

The Training Needs of the Aircrew Flight Equipment Career Field

Insights from a Survey of Airmen

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ISSUE

Aircrew flight equipment (AFE) personnel inspect, repair, maintain, pack, and adjust aircrew flight equipment, which is vital to the safety of the aircrews. Consequently, U.S. Air Force leadership is concerned about proficiency in the career field. A 2021 RAND report, derived from interviews with AFE personnel, suggested that changes to training may be needed. This report, following from that recommendation, provides a deeper review and identifies improvements.



APPROACH

RAND Corporation researchers conducted a survey of AFE enlisted personnel to help the career field better justify specific changes to training and personnel management policies. The survey explored six topics: (1) the workforce's level of proficiency, (2) adequacy of initial skills training (IST), (3) adequacy of follow-on training in the field, (4) maintenance of proficiency of 5-level and 7-level personnel, (5) impact of workload on ability to train, and (6) ways to improve training and proficiency.



CONCLUSIONS

- There are proficiency gaps in the workforce. For a subset of tasks, 7-levels do not consider themselves fully competent.
- Survey respondents indicate a gap for some tasks between what IST is delivering and the target competency levels and believe that IST should be changed.
- Proficiency of 5- and 7-levels is lacking in some areas due to insufficient follow-on training, insufficient maintenance of these skills, or both. Lack of qualified instructors, lack of training space and equipment, and other work demands are contributing factors.
- The career field needs additional continuation training to maintain skills. Many tasks are performed infrequently, so skills can degrade.
- Career field personnel perceive that extra workload has a direct effect on the career field's ability to train personnel and to maintain proficiency.
- AFE personnel want extra support to help them brush up on proficiency and check their work. They also believe that the use of videos to illustrate proper techniques and adjustments to technical orders (TOs), particularly navigation and ensuring they are up to date, could improve training.



RECOMMENDATIONS

We have three recommendations for changes to IST:

- Shred IST training.
- Address gaps in the proficiency of IST graduates identified in the survey.
- Consider other changes suggested in write-in comments—for example, reducing IST to only the fundamentals relevant to all assignments, eliminating it, or lengthening it, especially if shredded to align with the first assignment.

Two recommendations focus on follow-on training after IST:

- Build dedicated training units in the field and utilize mobile training teams.
- Establish a process of certifying currency and maintaining skill sets.

With respect to workload and manpower requirements, we recommend the following:

- Address concerns about AFE work demands. The Air Force Manpower Analysis Agency should review the existing manpower requirements and make adjustments to account for any workload factors that are not already well captured. Squadron leaders should also review the demands being placed on their personnel and consider whether any can be redistributed to other Air Force Specialty Codes.

We have three recommendations for changes to training technologies and approaches:

- Develop videos and embed them in TOs. Video content should be incorporated in stages so that its value can be further explored and confirmed.
- Modernize TO technology. Improve the ability to navigate through the TOs, add video content, and incorporate links to related information to streamline access.
- Invest in practice simulation equipment and make it accessible. Effectiveness should be tested on a subset of personnel first to confirm that it is worth the larger investment.

We have two overarching recommendations:

- Devise a system specifically for flagging and recording training issues that is consistent across the career field. Although the Training Business Area database and the quality assurance databases maintained by the career field contain a lot of information, their usefulness in addressing the surveyed issues is quite limited.
- Continue to look closely at the career field's proficiency. Consider periodically resurveying part or all of the career field. Results shown here should be revisited after major changes to training to assess their impacts.

Last, several factors should be considered when deciding how to prioritize the recommendations:

- Focus resources on the areas in which training is most needed.
- Implement recommendations with high costs only for tasks where safety is a concern.
- Consider the size of the potential gains.
- Some recommendations may negate the need for another recommendation.
- Prioritize both long- and short-term solutions.



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