The Army is in the process of implementing TADLP, The Army Distance Learning Program, with an overall aim to improve the effectiveness and efficiency of military education and training. Distance learning (DL) uses technology to train soldiers where they are stationed, enabling the Army to deliver training more readily and also shorten the amount of time devoted to resident training at its schools. These changes are substantial and can have wide-ranging effects on how the Army trains and develops its leaders.

The Army is making major investments in distance learning technologies, building "distance learning classrooms" and developing courseware. These investments amount to approximately $850 million through 2015, including costs already incurred in both Active and Reserve Component programs. Observers have questioned the scope of these investments and whether the changes needed to manage such training are feasible to implement. Others have questioned more broadly the approach of TADLP: Is the program currently postured in a way to deliver on its promises?

This research, conducted for the Army’s Deputy Chief of Staff for Personnel, examines distance learning from a personnel readiness perspective. The research team has explored aspects of personnel readiness that could be improved through distance learning, seeking ways to configure the distance learning program to realize those improvements. We examined two possible ways to leverage DL’s potential to improve personnel readiness: (1) alleviate shortages of qualified enlisted personnel in critical military occupational specialties (MOSs) and (2) enhance the stability and professional develop-
ment of soldiers and leaders. Our findings indicate that the Army should emphasize the exploitation of DL’s capabilities in courses that promise high payoff in these areas. These include MOS skill-producing courses in specialties with chronic or large shortages, and officer and NCO development courses, especially those with large student loads and/or long residence requirements.

**USING DL TO HELP REDRESS SHORTAGES OF QUALIFIED PERSONNEL**

Active Component enlisted shortages pose a serious problem. For example, we estimate the Army was short more than 19,000 soldiers in operating strength in various military occupations in FY99; this was about 5.4 percent of authorizations. Another 8,500 were in jobs for which they lacked the full training specified for their skill and grade level.

Historically, the Army has addressed such problems by using accession, retention, and training strategies. In this report we shall focus on how DL might improve the effectiveness of training strategies aimed at reducing shortages. Such strategies include reclassification training at reenlistment, cross-training of soldiers, consolidation of military occupational specialties, and acceleration of training (especially for NCOs).

Reclassification is the transfer of soldiers from one MOS to another, with necessary training provided. In the context of reducing shortages, reclassification means transferring soldiers from surplus to shortage MOSs. RAND’s analysis suggests that distance learning could assist in the reclassification process in several ways. First, DL could stimulate an expansion of the reclassification program, with a corresponding reduction in the number of MOS shortages. The reason is that reclassification courses taught using distance learning would be more attractive to (and therefore more utilized by) soldiers and commanders because they can take less time to complete and involve less time away from home. Second, reutilizing existing manpower to fill shortages increases the efficiency of the existing end strength. One way to value that gain is by the pay and allowances of soldiers moved from surplus to shortage positions—$32,000 per soldier per year for an E4 with 3–4 years of experience. In effect, this
amounts to a better utilization of about $32,000 annually per reclassified soldier, since the soldier’s time is now being employed in a shortage skill rather than in a skill where he was excess to the Army’s needs. Hence, for every 31 soldiers so reclassified, the Army uses about $1 million in personnel costs in a way that more directly enhances personnel readiness. Third, the analysis suggests that DL could reduce the costs of reclassification by 30 percent. Cutting a 10-week course to 7 weeks produces an estimated cost avoidance of $4,500 per trainee. Finally, reclassification through DL can, in the long run, lead to the reallocation of some selective reenlistment bonuses (SRBs) to make them more effective in reducing shortages.

Distance learning can also improve the cross-training and consolidation processes. Both processes attempt to produce a more versatile soldier, one who can work effectively across a broader range of skills. While these processes do not necessarily decrease the number of MOS shortages per se, they do render shortages less damaging to personnel readiness. DL’s effects in this area are much the same as they are in reclassification: reducing transaction costs (by offering shorter courses closer to home) allows for expansion of the program. As with reclassification, it also reduces training costs. DL also facilitates cross-training by enabling soldiers to access short refresher courses or on-line help when they encounter a less familiar aspect of their work. Such a resource can also help reduce resident time requirements in skill training programs.

DL can also make some parts of leader development training easier to accomplish in a more timely fashion; accelerated training, in turn, enables a reduction in the number of untrained personnel. As pointed out above, we estimate that in 1999, 8,500 soldiers held jobs for which they lacked full training, specifically the proper basic or advanced noncommissioned officer course. Distance learning can help by allowing the training to begin earlier in the select-train-promote cycle than the resident courses. This way, some portion of the work can be done before a resident course is available, and the course can be taken in small pieces at the home station. In many cases, the student will also be able to use the DL technology to test out of portions of the course, eliminating wasted time studying material already mastered. Moreover, DL can enhance self-development to accelerate the institutional training process.
ENHANCING STABILITY AND PROFESSIONAL DEVELOPMENT

Personnel turbulence—the disruption of stability caused by too frequent changeovers of positions—is a chronic impediment to readiness. DL-supported professional development courses can reduce turbulence and thereby promote stability. This effect can take one of two forms: either a modest increase in elapsed time between transfers (less time needed for schooling en route to new assignment), or a decrease in time spent away from duty position (in cases where the schooling is done on a TDY-and-return basis). Many consider the reduced time away from home and the lower travel costs as ancillary benefits of distance learning. Our analysis suggests these benefits are large enough to warrant greater emphasis on developing DL segments for Active Component officer and NCO professional development courses.

This portion of the research examined the institutional training and associated travel patterns of an officer’s career course (Armor branch) to ascertain whether DL could offer stability and professional development benefits. Researchers considered four options, all of which were varying combinations of the two possible attendance modes: permanent change of station or temporary duty. Results show that using DL increases the time a student can be available to his or her home unit by an estimated 32 to 43 days. Some of the time at the home station would have to be devoted to DL study; allowing for this still leaves a net gain of as much as 15 to 27 days per student. Using conservative assumptions that all DL work would have to be accomplished on duty days and that the student would not be available for any duties on any of the DL days, we also developed a “worst case” estimate for days gained. This minimum estimate ranged from 8 to 15 days, depending on the option chosen. Extending this analysis to the entire population of captains who attend such courses each year yields between 115 and 135 additional working man-years available to the force, within the same total level of manpower. Extension to other officer and NCO courses would yield approximately 800 more man-years; together, these figures amount to well over 900 man-years. This is close to 5 percent of the student man-years we estimate the Army devotes to these kinds of courses each year.
Our analysis shows that travel and per diem cost savings will accrue only in those cases where DL can help shorten courses that are already being done in a TDY mode. These kinds of TDY savings could be in the $20 million range once the DL program matures. Cost savings may also be achievable in other aspects of institutional training, e.g., in the schools and the resources that support them. But too little is known about the tradeoffs in these areas to justify banking on such savings at this point.

FURTHER EXTENSIONS OF DL’S POTENTIAL

Our research provided additional insights into DL’s potential. Using DL, the Army can help its people keep pace with the rapid changes that characterize today’s world. Training on demand, provided through Web-based packages, will make it much easier for all the Army’s soldiers to stay current in their fields, to refresh skills as needed, and to interact in near–real time with training institutions and with others in their fields, sharing ideas and techniques. Similarly, DL training packages can facilitate development of supplemental skills for soldiers assigned “additional duties.” Also, more extensive use of DL to support military training opens more possibilities for using the same facilities, networks, and equipment to access civilian education courses as well.

POLICY IMPLICATIONS

Looking at distance learning from the standpoint of personnel readiness, we find that DL conveys potential benefits based on its potential to deliver self-paced training at a time and place best suited to the student. DL can provide needed flexibility to the training process, enable some training to be accomplished more quickly, and reduce the time needed for resident training.

Based on these findings, the Army may want to review the DL program and adjust implementation to capture more quickly some specific personnel readiness payoffs. First, we suggest more rapid adaptation of DL in enlisted occupations experiencing personnel shortages and for officer and NCO education. Moreover, we hold that the key advantage of DL is the significant additional flexibility it provides in the delivery of training at a time, place, and pace best
suited to the individual student. The best way to leverage this capability is to use asynchronous\(^1\) modules and make them readily available on Web sites. The Army also plans to provide synchronous training through DL, but this requires significantly more capital investment (i.e., for classroom facilities and hardware). We recognize that the Army has reservations about Web-based DL, and synchronous DL is likely to be the appropriate instructional mode in some instances. Moreover, the value of DL in these instances depends on whether the current quality of instruction and levels of training effectiveness can be maintained; this issue warrants further scrutiny. For example, the correct balance between distance learning and resident learning needs to be established and periodically checked for each course. Despite these concerns, we recommend that the Army carefully review the relative emphasis and resource allocations placed on these applications of distance learning.

\(^1\)Synchronous DL has multiple students participating, usually with an instructor, at the same time. Seminars and group exercises are examples. Asynchronous training involves students individually; they participate at times best suited to them.