Chapter Five

OTHER EXTENSIONS OF DISTANCE LEARNING’S POTENTIAL

We now turn briefly to a more general overview of some other potential benefits that could accrue from leveraging DL’s potential. The benefits of distance learning are not limited to possible cost savings and increased time on station. Again we stress that the principal advantage of DL—an advantage with far broader application than professional military training and education—is the ability to deliver training efficiently in a manner that can be tailored to the student’s individual needs in terms of timing, content, focus, and pace. While this feature would be beneficial in virtually any education scenario, it is even more valuable in today’s environment of rapid technological growth, frequent deployments and other distractions of military personnel from assigned duties, and broader knowledge and skill requirements for leaders.

A common belief expressed in education literature is that continuous education is more valuable than education presented in packages at discrete intervals. The hypothetical ideal is one-on-one instruction presented by an expert tutor, as needed and when needed by the student. DL makes a near variant of this ideal feasible: DL can empower the student to focus on areas where either improvement or greater familiarity is required. With modest additional training resources, real-time or near-real-time feedback can also be provided. These general benefits of DL can obtain in virtually all applications: self-motivated and dedicated soldiers can exploit DL capabilities to improve their performance, add to their general education, and broaden their perspective.
MILITARY TRAINING BENEFITS

The ability of DL to provide training “on demand” is one of its greatest potential contributions. Trainers and educators in and out of the military services have explored and begun to exploit the potential of paper-based and CD-based job aids. Web-based distance learning goes further, enabling training proponents to (1) deliver training more responsively (instantaneously, for asynchronous training); (2) update materials; and (3) monitor the usage and usefulness of their offerings. Job aids in any of these forms can be used to provide “just in time” skill training. This is likely in many cases to be more useful than more formal residential training, which involves waiting for a scheduled opening and then a protracted absence from assigned duties. This feature can be particularly helpful in cases where NCO leaders are serving above their pay grade. It will also be helpful in preparing officers to serve in their selected specialties (functional areas), as well as in keeping them current in their functional areas and more generally in their profession. DL similarly makes refresher training more readily available, and this has important implications for an Army increasingly dependent on skills that can quickly become outdated because of technological developments.

DL can offset the need for institutional training to support skill transitions from legacy to modernized equipment. The pace at which technology evolves makes it largely impractical, if not completely infeasible, to employ residential training to keep skills fully up to date in many technical specialties. In addition, military modernization and equipment procurement schedules can move so rapidly that soldiers and leaders find themselves needing to deal with a new generation of systems (or new systems altogether) when they move from one location to the next—and frequently even before they move. While technical libraries, telephone assistance lines, and mobile training teams can help the field upgrade and adapt the skills

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1The Army’s field grade officers serve either in their branch (e.g., armor, infantry) or in one of many specialties ranging from information management to strategic intelligence to operations research. DL certainly will not be able to supplant all or even most of the formal education needed to prepare officers in these specialties, but it can help.
of its people, DL can accomplish the same requirements—or a substantial portion of them—more rapidly and more efficiently.

The military services are all to some degree developing training support capabilities in which the proponent for each technical skill maintains a Web-based course covering all aspects of the skill that can reasonably be taught using asynchronous techniques. This would enable “just in time” training for soldiers who need their skills updated, either because of a job change or because of a new item being fielded. This capability would need to be backed up by instructors available by telephone or e-mail to provide additional assistance. In those cases where hands-on training is still required, mobile teams, locally certified instructors, or supplemental residential training will be needed, but DL can clearly reduce these requirements. It can also better prepare students to engage in hands-on training, making that training more efficient when it is delivered.

Along the same lines, “just in time” training can facilitate the acquisition of supplemental skills needed by some selected leaders, both officers and NCOs. We have in mind here the skills required to perform what the military services commonly call “additional duties,” including safety, physical security, environmental protection, load and movement planning and execution, information systems security, and ranging even into realms like tax and voting assistance. Many of these supplemental skills can be largely taught using asynchronous DL (or even completely taught, e.g., tax assistance and information systems security). Most Army installations have a

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2We do not envision the disappearance of hotlines and mobile instructors, but DL should be able to reduce the need for these more expensive approaches. We also believe that Web-based look-up resources, because of their more universal accessibility and the relatively lower cost of keeping them up to date, will largely replace technical libraries. TRADOC’s digital library, which offers manuals, publications, graphic aids, and partial on-line access to selected course materials, receives in excess of 2.5 million hits per week.

3Officers and NCOs assigned these additional duties are not meant to be sophisticated subject matter experts. They are expected to understand the basics needed in each supplemental duty. This basic understanding is supposed to be sufficient to enable them to supervise and direct the unit in accomplishing routine tasks relevant to the duty, to inspect and evaluate the unit’s preparedness to perform those tasks as required, and to know when, where, and how to request more expert assistance.

4The Army’s Signal Center currently offers a DL course in information systems security, aimed at producing the skills needed for someone assigned this additional
locally available course for many of these additional duties; DL could supplement or largely supplant those courses, providing the additional advantages of standardization and ease of scheduling. The latter would be a boon to the Army’s operational units. In many cases, training events and deployments include a requirement for a unit to have an officer or NCO certified in one or more additional duties (e.g., safety, preparation of air or rail car loads). More flexibility in scheduling—more readily available training—would obviously make it easier for units to replace these people when they rotate.

It should also be possible to employ certain forms of “just in time” training to meet some unit training requirements. For example, units being deployed to a given region need some basic familiarity with the characteristics of the people, geography, climate, and inherent dangers of that region. But they don’t need that familiarity until they are about to deploy there: “just in time” DL can make that aspect of deployment preparation easier to accomplish.

The benefits of informal learning at home station also include the possibility that the materials and training could be shared informally with other members of the home unit or organization. CD-based job aids have already been used for unit training; Web-based exercises and training sessions (e.g., for staff or staff subelement training) could easily take their place, offering greater interactivity and updating capability. This would also be a way to capitalize on the DL phase of professional development courses. For example, an officer or NCO slated for attendance at an officer advanced course or ANCOC could use some of the DL materials to present a class or run a short seminar for members of the unit. This individual would thereby get practice in presenting training, learning the material himself (thus completing part of the DL requirement), and simultaneously contributing to unit training.

GENERAL EDUCATION BENEFITS

We have so far focused on the potential for DL to enable more efficient acquisition of needed military and technical skills. A less obvi-
ous and largely untapped potential is for DL to help the military services in raising their general levels of education. The more complex and diverse missions faced today by our military services put a greater premium on general education, requiring more than ever that leaders have a broad perspective, a fuller understanding of the world environment and its historical context, and knowledge of civilian institutions. The growing complexity of potential missions and of the technology employed to accomplish them increases as well the need for well-developed decisionmaking and critical thinking skills, both of which can be enhanced through education. At the same time that requirements appear to be growing for a more highly educated officer and enlisted force, resource constraints and conflicting time demands are making education more difficult to achieve.

Traditionally, the military services have provided only professional military education for their enlisted personnel; civil schooling has been expected to occur as part of professional self-development, on the service member’s own time. Today’s operational pace and the accompanying greater frequency of deployments make it more and more difficult for service members to find the time (or, more to the point, a long-enough uninterrupted span of time) to take advantage of traditional residential instruction offered at universities, colleges, and local institutions.

The situation is similar for officers, although in the case of officers we are dealing with more advanced degrees—mostly masters’ and a few at the doctoral level. Historically, officers enter their service with a bachelor’s degree and some basic military education; subsequently they receive professional military education at discrete intervals, and some are selected for full-time funded attendance at civilian academic institutions to study for advanced degrees. The rest attain advanced degrees on their own, if at all. This approach may not be adequate to the demands of today and tomorrow. The military’s need for officers with advanced education is increasing, and—as with the enlisted force—the operational pace and frequent deployments make it more difficult to find time to take courses leading to an advanced degree.

Distance learning has significant potential to help the military services overcome the challenges summarized above. It can deliver education in smaller packages and provide access to educational
materials for students at dispersed military bases and deployed locations. These packages are usable when and where the student can find the time to take advantage of them; they are thus innately easier to schedule. Also, by reducing the importance of geographical separation in the selection of educational institutions, distance learning will serve to make the entire process of offering education more competitive for those offering it. This in turn will increase the leverage available to the military services and their members as customers, making it possible for them to receive higher-quality education at the same or lower costs. Some programs to achieve these ends are already under way. For example, the Army is developing its University Access Online program with the expectation that it will aid recruiting and retention; that is, by making educational goals more achievable while a soldier is serving, the Army hopes to increase the propensity to join and decrease the propensity to leave. We expect that this program when fully implemented will make education more available throughout the force, including elements that are deployed. Similarly, sailors worldwide can access the Navy College Program.

While we do not believe distance learning can fully supplant residential instruction in civilian education any more than it can in military training, it can significantly reduce the need to send service members to blocks of residential instruction and thus aid the overall process of raising education levels. Much remains to be learned about the costs and benefits of different ways to capitalize on distance learning in this regard. Answering the numerous questions that have and will continue to come up will require an extensive effort by the Department of Defense, the military services, and the civilian academic community. The result of this effort can well be a cost-effective program for improving general levels of education throughout the military services, despite the challenges of resource constraints, operational pace, and deployments.

\footnote{This, again, is an observation with implications that go well beyond the education of military service members.}