



The Air Training Command

IN THE short span of twenty years, Air Training Command (ATC) has grown into the world's largest military, flying, and technical-training facility. To operate effectively, ATC must provide training in every facet of aerospace operations and give this training to sufficient numbers of Air Force people and within a time interval designed to realize the full potential from its students. To do less would be to weaken the structure of Air Force operations. Yet, this is only part of the picture.

With headquarters at Randolph AFB, Tex., ATC trains more than 400,000 annually. More than 100,000 new replacements must also be found each year. This is done by the USAF Recruiting Service. Selectivity begins here. Of the total number enlisted during the past year, eighty-nine percent were high-school graduates or higher. Officers must have reached the baccalaureate level.

The day of the college-level officer had arrived when the last aviation cadet entered navigation training at James Connally AFB, Tex., in March 1964. It marked the end of an era which reached its apex twenty years before. Then, the largest of the central gathering points for newly arrived cadets was located at the San Antonio Aviation Cadet Center. Today, this refurbishing base, now known as Lackland AFB, is the gateway to the Air Force for all new enlistees.

For most, Lackland is the first look at military life. This is a time of first impressions, the molding of adolescence into self-discipline. There are some who can't make the transition. They are eliminated and discharged with little loss to the taxpayer. For the rest, the job of training begins. Drill, military studies, rifle practice, ceremonies—all are part of the introduction to Air Force life. At the same time, there is continual screening to determine individual aptitudes which can be matched against present and future Air Force requirements.

Assignment of airmen and officers (Officer Training School) from Lackland to job positions or student status is a critical area. Herein lies the development or dissipation of a career force. There is always an overlapping, on both sides, of requirements versus

Lt. Gen. Robert W. Burns took command of ATC in mid-1963 and is scheduled for retirement on October 31, to be succeeded by Lt. Gen. William W. Momyer. General Burns won his wings in 1929, served in Eighth AF in World War II, and afterward was Asst. DCS/Personnel, Hq. USAF; Commander, Fifth AF; and Chairman, Inter-American Defense Board.



desires and abilities. Where possible, a merger is made to the satisfaction of both parties. Each man is tested and personally interviewed. Many receive extended and additional interviews dependent upon the assignment. Considering a \$6,792 training cost figure for a radio relay equipment maintenance technician, \$10,000 for a language specialist, and \$62,829 for a jet-age pilot, the time and effort expended to place the right man in the right job is well spent.

Personnel placement is a mark of the times. The days of dealing with people as blocks of numbers has gone by, just as the advent of jet aircraft signaled the decline of propeller-driven craft. In a sense, technology has caught up with Mr. Average Man.

The requirement for highly qualified technical personnel to run a combat-ready missile wing is higher than ninety percent. Other units are only slightly less. All training is feeling the pressure of the age of technology.

The demand placed on ATC facilities to meet this transition has far exceeded initial capabilities. As numbers to be trained and technical requirements extended student training time, modifications to the ATC school facility were made. The prime center concept was one such step. Under this management arrangement, one training center was given the total training responsibility for a given weapon system. This assured exacting control of training requirements but did not speed the training process.

Development of a new ATC staff directorate in 1962 began to dig into revolutionary educational processes. Among those presently in use in ATC classrooms are programmed instruction and closed-circuit television. Both are now in-house operations with a programmed instruction writing staff developing new manuals and a full staff of qualified television personnel producing and conducting special training programs.

Results in the first phase of programmed instruction evaluation, started in October 1961, revealed some remarkable findings when the phase was completed two years later. In comparison with conventional instruction, programmed packages reduced training time thirty-three percent while gaining nine percent in achievement.

The second phase of evaluation is now in progress. Existing teaching methods established by Phase I will be refined. Particular attention will be given the mating of student behavior with the method of presentation. Application of these new approaches to technical education will eventually find their way into ATC training areas. Their purpose is to produce students at a faster rate, at cheaper cost, and of a higher quality.

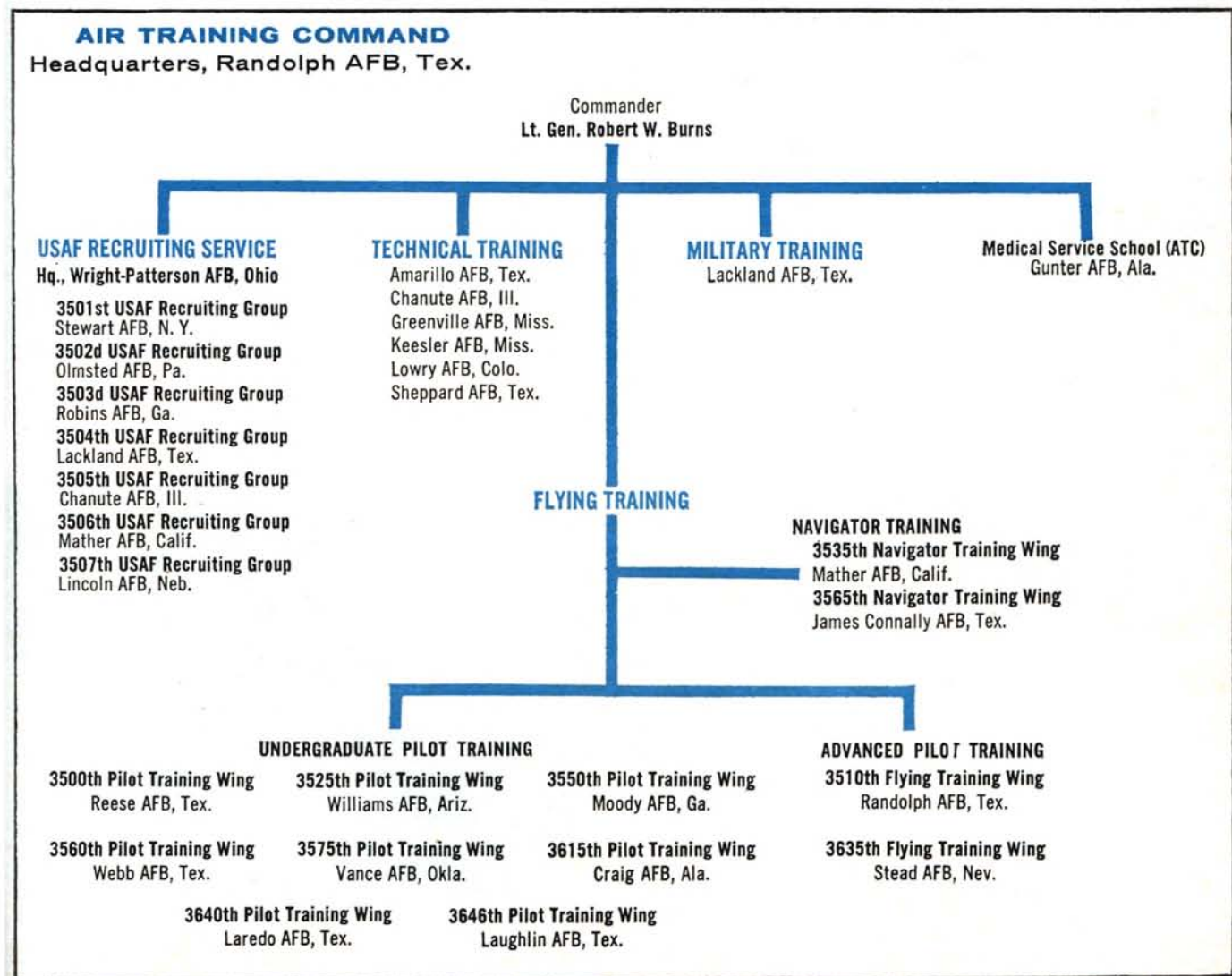
Quality and numbers, as applied to training, have long been the weights on either end of the scale.

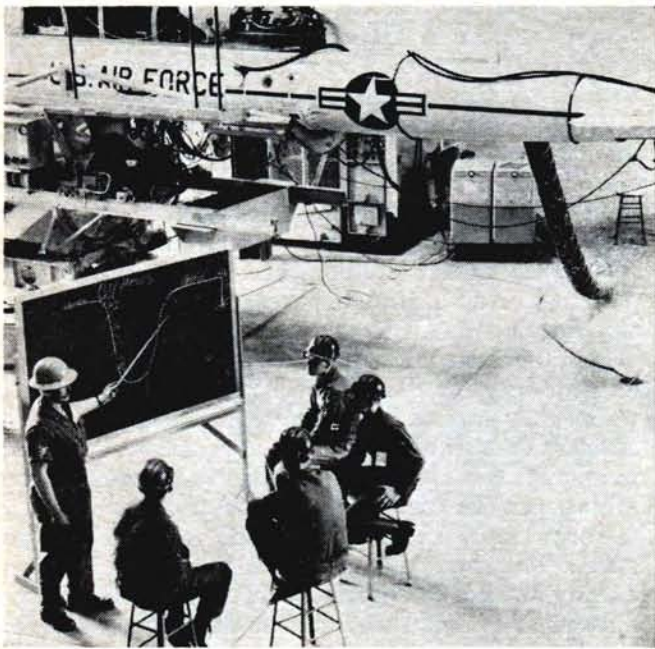
Imbalance occurs when demand for either element outweighs the other. Yet, neither can be overbalanced at the expense of the other. The shortcoming would be sure to appear in the operational effectiveness of a combat organization. The resultant impact on ATC is to maintain this balance by modification of programs.

ATC lives in an environment of change predicated upon the advances of science. Not many years ago, curriculum change was a bombshell that shattered staid faculty routine. Programs were canceled on short notice. Students were shifted to other classes calling for similar prerequisites. New manuals were produced. New instructors were trained and training aids developed. All factors contributed to a time lag. When the first students in a new training program left the doors of the ATC school, the equipment for which they trained had been sitting idle on site. The critical factor of obsolescence, so prevalent in military weaponry, was compounded. This was changed when Minuteman hit the drawing boards.

Concurrency became a byword in Air Force language. The total instructional facility of ATC began moving toward the goal of developing student production to coincide with missile development. Picked instructors were assigned to the factories responsible for making component parts.

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Missile training for Air Force personnel is increasingly important for USAF operations, and it is Air Training Command's mission to develop in-house expertise for the missile force. Above, Hound Dog school, Chanute AFB, Ill.

Course material was developed on the basis of their study and was ready for use when the part was completed. The initial cadre of instructors became the teachers of future instructors. A buildup of instructor and student strength continually matched missile production. Now, there are some 650 Minuteman missiles in combat operational status. All achieved this status on or ahead of time. Without trained men, it could not have been accomplished.

The philosophy of concurrency within the ATC structure will remain for some time. There are instances in which the philosophy boomerangs, such as in Skybolt and Dyna-Soar cancellations, but the invested loss from a training standpoint is negligible.

Adoption of the F-4C, for instance, was another marked success of the concurrency concept. Though the Navy first ordered and used the aircraft, transition of this weapon for Air Force use was akin to introduction of an entirely new system insofar as the ATC school was concerned. Instructor personnel were sent to naval stations at Miramar, Calif., and Oceana, Va., at the time of first consideration. Following their training, these students turned instructors to train Tactical Air Command personnel in maintenance of the F-4C. Resident training for the weapon system was opened at ATC's Amarillo, Chanute, and Lowry AFBs. By the time modifications had been made for Air Force use, maintenance crews had been trained and were in position.

The broad platform for technical training has been in the building stage for a number of years. It is a sound base. Through application of management techniques, a professional instructor corps, development of new teaching methods, and construction of modern classroom facilities, quality has become the expected and accepted product of ATC.

Students from courses of long standing are hybrid products, receiving the benefits of course modifications, new teaching methods, and other additives which produce a quality technician. From a practical standpoint, all ATC students are undergoing technical training. There is not a career field where penetration has not been made. It is no longer a question of whether or not training is technical but a matter of degree. The pilot is a prime example of the evolution from a required physical capability to a combined physical/technical capability. Likened to a missile launch officer, the pilot of today is a skilled practitioner of technical science with the additional ability of being able to employ his knowledge while on a moving platform. Such was not always the case.

Early aviation was the day of adventure, the thrill ride, a quest for rising above man's natural element. This spirit was maintained even through the individual aerial combat actions of World War I. Afterward came the flying circus and international air races, the setting of records, and seat-of-the-pants flying. A new tone to aviation was heard in the 1930s. Radio, instrument flying, high-altitude capability, and accuracy in weapon employment jarred the pilot loose from his purely physical requirement. By the time World War II came, electronics were around the corner. Some made their appearance on the scene before the end of the conflagration.

Aside from the physical attributes still required, a pilot entering the Undergraduate Pilot Training Program now undergoes academic training in many subjects related to the technical aspects of flying. Included in this category are such items as aviation medicine applied to high-altitude flight, instruments, survival, engineering, aerodynamics, navigation, and many others. Even more study comes with assignment to operational commands.

The transition to all-jet pilot training perpetrated many changes. Supersonic pilot training created even more. This program is now past the halfway mark with Webb and Reese AFBs, Tex.; Vance AFB, Okla.;

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Realism is the theme in ATC's training, as witness this scene at Chanute AFB. Two ATC students are learning the delicate job of attaching umbilical cord to Minuteman ICBM as it sits in silo. Cord feeds computer data to missile.

and Williams AFB, Ariz., already possessing the new T-38 Talon. Moody AFB, Ga., is presently being supplied with the new aircraft. Laredo and Laughlin AFBs, Tex., and Craig AFB, Ala., will follow in that order. Total T-38 augmentation is scheduled for mid-1965. Other changes are in the mill.

Already announced is the plan to reintroduce light-airplane flying into the pilot-training program during FY '66. Along with this change will be a drop in total training time from fifty-five weeks to fifty-two. Flying time during training will drop from 262 hours to 240 with thirty of these devoted to light airplanes. Training in light aircraft will be performed under civilian contract near each of the eight bases ATC maintains for the pilot-training program.

On May 28 of this year, Class 64-XI graduated at Laughlin AFB, Tex. Pilot students of this class graduated ten weeks ahead of their counterparts at other ATC bases in a test program aimed at reducing pilot-training time.

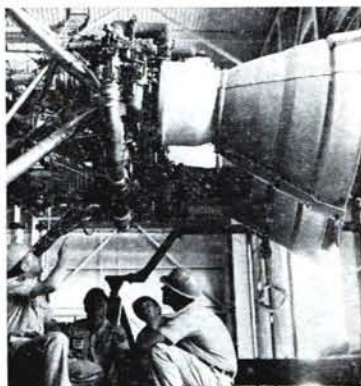
The other portion of the flying team, the navigators, are experiencing similar upheavals in traditional modes. Guiding Mach 2 aircraft by visual sighting of roads and rail lines hardly fits today's standards. At James Connally AFB, Tex., undergraduate student navigators learn the time-honored methods of dead reckoning, celestial, and radio navigation before moving into the newer grid, radar, and pressure-differential patterns. Mather AFB, Calif., picks up in advanced navigation, training the bombardier-navigators required for the SAC bomber fleet. Now, there is the requirement for a space-navigation program.

Preliminary studies in space navigation resulted in the introduction of a special twenty-hour course on Astronautics and Space Navigation at the Mather AFB advanced school in March 1964.

It is a long way from space to earth. Electronics has been the element which places the two in proper perspective. So vast is the requirement for personnel in fields embracing electronics as the basis for their work that Keesler AFB, Miss., has a continual student load in excess of 10,000. The electronic talents developed in students from Keesler are merged with others such as the missile maintenance technician trained at Sheppard AFB, Tex., to form specialized teams capable of providing the human touch needed to operate a weapon system.

There is another need for the human touch that is infinitely more personal and at times more demand-

What makes a Titan II ICBM go? Students get insight into inner workings of the mighty bird at Sheppard AFB, Tex., training center. When they finish the intensive course, they will be able to do everything but ride the beast. Missile training is major ATC job.



ATC contributes to space program through survival schooling for National Aeronautics and Space Administration astronauts. Above, NASA Project Gemini astronauts, in Arab-like headgear, get survival training near Stead AFB, Nev.

ing. This is the role of medicine. Gunter AFB, Ala., is the home of the Medical Service School. All entrants into any branch of the medical departments receive their training or indoctrination at Gunter AFB. In October 1963, this school graduated its 25,000th student.

At Stead AFB, Nev., there are those who are taught to save others and those who learn to save themselves. This is the home of helicopter training in the H-19, H-21, and H-43B. Final assignment is directed toward Air Rescue Service. Stead is also the home of the Air Force Survival School where aircrews learn primitive survival techniques in all types of terrain and climate. Among distinguished students of last year's classes were the Gemini astronauts. Their instructor, CMSgt. Frank M. Davis, is ATC's Outstanding Airman for 1964.

The past year has been one of significant training accomplishments for ATC:

USAF jet pilots graduated	1,577
ANG pilots graduated	47
MAP pilots graduated (jet)	177
(conventional)	81
MAP technical students	4,424
Helicopter pilots graduated (H-19/-21/-43)	261
Navigators graduated (undergraduate)	976
Instrument Pilot Instructor School (T-29/-33/-38/-39)	532
Pilot Instructor School (T-38)	183
Pilot Instructor School (T-37)	16
Pilot Instructor School (T-33)	387
ATC Instructor Course	287
Formal technical instructor training	454
OTS	5,572
Technical training graduates	435,262
Medical Service School	6,606
Chaplain	97
Judge Advocate	70
Factory training	92,675

Though accomplishments are supported by impressive numbers, figures alone are not the sole measurement of achievement. ATC strives for quality. Each student is evaluated throughout course content to determine proficiency.

It is the combination of numbers and quality that guarantees the continued capability of the USAF deterrent forces.—END