DL CAN ENHANCE LEADER STABILITY AND AVAILABILITY AS PART OF ARMY PROFESSIONAL DEVELOPMENT COURSES

Just as shortages of qualified personnel are a readiness problem for the Army, so too is turbulence—a lack of stability—because the more frequent the turnover of unit personnel, the less chance there is to develop cohesion and teamwork, which most consider to be key elements of an effective unit.

Turbulence is a stubborn problem. First, achieving zero turbulence is inherently undesirable, since an Army with near-zero turbulence is a stagnant one with limited upward or lateral mobility and few opportunities for broadening or advancement. Second, many measures that might reduce turbulence to “better” levels would be distasteful or undesirable in other ways. These include increasing overseas tour lengths, altering the force structure, decreasing the frequency of promotions, reducing permanent change of station (PCS) school opportunities, and reducing individual taskings.\(^1\)

However, DL-supported training programs—i.e., the judicious substitution of DL segments for some residential training—provide an option for enhancing stability without undesirable policy or structural changes. *Converting portions of the Army’s resident courses to DL can enhance leader availability and stability.* While this overall result is more or less intuitive, our analysis illustrates the magnitude of that result. DL-supported courses increase soldier availability not only by reducing the time spent away from home station, but also by reducing the total amount of time needed for the training. And doing so also improves family quality of life. Moreover, reducing the length

\(^1\)See Hix et al. (1998).
of time students are in TDY status for residential training will also produce some modest cost savings; the savings potential is less clear when we look at the possibility of converting courses from PCS to TDY.

In this chapter we show the results of an analysis that focused first on one officer course, the Armor Captains Career Course, to determine the potential effects of DL. Captains career courses consist of a branch-specific advanced course, taught at the branch school, and a course for junior staff officers called the Combined Arms and Service Support School (CAS3), taught at Fort Leavenworth. The Army already offers a Reserve Component Armor Officer Advanced Course that depends heavily on DL, with only a two-week resident phase. For the Active Component career course, we looked at the effects of converting 25 percent of the resident portion of the advanced course segment to DL and applied our previously noted 30 percent time reduction factor to that portion of the course sequence. Applying these factors to the Armor Officer Advanced Course results in a 16-day DL phase and a 94-day resident phase.

With this course structure as a basis, we explored four options to modify current practice. Today's pattern includes a resident advanced course of 18 weeks, 6 weeks at Fort Leavenworth for the CAS3 course, and, for most students, a three-week tank or cavalry troop commander’s course. The alternatives explore different combinations of PCS and TDY status to determine a range of possible effects on time at home station (i.e., increasing stability) and some of the relevant costs.

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2TRADOC currently envisions converting about 25 percent of officer advanced courses to DL mode. In addition, we note that the Armor School is conducting an advanced course for RC officers with upwards of 70 percent of the instruction done by DL.

3We considered DL conversion only for a portion of the 18-week advanced course phase: 18 weeks × 40 hours/week = 720 hours. A 25 percent reduction in this resident time yields a resident phase of 540 hours, 13.5 weeks, or about 94 days. The remaining 180 hours (22.5 days), when reduced by the 30 percent factor, come to 15.75 = 16 days for the DL phase. So the student will be at home station about 4.5 (18 – 13.5) weeks longer, and about 16 days of that time will need to be devoted to DL study. If partial conversion of the other phases also proves possible, the time savings will be greater.
Once we completed the analysis of the Armor Captains Career Course, we extended the results to other courses where they could apply.

**DL CAN INCREASE TIME ON STATION FOR THE ARMOR OFFICER CAREER COURSE**

As noted above, we considered four options to modify the current practice:

- Option 1: All resident requirements completed in TDY status;
- Option 2: Resident requirements done as three separate TDYs;
- Option 3: Mix of PCS and TDY-and-return, as determined based on Army requirements and officer preferences;
- Option 4: Current PCS pattern with career course segment shortened by including a DL module.

The motivation behind Option 1 was to start with a comparison of TDY versus PCS, assuming that the DL-induced shortening of the advanced course could make a conversion to TDY feasible. In this option, all the courses in the career course\(^4\) sequence would be completed in a single (and lengthy) TDY. This case imposes significant family separation. Thus, Option 2 allows for return home between the different segments; this reduces the family separation impact somewhat by breaking up the separations. But it adds more travel costs, and the family separation is still a major drawback. Option 3 allows some additional flexibility between PCS and TDY, allowing the Army to help officers avoid family separations but also allowing the possibility for others to avoid family disruptions by taking the course TDY and moving their families once instead of twice.\(^5\) Option 4 avoids altogether the family separation effects by simply leaving the current PCS pattern in effect and shortening the

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\(^4\)Note, from our earlier discussion, that the career course program includes CAS3, and that most Armor career course students also complete a tank commander’s or troop commander’s course while at Fort Knox.

\(^5\)We expect most officers would want their families to accompany them. This option would make it possible for the Army to accommodate those with important reasons—like spouse employment or timing of schools for spouses or children—to do otherwise.
advanced course. This would be the easiest change to make administratively.

For each option, we determined how much total time at home station would increase (i.e., available days). However, since some of the time at home station must be devoted to the DL instruction, we calculated the amount of time DL studies would take and derived a second number, showing how much additional time would be available to units. Finally, we calculated a “worst case” number. This number is based on a strict assumption that the student would be unavailable to the unit during any of the time devoted to DL. In reality, it is quite likely that an officer could participate in some unit activities with no detriment to the DL study, even when concentrating on DL.

As shown in Figure 3.1, the four options increase the time on home station—compared to current practice—by between 32 and 43 days per officer, depending on the mix of PCS and TDY status, shown by the gray columns. Stripping out the time necessary for DL yields between 16 and 27 additional days available to the unit (shown by the black columns). The worst case is between 8 and 15 days (shown by the white columns), again depending on the PCS/TDY mix chosen.6

The effect on quality of life (narrowly defined here as time available at home with families) varies among options. If the entire course is done in a TDY status (Options 1 and 2), the officer spends more time away from his or her family than with the current course, which is done in a PCS mode. Option 3 causes no family separation for students who wish to move their families—it is similar in this regard to both current practice and Option 4—and permits other students to stabilize their families if desired.

In our sensitivity analysis, we analyzed the effects of changing the size of the DL module, and thus, as a derivative, the length of the residential portion and duration of the overall course. There is a

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6Calculated by removing weekend time from the overall estimate of additional available days. For example, 43 additional days span 6 weeks, including 12 weekend days. If we assume no weekend work, saved days come down to 15 (43 – 12 – 16); similarly, 32 available days less 16 days for DL and 8 weekend days yields a minimum of 8 days saved. We believe this to be a very conservative assumption, but we use it as a basis for minimum estimates.
linear relationship between the number of days an officer is available (by all three of our measures) and the size of the DL module: the larger the module, the more available days. While this suggests that more DL conversion is always better, this is of course not true. The limit to conversion will come from deciding how much can effectively be converted to DL out of a curriculum that includes a host of potentially complex topics. This is an area that the Army is already exploring more extensively; our analyses illustrate the potential benefits of further conversions to DL if they can be supported from the standpoint of training effectiveness.

COSTS USING DL ARE ROUGHLY COMPARABLE TO CURRENT PRACTICE

We also compared some of the relevant costs of the various options to those of current practice. We focused on savings that can reason-
ably be estimated based on envisioned DL conversions and their effects on time spent and travel involved. Key elements in our estimates included factors for PCS costs, TDY travel, lodging, and per diem. The other determinants were the number of PCS moves (for courses that involve PCS moves, like the advanced courses), and the duration of the TDY periods.

Considering these elements, the cost of the various options does not vary much from the current practice. Figure 3.2 illustrates this, showing that three of the four options considered are more expensive than the current one, but only slightly so. The primary difference is that these options involve significantly more TDY (the lower two bands in each column), and these costs more than offset the PCS savings.

In our sensitivity analysis, we looked at how sensitive the options were to changes in course length and PCS or TDY rates. TDY options
naturally tend to be favored when PCS costs are higher and course length is shorter; likewise, PCS options cost less when courses are longer and TDY rates are higher. Our analysis showed that within reasonable ranges for the cost factors, the PCS options cost about the same as or less than the full-TDY options.

**STABILITY ENHANCEMENT CAN BE SUBSTANTIAL ACROSS ALL CAREER COURSES**

How do these increases in available days transfer across other career courses? Using the numbers for the fourth option and applying the estimated per-officer increases in available days to a population of some 3,500 to 4,100 captains per year going to career courses yields an estimate of about 300 to 360 additional man-years (using the total time on station measure), or between 115 and 135 *working man-years* (using our minimum measure, converted to working years). Consistent with our previous reasoning, these effects can be larger than our conservative measures indicate, depending on how carefully officers and their supervisors can schedule DL preparation and study time around unit duties. Also, the effect on stability enhancement is greater if TDY options are chosen (less time used in PCS processing), but the effect on families is ambiguous at best and more likely negative. Overall, costs for student travel will also rise in the TDY alternatives.

**ARMOR CAREER COURSE FINDINGS EXTEND TO OTHER COURSES**

Analysis to this point has focused only on courses now being done in PCS mode, showing that partial DL conversions of these courses enhance stability by keeping soldiers in their units longer at about the same costs (PCS or TDY) now being incurred. Extending the analysis to other courses done in a TDY mode only, we find the same

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7The FY99 Army Competitive Category (ACC) promotion list had about 4,100 names on it; FY98 had about 3,500.

8We use a figure of 240 working days for a working year. If we are using a measure—like our lowest measure here—that discounts weekend days, then it is appropriate to use a working-year factor that similarly discounts nonworking days.
general implications for stability enhancement, and unambiguous savings estimates as well.

Table 3.1 illustrates this for two BNCOCs—Artillery Fire Specialist (13B) and Signal Support Systems Specialist (31U). The current 13B BNCOC requires 43 residential days, including weekends. Applying our course conversion methodology, we find this course would break into a residential module of about 99 hours and a DL module of about 104 hours. Total time required, including weekends, to complete the residential portion is about 17 days. The 104 DL hours require 13 8-hour days. Thus, the NCO will spend 26 (43 – 17) more days at home station and could be available to his unit for a maximum of 13 (26 – 13) days. Minimum additional days are estimated at 6, after allowing for the presence of weekends as previously discussed. When we convert these per-person figures to man-years, we use work-years for the last (lowest) measure to be consistent with our removal of weekend days. The TDY cost savings is simply the saved

<table>
<thead>
<tr>
<th></th>
<th>Artillery Fire Specialist (13B)</th>
<th>Signal Support Systems Specialist (31U)</th>
</tr>
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<tbody>
<tr>
<td>FY99 attendance</td>
<td>153 TDY and return</td>
<td>111 TDY and return</td>
</tr>
<tr>
<td></td>
<td>17 TDY en route</td>
<td>18 TDY en route</td>
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<td>Original course length</td>
<td>43 days</td>
<td>77 days</td>
</tr>
<tr>
<td>DL length</td>
<td>17 days residential</td>
<td>30 days residential</td>
</tr>
<tr>
<td></td>
<td>13 days DL</td>
<td>23 days DL</td>
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<td></td>
<td>30 total days</td>
<td>53 total days</td>
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<tr>
<td>Increase in available days</td>
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</tr>
<tr>
<td>Max</td>
<td>26 per person</td>
<td>47 per person</td>
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<tr>
<td></td>
<td>(4,420 man-days/12.1 man-years)</td>
<td>(6,100 man-days/16.6 man-years)</td>
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<tr>
<td>Net</td>
<td>13 per person</td>
<td>24 per person</td>
</tr>
<tr>
<td></td>
<td>(2,210 man-days/6.0 man-years)</td>
<td>(3,100 man-days/8.5 man-years)</td>
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<tr>
<td>Min</td>
<td>6 per person</td>
<td>11 per person</td>
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<tr>
<td></td>
<td>(1,020 man-days/4.3 work-years)</td>
<td>(1,400 man-days/5.9 work-years)</td>
</tr>
<tr>
<td>Estimated savings (lodging and per diem)</td>
<td>$133K</td>
<td>$182K</td>
</tr>
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residential days times the TDY cost factor ($30) times the student load, e.g., $26 \times $30 \times 170 = $132,600 or $133K. The process for the 31U course is analogous.

Other courses such as reclassification training or short-duration courses also show benefits. However, since benefits are generally proportionate to course length, shorter courses naturally yielded smaller benefits. Overall, we estimated on-station man-year increases to be just under 2,400, with an increase in available work-years (our minimum measure) of about 800.