The Lessons of Operation Desert Hammer VI: Training

Digitization Will Impact Many Areas of Training

by Captain Ronald K. Kollhoff

During April 1994, the Army Warfighting Experiment (AWE) named Operation Desert Hammer VI (ODH VI) took place at the National Training Center. The purpose of the experiment was to have the first digitized battalion task force complete a full rotation and develop essential insights that would assist the Army's efforts toward achieving the goals of Force XXI. This article talks about lessons derived from the rotation in the area of training, that includes training tasks, strategies, methods, and literature.

Training Tasks

During training, preparation, and conduct of the AWE, observer controllers (O/C) and subject matter experts (SME) identified few new tasks. Of the new tasks identified, most were related to the new capabilities and requirements of the new digital systems. For example, the use of far-target designation and POSNAV on the M1A2 tank, or the operation of the HL-UAV, were "new" tasks. These tasks were few in number compared to the tasks modified by digital systems, like reporting, navigating, and C^2. These tasks are not additions; only the nature of accomplishing them has changed.

Unit training efforts must recognize these new and modified tasks and integrate these new tasks and new task procedures into the training plan. Training tasks "non-digitally" and then "digitally" can quickly exceed available training resources. The real focus of training should be to train soldiers how to leverage off digital system capabilities.

The advent of digital systems creates the need to train other members of a crew/section on these tasks, in addition to the already designated tasks within their primary Military Occupational Skills (MOS) and duty position. During the AWE train-up, leaders as the primary users, received the majority of the training on the digital systems. Not surprisingly, as a result, O/C assessments indicated that there was no depth within crews/sections for AWE leaders to delegate digital tasks down to subordinates. For example, the gunner and loader on a tank must also receive training on how to operate IVIS, so they can pick up some of the work load from the tank commander. The TCs became overburdened with operating digital equipment, which detracted from their primary roles as leaders. Another example is the All Source Analysis System (ASAS) where battalion-level intelligence personnel will deal with increased amounts of information. These personnel require training to request intelligence in forms usable by tactical commanders.

The bottom line is that we must identify the specific tasks that are new, modified, and unchanged when operating in a digital environment.

Training Strategy

The AWE TF train-up for NTC focused primarily around simulation training, with no TF field maneuver training taking place in the 12 months prior to deployment. With the emphasis on simulation training, not field training, the TF experienced difficulties performing basic warfighting skills and fieldcraft. Several O/Cs and SMEs commented that the lack of hands-on training prevented soldiers from achieving proficiency with digital systems. It is also important to understand that the AWE TF did not have sufficient time to assimilate digital systems into its administrative and warfighting SOPs. Equipment and software changes occurred as late as the unit's arrival to the NTC.

Another key point is that the AWE TF did not link up with all its supporting elements until arrival at the NTC. This particular training preparation is generally unsuccessful and not the training strategy used by conventional baseline units preparing for a rotation.

Several lessons learned were mentioned by O/Cs and SMEs from this use of simulation within training strategy. The training strategy must address training horizontally across Battlefield Operating Systems (BOS), and vertically within BOS. AWE TF training exercises reinforced horizontal integration across BOS, but geographical separation of the units hindered training within BOS. For example, FISTs and FSOs were integral players in simulation exercises, but training could not routinely include the key players from supporting artillery units. As a result, the complete fire support system was not exercised. The training strategy must provide for this vertical and horizontal integration.

Despite the presence of digital systems, the synchronization of all available combat power proved a challenge. Although digital systems can aid synchronization, leaders must know when and where to synchronize. Future training strategies must train the leader in all the necessary steps to attain synchronization. Training events should occur at company, battalion, and brigade levels and involve all the key players required in attaining synchronization. Constructive, virtual, and live simulations should also be used.

Future training strategies should also feature a clear progression of training. First, there is still a requirement for training basic fundamentals. Soldiers must learn basic warfighting skills and fieldcraft. Then they train on how to operate digital equipment, followed by training on integrating these systems into unit warfighting processes. This structure ensures that individuals and units are proficient in fundamental skills and tasks prior to moving on to more advanced concepts. O/Cs observed that the AWE TF was proficient with certain digital systems, but underlying weaknesses in fundamental skills prevented success. Training strategies should focus on avoiding such shortcomings. In fact, structured training programs require development and foundation on a logical progression of training.

Future training strategies must orient toward more complete combined arms (CA) training with a higher proportion of CA exercises. Digital systems and their associated communications links are designed to more closely integrate the various BOS. The M1A2 and the Bradley (with IVIS) can be considered "two BOS systems" since they can both maneuver and direct artillery/mortar fires. Clearly, these systems and their links must be frequently exercised for overall unit proficiency on the battlefield. This can only be achieved by CA training.

Also, leaders and soldiers must train on digital systems until they are second nature. During the preparation and conduct of the AWE, leaders and crews were observed using digital systems when time was available. In high pressure situations (such as enemy contact), soldiers tended to revert to voice means of communication and other techniques they considered "normal." This was largely due to unfamiliarity with the digital systems. The M1A2 and its capabilities were better utilized because the AWE TF had worked with these systems the most. Only repeated training gives soldiers the necessary insights to best use their systems. Future training strategies (institutional and unit) must incorporate the necessary training time for leaders and soldiers to gain this knowledge and proficiency.

Future battle command will definitely require a revised training strategy. This strategy must be built around a solid training program. Such a training program requires its own synchronizing of field/simulation so that all BOS training occurs within a combined arms contact.

Training Methods

Given the changes noted above in training requirements, most current training methods are excellent, but digitization we will cause a few changes. Some already know, but it's too early to determine the extent of all the necessary changes. Many new methods need developing as new systems undergo testing and fielding. Suggestions made after observing the AWE TF were the need for embedded training, assigning a "master digitizer," and using simulation as a means of dealing with the increased training frequency required for units to function digitally.

Using available training time to the fullest extent possible is always a challenge. Training tools like "hip pocket training" are useful as embedded training to fill time voids when soldiers are standing around waiting to conduct their other scheduled training. Digital skills are highly perishable, which means that the frequency of digital training will need to increase. We have current training strategies that already require significant amounts of time to carry out, thus increasing the frequency in order to provide sustainment can quickly exceed available training time. There is just so much time to allot to training. When soldiers are sitting in their M1A2 waiting to shoot Tank Table VIII, or standing around in the motor pool waiting to have their vehicle inspected, they could call up a training tutorial software program within the digital system. The tutorial would allow soldiers to gain and sustain the necessary skills required to operate their assigned digital equipment.

Having a master digitizer at the company/team level, the unit SME on digital systems, would greatly enhance digital training within the unit. This person is similar in function to the master gunner, providing the necessary expertise required for the unit to train to digital excellence. He would train the users when and how to use digital systems and how to communicate what they've learned to subordinates.

In Force XXI, we digitize so that large units, battalion and higher, can function quickly as one. Consequently, there needs to be more battalion-and-higher exercises. Maneuvering large forces with increased frequency in the field is too costly in terms of training dollars; therefore, there is the need for more simulation training. However, it is important to understand that simulation is not a total substitute for field training. We must determine a proper mix of field/simulation training to ensure essential field skills don't deteriorate. Finally, as often as possible, simulations and field training, should include combat support and combat service support elements to ensure the entire TF trains as it will fight.

Training Evaluation

The evaluation of training is critical to assessing a unit's ability to perform its METL tasks. Evaluation should be continuous and integral to all training events. Knowing that digital task performance decays rapidly, units must ensure continuous evaluation of soldiers' performance during training. External evaluations, digital skills test, and "gates" in simulation can ensure units are adequately trained to operate on the digital battlefield.

During a major simulation training exercise, the AWE TF did not receive adequate external evaluations at all echelons. At the platoon and company/team levels, sufficient external evaluations did take place. However, at the battalion level, the staff did not receive its evaluation from an external source. FM 25-100 states that formal evaluations should be conducted by a headquarters higher in the chain of command than the echelon undergoing the evaluation. Also, when using Distributive Interactive Simulation (DIS) for multi-echelon training, there should always be a plan to properly critique each echelon involved. Training conducted without some form of feedback

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provides little benefit to leaders in assessing their unit's ability to perform its wartime mission.

Furthermore, Force XXI creates the need for conducting a digital skills test as part of a unit's collective training. A key point derived from the AWE TF was that digital systems must be an integral part of a unit's operations and training. To ensure soldiers can perform necessary digital tasks prior to a major training event, something like a digital skills test should be performed — possibly a test similar in nature to the Tank Crew Gunnery Skills Test (TCGST) which armor crews must pass prior to shooting tank gunnery. Not only will the test demonstrate proficiency with digital systems, it will also provide a tool for conducting sustainment training.

There is a need for monitoring digital training progression that allows commanders to track performance. A proven method is to use simulation with "gates," like in the Unit Conduct of Fire Trainer (UCOFT). Have a matrix, as used with the UCOFT, which moves soldiers through continually tougher conditions until proficiency is achieved at each level. Feedback would be provided so that commanders can determine what personnel/sections require additional training in order to perform all essential digital tasks to standard.

Training Literature

Training literature across the board needs rewriting, with present tasks, conditions, and standards updated to reflect the digital environment. Soldier manuals for every MOS level will require revision to reflect the impact of digitization.

A significant problem with the train-up of the AWE TF was insufficient training literature and documentation for the digital systems prior to fielding. Equipment and software updates occurred frequently, with some taking place even after the unit's arrival to the NTC. As a result, the TF had to learn and master the digital systems during the rotation, which detracted from its performance.

Force XXI creates the need for new tactics, techniques and procedures (TTP). Several written materials delineating TTPs were available to the AWE TF prior to the rotation. Some of these included the Fort Knox Supplemental Material (FSKM) 17-15-1A2: *M1A2 Tank Platoon Tactics, Techniques and Procedures*; Special Texts (ST) 71-1-1, 71-2-1 and 71-2-2: *Tactics, Techniques and Procedures for the M1A2 Tank Company Team, Battalion Task Force, and Digital Battalion Task Force* (respectively). In many cases, these manuals were not field- tested prior to the AWE and should now be treated as foundations for the continuing development of future TTPs. Again, with Force XXI, we see changes to tasks, staff processes, and warfighting; therefore our training literature must change.

Digitization is taking the Army in new and exciting directions. The AWE TF and Operation DESERT HAMMER VI gave us some valuable lessons on which we need to focus to achieve success in the future. Force XXI will change the way we fight and, therefore, we must relook the way we train and make changes accordingly. Digitization alone will not win future wars; only units that have well trained leaders and soldiers will.

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