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**HOW DL CAN IMPROVE THE EFFECTIVENESS OF  
CROSS-TRAINING AND MOS CONSOLIDATION**

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When we looked in Chapter Three at the generic strategies that the Army uses to reduce personnel shortages, we identified cross-training and consolidation of MOSs as two options. Since both strategies attempt to produce more effective soldiers by making them more capable of performing a broader range of activities, we treat them here as one strategy for discussion purposes. With cross-training, soldiers already proficient in one MOS are trained to perform related activities in another MOS, so that they can informally fill in for that other occupation when necessary. With MOS consolidation, MOSs that perform similar activities are formally combined into one occupation, and soldiers in each of the old MOSs are given additional training to become proficient in all aspects of the new MOS.

In this chapter we follow a similar approach to the one we used in discussing the reclassification strategy. We begin by discussing the cross-training/MOS consolidation process; we then turn to arguing for the feasibility of the two and for their usefulness in reducing personnel shortages. Then, we discuss how DL can enhance the effectiveness of the strategies. Finally, we discuss some potential force-wide benefits of using DL for cross-training and MOS consolidation.

**THE PROCESS OF CROSS-TRAINING AND MOS  
CONSOLIDATION**

Cross-training and MOS consolidation work best in occupations with high overlapping functionality. In the 67T case, for example, there are six other occupations dealing with helicopter repairs. Consolidation or cross-training is clearly possible here. This is reinforced by

looking at the civilian workforce, some of whom work on Army helicopters, which already uses generic helicopter repairmen. These civilian helicopter repairers are given access to special add-on training, as and when required, for specific equipment and assignments.

One key consideration in using a cross-training strategy is the organizational context. For example, it makes no sense to cross-train two occupations unless soldiers in the two occupations are going to work side by side. In the case of Army aviation this test is met, since future plans call for multiple aircraft types in the same unit, a balanced mixture of attack, reconnaissance, and lift helicopters.<sup>1</sup>

A necessary ingredient for consolidating MOSs is a workable training strategy, which can only be accomplished if the occupations are good candidates in the first place. For example, if occupations are overconsolidated, the amount of material to cover can lead to development of SL1 courses that are impractically long. Simply cutting that course to make it more feasible is clearly not the solution, since that would threaten the quality of the work performed and the readiness of units using those occupations. An answer in some cases is to create generic training courses that are supplemented by specialty training on selected types of equipment depending on soldier assignments.

## **THE FEASIBILITY OF CROSS-TRAINING AND MOS CONSOLIDATION**

Unlike reclassification, there is some concern that cross-training and MOS consolidation may not be feasible strategies in and of themselves, since they have not been widely employed in the recent past. Thus, we briefly discuss our view that the strategies can indeed work.

Consolidation of MOSs was much more prevalent during the recent drawdown period and before, as evidenced by a reduction of the total number of MOSs by 40 percent from 1986 to the mid-1990s.<sup>2</sup>

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<sup>1</sup>See Maj. Gen. Anthony Jones, "Aviation Modernization Strategy—2000 and Beyond," *Army Aviation*, May 31, 2000.

<sup>2</sup>BG Adair, CSA IPR of the Army Development System (ADS) XXI Task Force, briefing, May 2000.

Not all these reductions involved consolidations; some reductions simply reflected (as does the anticipated disappearance of 67V, 67N, and 67Y mentioned earlier) equipment leaving the Army. However, many did involve consolidation of two or more MOSs into a single MOS.<sup>3</sup>

Present-day evidence comes from the Army Development System (ADS) XXI Task Force. As of early summer 2000, proponents working on that task force had suggested the merger of 44 MOSs into 22.<sup>4</sup> These 44 MOSs cover 17 percent of current authorizations in the Army.

Finally, there is also evidence that cross-training and MOS consolidation are indeed feasible, even for very tough cases. An earlier RAND study (Wild and Orvis, 1993) examined the feasibility of using “field-based cross-training” (FCBT), which referred to two programs: (1) consolidation of two or more MOSs by combining specialties, and (2) a shift from school to OJT, where AIT courses are shortened and reoriented to focus on general “core” skills and where a formal OJT program is instituted at the field unit to compensate for the reduction in schoolhouse training.

The RAND study focused on a tough case—CMF 67, helicopter maintenance—which includes the 67T MOSs we focus on in this study. This career field is tough because it involves advanced technology, has a significant peacetime training mission, and entails an especially high prevalence of safety issues.

The premises of that study were that MOS consolidation broadens enlistees’ skills through cross-training and that broader skills can potentially lead to more flexible work allocation at the maintenance unit and more flexible assignment of personnel to field units. The study found that selective consolidations in the CMF offer the best way to maintain readiness while reducing training and personnel costs. The report also emphasized that the consolidations should

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<sup>3</sup>For example, most current MOSs in CMF 31 are the product of at least one consolidation between 1986 and 1999. Specifically, 31G, 31K, and 31V combined to form today’s 31U; 36L, 29NV8, and the old 31F combined to form today’s 31F; 31M and 31D combined to form today’s 31R; 31N, 29M, and 29V combined to form today’s 31P; and 29Y and 31M7A combined to form today’s 31S.

<sup>4</sup>See Adair briefing, *op. cit.*

focus on highly transferable skills and that they should be augmented with policies that facilitate cross-training. Finally, it stressed that training packages to support flexible unit assignment of similar MOSs could be used to enhance cross-utilization without formal consolidation.

Beyond the evidence of feasibility from the RAND study, there is also evidence in the civilian sector. As mentioned above, civilian aviation organizations currently train all primary helicopter repair skills in one occupation.

### **THE EFFECTIVENESS OF CROSS-TRAINING AND MOS CONSOLIDATION**

Not only are cross-training and MOS consolidation feasible, they provide an effective strategy for alleviating the effects of personnel shortages. In this case, however, the strategy does not accomplish this task by *creating more soldiers to assign*, as is the case for reclassification; instead, it accomplishes the task by *increasing the skill base of soldiers in existing assignments*, thus making soldiers more efficient. To understand this, think of two specialized MOSs, A and B. Workers in MOS A might stand idle because of a temporary lack of type A work, while type B jobs queue up because of a temporary high demand for the work. Alternatively, workers in MOS A might have work, but only on low-priority jobs, while high-priority type B jobs again queue up. Clearly, when personnel are capable of both types of work, such instances can be remedied.

Another way to think about the effect of cross-training and MOS consolidation is that they minimize the impact of personnel shortages. In the scenario discussed above, the shortages do not get reduced by cross-training and MOS consolidation; however, the ability to use cross-trained personnel to help redress workload imbalances can render the MOS shortages less damaging to readiness.

Of course, cross-training and MOS consolidation may also actually reduce shortages. A consolidation of functionally similar Army occupations could simplify the assignment process, allowing a reduction in the 9,950 shortages that currently exist because of personnel surpluses in nonshortage occupations. Moreover, the

increased efficiency of soldiers could eventually allow a decrease in requirements (i.e., the need for the assignments in the first place).

Table 5.1 helps to drive home this point by exploring the potential for cross-training and MOS consolidation to reduce shortages in the MOSs of CMF 67. The table lists functionally similar 67 MOSs and indicates their present status in relation to SL1 shortages and surpluses and NCO shortages and surpluses.<sup>5</sup> Considering all helicopter repairers together, the gap between SL1 authorizations and assignments is approximately 11 percent (computed by dividing 419, the number of shortages, by 3,885, the number of slots authorized). This is less than the gap in 67T by itself (14.4 percent) because the gaps in other occupations are smaller. Thus, if cross-training or consolidation could reduce workload (or requirements) by about 11 percent, the current shortage in the entire series could be eliminated.

It is worth noting that while all MOSs but one have an SL1 shortage, NCOs (the right side of the table) show a slight surplus. Thus, if a

**Table 5.1**  
**The Potential of Cross-Training and MOS Consolidation:**  
**The Example of CMF 67**

MOS	Title	SL1			NCOs (E5–7)		
		Auth	Assgn	Diff	Auth	Assgn	Diff
67T	UH-60 Repairer	1,804	1,544	–260	1,554	1,612	58
67U	CH-47 Repairer	684	665	–19	834	879	45
67R	AH-64 Repairer	802	758	–44	670	671	1
67S	OH-58D Repairer	453	400	–53	547	510	–37
67N	UH-1 Repairer	109	68	–41	109	84	–25
67V	Observation/Scout Repairer	6	21	15	21	36	15
67Y	AH-1 Repairer	27	10	–17	54	35	–19
Total		3,885	3,466	–419 (11%)	3,789	3,827	38

SOURCE: MOS Data Sheet, PERSCOM.

<sup>5</sup>Note that the final three occupations in the table are being phased out of the active force.

consolidation strategy required some equipment-specific training for soldiers taking on new assignments, the surplus in NCOs suggests that there are enough senior personnel present to support this training.

### **HOW DL CAN ENABLE MORE CROSS-TRAINING AND MOS CONSOLIDATION**

As was true with reclassification, using DL in conjunction with cross-training and consolidation could make the existing options more attractive, but in somewhat different ways for each. For cross-training into functionally similar MOSs, the modular aspect of DL training would allow avoidance of part of the reclassification course dealing with common tasks, reducing even further course length, training repetition, and TDY time. For MOS consolidation, the way DL would help depends on how the consolidation is accomplished. If two functionally similar MOSs are simply combined into one (perhaps because of technological change), the use of advanced learning technology might contribute to the development of a workable training strategy. But if the concept is to produce a generic specialist across two or more specialties (as is true for helicopter repairers in the civilian world), DL could provide the equipment-specific training they need for a specific assignment without leaving their home station.

In addition, DL makes it easier for soldiers to stay current in skills relevant to the requirements of their current job and then refresh quickly on a different set of (hopefully similar) skills in the same MOS when they are moved to a unit with different equipment.

It is important to note that DL by itself does not make any given MOS consolidation or cross-training a good idea, any more than it makes reclassification a good idea. However, in cases where consolidation does seem to be feasible and useful in reducing personnel shortages (like those cited above), DL can make consolidation strategies easier and less expensive to accomplish. Below we discuss some of these benefits in more detail.

**DL Cross-Training Is Even More Appealing Than  
Reclassification to Soldiers/Unit Commanders**

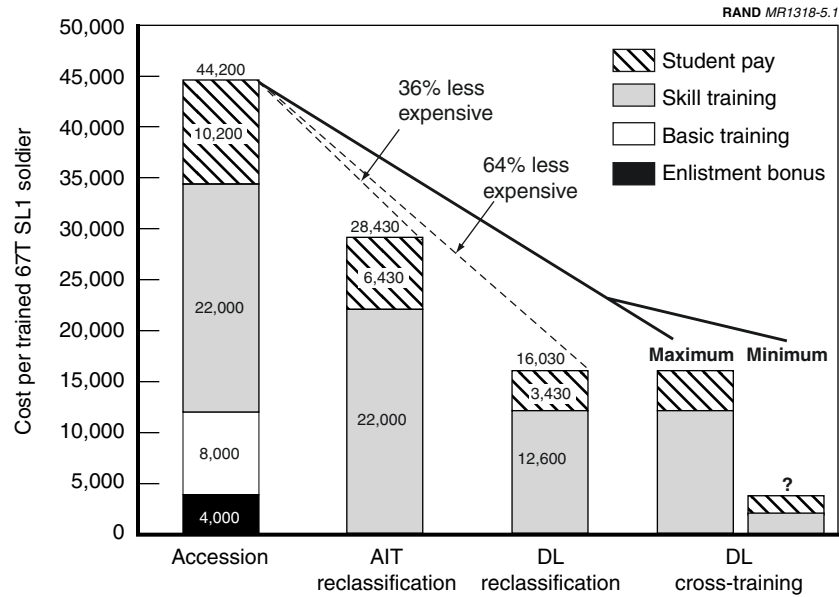
In the previous chapter we discussed how using DL courses to do reclassification made those courses more appealing. Doing the same thing with cross-training courses raises their appeal as well, as illustrated in Table 5.2, which modifies Table 4.2. In this case, the boldface in the table represents the key differences between the DL reclassification course and the DL cross-training course. Those differences center around the ability to modularize the existing DL course so that soldiers can test out of already mastered material when being cross-trained and, thus, not need to take an entire course. The ability to modularize courses through DL also drives the result, indicated in boldface, that the already shortened lengths for the first three entries can be made even shorter.

**DL Cross-Training Can Reduce Costs in the Same Ways DL  
Reclassification Does**

Figure 5.1, which builds on Figures 4.4 and 4.5 in the previous chapter, shows that DL cross-training promises to be even less expensive

**Table 5.2**  
**DL (TADLP) Versus AIT Course Characteristics:**  
**The Example of the 67T Cross-Training Course**

Characteristic	AIT Course	DL Course (TADLP)
Total course length	15 weeks	<b>Maximum of 8 weeks, 3 days</b>
Residential length	15 weeks	<b>Maximum of 4 weeks, 1 day</b>
DL length	None	<b>Maximum of 4 weeks, 2 days</b>
Testing out of already mastered material	No	Yes, if course modularized
Potential obstacles	Funding Training seats Equipment	Cost of course development



**Figure 5.1—DL Cross-Training Is Even Less Expensive Than Reclassification for Alleviating SL1 Shortages**

than reclassification for alleviating SL1 shortages. Just as we modified the right column in Table 5.2 with the word “maximum” to indicate that the courses are likely to be shorter in all key aspects, here we provide a range of maximum and minimum. The courses will be no longer than the reclassification course, in which case they would have the same cost levels; however, they could be quite a bit shorter, which would drive the actual costs per trained 67T SL1 soldier down much lower, depending on the degree of modularization. In addition, as was true for DL reclassification, DL cross-training can help make the SRB program more effective.

**POTENTIAL FORCEWIDE BENEFITS OF DL CROSS-TRAINING OR MOS CONSOLIDATION**

Using DL for cross-training and MOS consolidation can increase readiness by providing better vehicles to reduce the number of per-

sonnel shortages. As with reclassification, the availability of DL can make these strategies more attractive to consumers, and improve the efficiency of the overall process.

The primary benefit of using DL to implement these strategies is the avoidance of future training costs. How much can be saved depends on the extent these strategies are used across the force. We have already noted that the organization of future aviation brigades suggests compatibility with MOS cross-training and MOS consolidation. Similarly, we have noted that proponents working with the ADS XXI Task Force have submitted a list of 44 MOSs for consolidation, involving 17 percent of authorizations.

In addition, the ADS XXI Task Force will recommend future consolidation beyond the 44 already submitted. One of the goals of these consolidations is to make occupational positions easier to fill, reducing current shortages. Specifically, another 88 MOS consolidations are currently being considered or recommended for further study. The concept in these consolidations is to create a new MOS structure with bigger and fewer occupations facilitating more flexible personnel management policies. Positions within occupations will be filled with “adaptable soldiers” who have the ability to perform well in skills, knowledges, and abilities (SKAs) that span two or more functional areas. Each job within a MOS will not be considered separate; instead, it will be considered a refinement that can be modified by training through DL media (i.e., self-development or unit-conducted training) to bring the soldier up to required proficiency.

Clearly, the potential size of the benefits of DL cross-training and consolidation are large in the long run, once DL has been fully implemented. However, for benefits to be large during the long implementation period of TADLP will require coordination to ensure that the right courses are chosen for DL conversion and that the characteristics of the courseware fit the needs of the specific strategy employed. For example, we found that only 6 of the 44 courses initially proposed for consolidation by school proponents were on a course list for TADLP before FY03.