



Chapter XIII

Integrated Training Requires Integrated Design and Business Models

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ABSTRACT

There are many instructional design models that are based on educational and learning theory. There are also many process-based performance and quality improvement analytic models. When training development is viewed as a design and production process with the training “product” as the outcome, then both traditional ISD models and process improvement models become highly relevant to the goal of developing high-quality, user-focused training. This chapter examines the integration of performance and quality improvement model elements into traditional ISD models with an emphasis on a front-end analysis that uses the Quality Function Deployment Model to insure user-focused and outcome-based results.

INTRODUCTION

Somewhere in the Persian Gulf, Petty Officer Third Class Smith rolls out of his bunk at 05:30. He showers, hits the galley for breakfast, and heads to the hangar bay to be on duty at 06:30. At the duty section brief, he learns his shop will be doing an engine change on an E-2C Hawkeye aircraft that is returning to the aircraft carrier after experiencing an in-flight turbine failure. The Air Boss has made it very clear that the aircraft, which serves as the “Eyes of the Fleet,” will be repaired and ready for flight ASAP.

PO3 Smith remembers most of the turbine-related training he received at a Naval Aviation Maintenance Training Group detachment (NAMTRAGRUDET) before he reported to his squadron, but it has been awhile and turbine failures are definitely not a routine evolution. Non-pulsed, he returns to his maintenance shop, sits down at a computer, and searches for the same lessons he sat through at the NAMTRAGRUDET. He downloads the lessons from the local LAN for review, and notes a new engineering change proposal (ECP) has been linked to the turbine-related lessons. After reading the ECP, he is not quite clear on the final step of the overall procedure, which has been modified since he saw it in school.

As his supervisor is assigned to the flight deck recovery of the damaged E-2C aircraft, PO3 Smith sends an email back to the NAMTRAGRUDET instructor who taught the class, with a copy to the stateside manufacturer’s technical representative. He then checks out a personal digital assistant (PDA), downloads the turbine maintenance technical specifications from the interactive electronic technical manual files to the large-screen PDA, and heads back to the hangar bay, knowing he will have an answer to his email long before he gets to that step. With the technical specifications at his side, his refreshed knowledge on turbine repairs, and the reliable help from experts stateside, he’s confident he’ll be done in time to email his girlfriend back home before signing on for his 2100 (9PM) Navy e-learning online class in Electrical Engineering 101.

A Brief History

Since the ’50s, the military training systems have embraced the logical and deliberate methodology of the Plan, Analyze, Design, Develop, Implement, and Evaluate (PADDIE) Model in one form or another.

Its inherent linear design structure perpetuates a single input that leads to a single output. Each block or phase has specific tasks associated with it.

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