The Cost of Producing New Airmen Can Be Reduced with a Better Mixture of On-the-Job Training and Schoolhouse Courses

To train its 30,000 to 40,000 new enlisted airmen each year, the U.S. Air Force needs to know how to divide training between initial skills training (IST, or “schoolhouse” training) and on-the-job training (OJT). Past assessments have not included OJT costs or fully evaluated how changes in IST impose extra burdens and costs on OJT. When only IST costs are considered, overall training costs are seriously underestimated. The Air Force needs to know the full costs and benefits of both IST and OJT to make decisions about the best and most cost-effective balance between the two.

The costs of IST are relatively easy to capture because costs are identifiable within the Air Force budget and because airmen-in-training are dedicated 100 percent to their training activities. OJT costs are much harder to capture—particularly the cost of an airman spending time in training rather than on productive work.

RAND Project AIR FORCE (PAF) developed a methodology for deriving the full costs of bringing new airmen up to required levels of productivity. PAF applied the methodology to seven Air Force occupational specialties and made recommendations for the best and most cost-effective combination of IST and OJT to train new airmen in these specialties. The analysis suggests the following:

- The analysis approach offers great potential for trade-offs between IST and OJT. In three of the occupational specialties, increasing the length of the IST course would increase its cost by only 0.5 percent but would yield a tenfold (5.0 percent) improvement in total productivity.

- In some cases, portions of the IST curriculum (for the airborne and nonairborne cryptologic linguist specialties) could be shortened with little impact on productivity.

- For five of the seven specialties (Special Purpose Vehicle Maintenance, F-15 Tactical Aircraft Maintenance, B-1/B-2 Aircraft Maintenance, Security Forces, and Fire Protection), a small increase in IST course length could lead to a lower overall cost per unit of productivity. Key to the PAF methodology was the development of productivity curves. The Air Force should investigate other external measures to validate the productivity functions and then replicate the PAF data with more-specific and -refined estimates.

- The Air Force could use this analysis approach in the specialty code utilization and training workshops to guide curriculum trade-offs.

The cost of OJT should play a larger role in policymaking, particularly for determining the course length of IST. OJT imposes substantial costs—an estimated $1.4 billion per year—that are not now factored into training decisions. Changes in IST course length can, in many cases, avoid an appreciable portion of those costs.
This research brief describes work done for RAND Project AIR FORCE and documented in *Finding the Balance Between Schoolhouse and On-the-Job Training*, by Thomas Manacapilli, Alexis Bailey, Christopher Beighley, Bart Bennett, and Aimee Bower, MG-555-AF (available at http://www.rand.org/pubs/monographs/MG555/), 2007, 148 pp., ISBN: 978-0-8330-4045-9. The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND’s publications do not necessarily reflect the opinions of its research clients and sponsors. RAND® is a registered trademark.

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