TRAINING THE GRUNTS: WHAT TODAY'S SOLDIERS TELL US ABOUT TRAINING FOR THE FUTURE

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> When even the infantry-long characterized as grunts and mud soldiers- is focused on moving digits, it is clear a major shift is underway in the way the U.S. military fights.
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> *Washington Post* (February 2, 2002) interviewing a Staff Sgt from Fort Lewis

How do we train mid- and junior-level soldiers in the information technology (IT) skills needed for operational units? How can we maximize the acquisition, transfer, adaptability, and retention of these skills necessary for transformation to the future force? To help answer these questions, scientists from the U.S. Army Research Institute (ARI) administered questionnaires and conducted interviews with operators of Army Battlefield Command Systems (ABCS) at Fort Lewis, Fort Hood, and Fort Bragg.

Sixty-two soldiers with ranks ranging from E2 to E7 participated. Approximately seventy-five percent of the soldiers were E3-to-E5 and 64% performed at skill level 1. These soldiers operated a variety of ABCS systems with the majority, 77 percent, operating either the FBCB2 or the AFATDS.

The most pervasive and consistent finding was that junior-level enlisted soldiers see a need for and want additional training to become proficient at their jobs.

- "Our biggest problem is that we need more training."
- "Learning the system is crucial to a combat situation."
- "What I would like is for my unit to do more training on how to do our job using the digital systems."
- "Training should be done more frequently so that soldiers can realize all of the systems functions."

New Equipment Training (NET) and Advanced Individual Training (AIT). NET and AIT are the predominant means of acquiring skills on the ABCS systems. Both NET and AIT training focus on how to operate the system or what often is called "knobology.". This training is context-free: there is little training about how different situations influence performance. Soldiers complete this training at a novice level with knowledge of facts, features, and rules that they can verbalize and apply by rote. They have difficulty applying their knowledge in new contexts. To move beyond this novice level, soldiers want and need practical experience in multiple situations to form a more sophisticated understanding of system uses. For example, they need to learn to prioritize and organize information to achieve a variety of goals.

Lengthening the time soldiers spend on their initial IT training is not the answer according to these soldiers. Although they see AIT and NET training as valuable for learning the basics, they find field exercises even more beneficial. When it comes to the most effective training beyond basic "knobology," field exercises are preferred by far, followed by exploring the system on their own.

- A lot of hands on, that's important for today's up and coming Army.
- Learning with my peers at the battery, teaching each other, we learned at our own pace.
- Give the soldiers time to get hands on and use the programs and learn for themselves.
- We have no scenario-based training, only digital.

Operational Training and Life Long Learning. Soldiers expressed strong disagreement when asked if training on IT systems in operational contexts takes time away from other important training activities. They emphasized that system training is important with strong agreement about statements such as:

- Successful task/mission performance requires team members to coordinate their activities directly with each other.
- Successful task/mission performance requires team members to obtain information about the work situation and pass it on to other team members.
- My leader places a high priority on our using our IT equipment.

Soldiers, like their commanders, see the need to collaborate and coordinate with other soldiers and systems if the ABCS is to provide maximum advantage.

- My most valuable training was when everybody brings their systems up and you get a chance to work out small deficiencies.
- Field training is valuable because it gave me an understanding of what the other ABCS components provided me within the Army.

Soldiers say that they are ready now for life-long-learning. A major question is how can the Army do it? Current research data provide important clues:

- Ninety-two percent (92%) soldiers have their ABCS systems available in their unit for training.
- Fifty-eight percent (58%) report that they have time to train during their work hours if training resources were available (e.g., CD ROM, manuals, on-line help, practice vignettes/scenarios).
- Seventy-four percent (74%) would train on their own time if computer systems and training resources were available.

Ninety-eight percent of the soldiers interviewed had experience using the internet and 93 percent had used instant messaging. Over 70 percent had little or no experience with distance learning and over half had little or no experience with web-based gaming.

Data suggest that the internet is a medium where soldiers could receive additional training and interact with soldiers using IT. Interestingly, soldiers think that the best tool to become proficient operators is embedded training, yet none of the soldiers interviewed use the "Help" that is embedded on their current system. Soldiers view embedded training as a tool that goes far beyond what currently is available.

An overwhelming majority of system operators (61 percent) are frustrated by the "bugs" in their systems. Reliance on civilian contractors degrades their readiness and soldiers would like to be trained to perform these roles.

- None of the soldiers knows how to troubleshoot the server so when something goes wrong and the contractors aren't around we're screwed.
- We faced multiple overloads to our system causing it to shut down in the middle of the exercise.
- Sometimes a system has a hard time coming up. You might need that time in combat.
- During a warfighter exercise the system kept freezing up on us. We haven't been trained to fix the problem.

Conclusions:

Information Technology is changing the way we fight. Soldiers operating this technology under the ABCS tell us that they could use it more effectively with additional training. They find that the most beneficial training involves a lot of hands-on under a variety of realistic scenarios and is there when they need it. In addition, they want to become competent in maintaining their digital systems to ensure they are ready when called upon. To support these training needs, soldiers today are asking for life-long learning, on demand training, and crosstraining. The Army must exploit these opportunities to develop the multi-skilled, technology-experienced soldier needed for tomorrow.