Case Study: Distributed Learning at the US Army's Lifelong Learning Centers

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Introduction

Soldiers in the U.S. Army have been under great strain in recent years, in part due to multiple deployments in Iraq and Afghanistan. Working in complex operating environments, while keeping current with equipment updates, has deepened training burdens. Combine this with a desire to reduce family separation (pre and post deployment), and it is easy to understand why the Army is exploring alternatives to centralized schoolhouse training.

As a response, the Army Training and Doctrine Command (TRADOC) devised "Lifelong Learning" Centers (LLCs), which were put into operation in 2006. LLCs feature online portals that learners can use to "reach back" to established Army training institutions. LLCs provide access to schoolhouse training content, simulations, and discussion forums (TRADOC, 2005). In contrast to the backlogs at physical training centers, LLCs can theoretically provide unlimited instruction, delivered anywhere. The effectiveness of the first LLCs was examined by the Army Research Institute in two studies (Cianciolo, 2007 and Cianciolo, 2008). In this paper, we summarize ARI's findings documenting the provision of online training content using LLCs.

Instructional setting

Lifelong Learning Centers have been established at Ft. Gordon (signal unit training), Ft. Leavenworth (command and control), and Ft. Leonard Wood (maneuvers support). Ft. Leavenworth was the subject of the first ARI study (Cianciolo, 2007) while the second (Cianciolo, 2008) covered Ft. Gordon. In both LLCs, courses are presented using the Blackboard Learning Management System, which supports both SCORM 1.2 and 2004 course formats.

Ft. Gordon's LandWarNet eUniversity concentrates upon MOSQ (Military Occupational Specialty Qualification) instruction, which is more technical in nature than the leadership development education provided at Ft. Leavenworth. As of 2008, Ft. Gordon offered courses on 20 MOSs. Before the MOS instruction was placed online, signal units frequently suffered from an insufficient number of qualified soldiers to satisfy Mission Essential Task Lists. Courses can be accessed on base or at one of two Regional High-Tech centers located in California and Pennsylvania.

General findings on online learning

At Ft. Gordon, trainees' opinion of online learning was favorable; 91% reported that they were generally or highly motivated to use Web-based instruction. Similarly, data collected at Ft. Leavenworth indicated that 88% of trainees reported high self-efficacy in the use of online instruction.

Online/classroom cost of delivery comparison

At Ft. Gordon, the cost of delivery of an entry level MOSQ course, 25B10, was compared for traditional and online modalities. The course covers proprietary and COTS software operation as well as networking equipment operation and maintenance.

The resident cohort spent 19.5 weeks at Ft. Gordon studying the course. The online cohort spent 18 weeks studying remotely, followed by a single week at a regional Professional Education Center (PEC). When base pay, travel, and meals were considered, the predominately online version was found to be 93% cheaper, costing $1,833 vs. $25,392 per student. These calculations include base pay for time spent at Ft. Gordon/PECs, but not for time spent during remote learning. Thus maximum savings would only be realized if trainees' online studies were performed in their own time. That said, ADL (2009) has found that online

training can be ~50% faster than classroom instruction, and so it retains its economic advantage.

Blended/classroom learning effectiveness comparison

A second component of the Ft. Gordon studies examined the performance of officers undertaking small group leadership training in a resident or non-resident format. The training included both individual and group activities. Group activities were performed in person (both formats) while individual activities were taken online (non-resident formats) or in person (resident formats). Online instruction was comprised of PowerPoint presentations with automated knowledge tests.

Both groups' final performance exercise was observed and scored by experienced instructors. This exercise contained two phases, Mission Analysis and Course of Action Development (COAD). Both groups were judged to perform at "novice" level on Mission Analysis, but the resident group outperformed the non-resident group in the COAD phase—receiving a rating of "advanced beginner" as compared with the non-resident group's rating of "novice". However, in interpreting these results, the author notes that there was "little practical difference" in the performance of the resident and non-resident groups (Cianciolo, 2008, p. 51).

Summary

This case study summarizes the cost savings and effectiveness of two online courses hosted at the Army Lifelong Learning Center at Ft. Gordon. Trainees found Web-based instruction to be relevant and motivating. Cost of delivery was greatly reduced, compared to traditional classroom instruction. Additionally, groups trained using the different delivery media (online and in-person) exhibited similar levels of performance. In general, these results indicate that SCORM-based instruction can be used to increase access to occupational training, reduce skill gaps, and ultimately increase unit readiness.

References

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