TRAINING TECHNOLOGY APPLICATIONS PROGRAM

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Training Technology Application Program (TTAP)

TTAP was developed from Air Staff and ATC concerns that there is no mechanism for taking validated research and off-the-shelf technology and putting it to practical use in our training environment. TTAP provides the money and management support to bridge this gap through a well-defined program for application of research and new technology. In addition, it performs an information function to tell trainers what is available and tells researchers what training issues need further research.

A TTAP Program Management Office has been established under the supervision of the Technical Director for Training Systems Development Directorate, DCS Technical Training. The focus for project planning and execution is kept on the end users. Funding is provided through Program Element 84772, Training Development. The program objectives are: (1) identify training technology innovations from government, business, and education; (2) prioritize potential applications according to ATC needs; (3) improve communication between researchers and users; (4) conduct applications studies and evaluate technology; and (5) transfer successful efforts to operational status.

In FY 83, 16 projects were approved and funded (22 in FY 84) including work in such areas as: the Advanced Training System; interactive video-disc; CMI; CBI; modeling; student information *management; and a network for instructional technology dissemination. There are currently over 50* projects in various stages of development and the program is continuing to grow. Projects are currently focused in the six technical training centers, but we are getting initiatives from Flying Training, other major commands and other services. The administration of the program is centered around the Technology Applications officers at each center. Governing regulations including ATCR 80-1, ATCR 27-1, and ATCR 23-1. Documentation includes a one page project summary, a detailed project plan, a memorandum of agreement (MOA), and a final report.

TTAP gives commanders a "fly before you buy" look at how new technology will affect the way they train. From a TTAP study, the user has hard data to support their funding, acquisition, personnel or equipment needs and priorities.

Introduction

There is a need within the Air Force training environment for a coherent strategy for needs assessment, RDT&E (research, development, test and evaluation) of solutions, and acquisition of cost-effective training systems. The Training Technology Applications Program (TTAP) is part of that strategy.

The dynamic nature of our training environment requires an ability to respond with flexibility, accuracy, and timeliness to changes in operations, recruiting, technology, and resources. TTAP gives a commander the ability to analyze requirements, document needs with detailed training situation analysis, and run studies to determine cost and training effectiveness of new technology and the implementation impacts.

TTAP can be defined as a management technique for changing Air Force training through the controlled application of new technology, research, or training methodology. The end goal of TTAP is to improve the quality of our training so we have better trained people able to go to work sooner.

TTAP Background

Requirements. Significant advances have been made in the development of instructional technology by government, education, and private industry that have not found their way into our training. Computer applications are a good example and the future promises even more developments. We have been so busy turning out graduates and working within the existing bureaucracy, that we have no time to look at what changes are available, let alone what they would do for us or to us! We did not have the time, money, or people to evaluate and implement technological changes. If there were applications, they were due to isolated efforts from which the Air Force or HQ ATC could not fully benefit.

To help meet these and other needs, TTAP was developed out of the Training Development Program (Program Element Code 84772) established by Air Staff and HQ ATC management during FY 83 POM deliberations. The Chief of Staff approved the following policy on training technology in January 1980:

The Air Force will exploit the full capability of advanced training technology at every phase of the personnel life cycle to achieve the following goals:

1. Increased individual contribution to unit readiness by optimizing identification and utilization of individual abilities and interests.

2. Improve individual and unit productivity.

3. Improve management efficiency.

4. To minimize the time required to deploy successfully demonstrated system enhancements, the Air Force will program funds and manpower required to support implementation plans without degrading current operations during the implementation period.

The Secretary of Defense approved all recommendations of the Defense Science Board 1982 Summer Study on Training and Training Technology. Specific direction to increase management emphasis on the development and use of training technology, and establish a single focal point for proponency and coordination of training and training technology matters was included.

Objectives

The objectives of TTAP are:

1. Identify training technology innovations from government, business and education;

2. Prioritize potential applications according to ATC needs;

3. Improve communication between researchers and users;

4. Purchase equipment and training materials for conducting applications projects;

5. Evaluate the technology; and

6. Transfer successful efforts to operational status.

TTAP Mechanics

Management. Program management is provided by three primary documents:

1. An Air Staff Program Management Directive

2. HQ ATC Operations and Management Plan for TTAP

3. HQ ATC Regulation 80-1

We look to the Technology Applications Officers (TAO) at each technical training center as our primary communications focal point for activities covered by TTAP. TAO responsibilities include:

1. Providing information to center organizations concerning training technology innovations;

2. Soliciting applications proposals and preparing project summaries;

3. Managing and accounting for funds provided for center purchase of equipment and materials;

4. Monitoring the accomplishment and evaluation of applications projects;

5. Preparing and submitting reports to HQ ATC/TTTD on completed projects; and

6. Serving as the center focal point for transferring proven training technology to operational status.

Documentation

We have tried to keep the program as responsive to end-users as possible. With that thought in mind, we have kept our requirements for program documentation to the minimum. The four standard documents required of the program include:

1. A project summary (usually one page).

2. A detailed project plan (two to three pages defining how we will determine the difference/impact that an application makes).

3. A Memorandum of Agreement (MOA, the formal document from ATC Reg 80-1 defining who is responsible for what, two pages).

4. A final project report (as detailed to capture lessons learned and transfer findings, this document will be sent to the Defense Technical Information Center for distribution).

TTAP Status

Project. During the first year of the program 16 MOAs were approved and funded. Currently in FY 84 we have 22 approved projects and an additional 32 project summaries being staffed. The projects are focused in the technical training centers for the first three years of the program. In addition, we are picking up good "targets of opportunity" within the flying and medical training arenas as well as throughout the Air Force, in direct support of other MAJCOM training requirements.

Examples of current TTAP projects include: the Advanced Training System; the Student, Information Management System; the Network for Instructional Technology Dissemination; and Assessment of New Technologies for Technical Training Application.

Scope. The areas of application that our projects cover include the total training environment. Current projects focus on: program and training management, instructor training, curriculum development, test and evaluation, computer based and managed instruction, equipment trainers and simulation, remedial training, and resource utilization and modeling.

What do we get for our money and effort? Studies will give commanders a "fly before you buy" look at how a change will affect the way they do business. For a small initial investment, we find out what works and what doesn't, identify and focus further researchable questions, collect hard evidence to support and fight for priorities in the competition for resources. With the continued emphasis on doing more with less, TTAP gives us an opportunity to focus on quality of instruction through the most efficient and effective use of current technology, while maximizing the benefits in such areas as time to train, curriculum development, resource utilization and so on.

Future Directions

As long as there are new technologies and research, there will exist the requirement for transitioning that knowledge to the operational environment in a logical and practical manner. TTAP is a new program that's growing and developing rapidly. We must continue to work to institutionalize the program and further define its mission within the Air Force training arena. An Air Force program is needed to manage and monitor training applications across the entire scope of the Air Force's training needs.

We must complete what we have begun and provide closure on our existing projects. At the same time we need to continue to develop new summaries based on identified training needs from the field. As part of this continued development we must insure that the program remains responsive to end-user needs and insure that TTAP is supported in the POM cycle to provide additional funds to meet these needs. Continued commander support is needed to maximize the potential that the TTAP concept offers to the Air Force.

Conclusion.

The Training Technology Applications Program provides a bridge from the world of new technology and research into the Air Force real world training environment. The cost to the Air Force in dollars and readiness dictates that we must take a critical "show me" approach to the application of new technology. We are not in the business of change for the sake of change.

The Air Force needs an organization that is responsible for the transfer of technology across the entire spectrum of our training. We need the capability to analyze, develop, and integrate complete training systems, while at the same time remaining responsive to commanders immediate requirements and problems. TTAP is a step in the fulfillment of these requirements.

Our singular purpose is to improve the quality of training through the application of research and technology.

ABOUT THE AUTHORS

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