ADAPTIVE TRAINING FOR FAST-EVOLVING EQUIPMENT & TACTICS

The Department of Defense (DOD) is increasingly relying on fast-evolving equipment and associated tactics that keep pace with technology and needs on the battlefield. In the signals intelligence and cyber communities, for example, tools and tactics are changing as fast as every few months. Some military commands have found that the schoolhouse training that they typically rely on cannot keep up with the pace of this change, and informal training opportunities can have shortfalls in quality and availability. CNA has conducted analysis for multiple naval communities that provides insights and recommendations for designing agile, formalized training programs to support rapidly changing tools and tactics.[1]

STAFFING THE TRAINING UNIT

CNA analysis suggests that instructors for fast-evolving technical tools and corresponding tactics would ideally be experts in three areas:

- Education, including developing and carrying out training
- Technical aspects of the equipment and tactics
- The operational environment and tactics execution

Different candidate pools for instructors will allow for different specializations. For example, certified instructors—whether military or civilians/contractors—could contribute education expertise, civilian/contractor system developers or engineers could contribute technical expertise, and military personnel who were recently (or are currently) in billets where they used the equipment could provide operational expertise.

These examples suggest that it may be difficult to find all three of these areas of expertise in the same population. Thus, decision-makers may have to prioritize among the three. In this case, several mitigations could be employed:

- Certifications—Instructors could earn certifications in the areas in which they are not experts, e.g., education certifications.

- A hybrid training unit—The unit could be composed of personnel with different areas of expertise. This option may be most feasible for a relatively large training unit.

- Support—The unit could be supported by other organizations with the expertise that the instructors lack (as is discussed further below).

Regardless of incoming expertise, instructors will have to quickly master changes to equipment and adjust tactics to that modified equipment. They may also be required to conduct advanced training. Thus, recruiting highly qualified instructors may be paramount to the success of the training unit. In this case, CNA analysis yields the recommendation that the training unit be developed as a highly regarded expert training unit, drawing from the models of the Navy's

Fighter Weapons School (TOPGUN) and the Marine Corps' Marine Aviation Weapons and Tactics Squadron One (MAWTS-1). In this model, top personnel are recruited from the operating forces to a temporary appointment at an elite training and tactics development unit that fosters strong ties with the operating forces. The prestige of the training unit and the recruitment of top personnel are supported by practices that include:

- A rigorous selection process
- An emphasis on the development of expertise and tactics for instructors
- Good career advancement opportunities for instructors after serving in the unit (if they are military personnel)
- High mission visibility with senior leadership

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1. For the purposes of this writing, we assume that a single training unit will be developing and executing training.

ESTABLISHING RELATIONSHIPS FOR THE TRAINING UNIT

The training unit can gain critical support from and access to organizations and populations through the relationships it establishes both organizationally—particularly the choice of the unit's parent command—and geographically. As for the parent command, there are a variety of options for where the training unit could reside, from an organizational standpoint. It could augment or be established as a new unit under an existing training, technical, or operational organization associated with the equipment or operating community, in alignment with the expertise of the unit's staff. The unit will be able to draw from the parent command's resident expertise and administrative resources and benefit from the parent command's leadership and advocacy. A decision on the parent command will be influenced by logistical and financial considerations; we recommend that the decision also be based on the alignment of the training unit's missions, functions, and tasks with those of candidate host organizations.

The physical location of the training unit can facilitate its access to:

• Trainees

• Experts (training, technical, or operational)

• Higher headquarters

Another consideration is whether the unit will be consolidated or distributed (i.e., located in one place or divided among different locations). Consolidating the unit could facilitate its internal coordination and its development of training and tactics, while distributing the unit could maximize its access to different groups.

If the unit requires support from or access to additional organizations, it may be beneficial to formalize the unit's relationship with those organizations. Formalized relationships can include agreements regarding information sharing, coordination, visits, technical support, and access to certifications. Decision-makers should identify all organizations that will be relevant to the training unit and articulate any support or access requirements. They should then advocate for relationships that reflect these needs.

LEARNING FROM BEST PRACTICES OF TECHNICAL DOD COMMUNITIES

Drawing from the practices of expert DOD training units was discussed above. Other DOD communities also offer lessons. In particular, signals intelligence and cyber communities have dealt with fast-evolving equipment and associated tactics for years. An analysis of the cryptologic communities from the Army and the Naval Special Warfare Command, as well as the Marine Corps Cyberspace Command and the Navy Acoustic Intelligence Specialist community, yielded several practices that contribute to these communities' success and could be applied to other communities to enable agile and high-quality training, including:

• Maintaining flexibility in the training unit's structure and its training to remain responsive to unforeseen or new training issues

• Conducting training in the operating environment if possible

• Establishing longer billets for operating forces to offset the significant amount of time personnel spend in-billet receiving technical training

• Incentivizing personnel to remain in the community for multiple billets to foster the development of advanced technical and operational expertise

ABOUT CNA CORPORATION

CNA is a not-for-profit research and analysis organization with 75 years of experience providing government agencies with data-driven insights and real-world, actionable solutions grounded in our direct experience with the operational environments where these solutions are applied. CNA developed the foundational techniques for operational analysis to address complex challenges facing government programs. We have applied these techniques successfully in areas ranging from defense to aviation, education, justice, and homeland security.

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