and expendable items.
	The U.S. Army does not recognize and properly incentivize the extra effort and increased responsibility inherent with the duties of an EOD Team Leader.	• Monetary incentives have not been proposed or properly substantiated to Army budget officials. • Non-monetary incentives are not being made available or utilized by the organization.	• EOD Corps proponents provide proposal to Army budget officials describing the importance of EOD Team Leader population maintenance and proposed incentives. • Organizations explore the use on non-monetary incentives for certified EOD Team Leaders.
INDIVIDUAL	The curriculum provided to EOD students at NAVSCOLEOD does not align with the expectations of knowledge at the organizational level.	• Individual knowledge development at the organizational level is not occurring appropriately, or is not being pursued by individuals.	• Organizations establish study requirements to expand upon base of knowledge established at NAVSCOLEOD.
	Prospective EOD Team Leader's training paths are not scaffolded from reception through EOD Team Leader Certification assessment.	• The organizational EOD Team Leader development pipeline is not structured in a sequential or progressive fashion, resulting in skill and knowledge gaps.	• Organizations review and adjust EOD Team Leader training paths to ensure sequential and progressive methodology pertaining to EOD team Leader development. • Organizational leadership supports newly presented information with previously acquired knowledge and skills that may be built upon.
	EOD Soldiers are not aware of the duties and responsibilities expected of them as future EOD Team Leaders.	• A lack of organizational communication to inform individuals of prospective EOD Team Leader duties and responsibilities. • Individual interest in gaining understanding of EOD Team Leader duties and responsibilities may be understated.	• Organizations develop counseling sessions to inform and elaborate upon the duties and responsibilities of prospective EOD Team Leaders for delivery upon organizational reception, with periodic follow-ups. • Organizational leadership emphasizes the importance of early EOD Team Leader knowledge, skill, and attitude understanding to prepare prospective EOD Team Leaders for training and development.

Questions

References

Chyung, S.Y. (2008). Chapter 7. Engineering Human Competence. *Foundations of*

    Instructional and Performance Technology. Amherst, MA: HRD Press, Inc.

Dalto, J. (2020, September 26). *Human Performance Improvement (HPI) Basics: Gilbert's Behavioral Engineering Model (BEM).* Retrieved from

    ConvergenceTraining.com: https://www.convergencetraining.com/blog/human-performance-improvement-hpi-basics-gilberts-behavioral-engineering-

    model-bem

Gilbert, T. F. (1978). *Human Competence: Engineering Worthy Performance.* New York: McGraw-Hill.

Intrinsic Motivation Inventory (2021). Retrieved from https://blackboard.syracuse.edu/webapps

    /cmsmain/webui/courses/35483.1212/ExampleTools?action=frameset&subaction=view&pid=pid-6804829-dt-content-rid-60558488_1

Learning Climate Survey (2021). Retrieved from https://blackboard.syracuse.edu/webapps

    /cmsmain/webui/courses/35483.1212/ExampleTools?action=frameset&subaction=view&pid=pid-6804829-dt-content-rid-60558488_1

U.S. Army (2021). *About the Army: Post Locations.* Retrieved from https://www.goarmy.com/

    about/post-locations.html

All images and graphics used in this presentation were sourced from creative common licenses or created by Donny Petrie