Aviation cadet programs have produced thousands of flying officers, and always when desperately needed.

They Wanted Wings

By Walter J. Boyne

The Air Force's predecessor organizations—the Army Air Service, Army Air Corps, and Army Air Forces—ran aviation cadet programs over a period of some 48 years, from their inception during 1917 until their final termination in 1965. These programs varied greatly in size and scope. They came and went.

Still, all of the cadet programs had this much in common: They all were set up and launched when time was short, facilities limited, and combat imminent. Each of the programs produced the pilots, navigators, bombardiers, and other personnel to meet the country's needs, and did so in huge numbers, sometimes almost as if by magic.

The Air Force Academy, Reserve Officer Training Corps, and Officer Training School—all leading to or requiring a college degree—are now well-established as the paths to a military commission. Yet it is worth recalling the times when aviation cadets gave the nation huge numbers of officers, often straight out of high school.

Although aerial warfare had developed rapidly in Europe during the Great War of 1914-18, inherent conservatism and tight budgets of the US Army kept the American air component to a minimum during the early years of that conflagration. Not until America's entry into the war in April 1917 did President Woodrow Wilson sign into law what was then the largest Congressional appropriation in history—$640 million for aeronautics. This began a huge production effort and the creation of the training programs the vast new "flying corps" would require.

In these years, Benjamin D. Foulois, a future Chief of the Air Corps, was the Air Service's first military pilot (an airship pilot). He went to Canada to examine the flying training systems in place there. These, especially the School of Military Aeronautics (SMA) at the University of Toronto, were used as models for the Air Service to follow.

Maj. Howard Bingham was tasked to create a similar American system, and by July 1917, eight universities had similar programs. Bingham even adopted the Canadian term "flying cadets" for the pilot candidates, who had to be under 25 years of age, have two years of college, and be "athletic, honest, and reliable."

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Cadets at Kelly Field, Tex., in 1918. Between April 1917 and November 1918, US and European aviation cadet schools graduated more than 10,000 students.

Ten Hours Then Solo

Almost 40,000 applied for the program, with 22,500 passing the very tough physical examination that became an enduring characteristic of the aviation cadet programs.

American schools of military aeronautics grew to 20 weeks' duration. Emphasis was on military training, aerodynamics, aircraft rigging and maintenance, engines, gunnery operation, and theory of combat tactics.

A simultaneous effort created 24 more flying schools. The flying cadets received 40 to 50 hours in aircraft such as the Curtiss JN-4 or Standard J-1.

Those who survived the training (the accident rate was high) and passed their pilot qualification tests received commissions as second lieutenants and were rated as either a reserve military aviator or junior military aviator.

With their new wings, the pilots then received a month of specialized training to qualify for pursuit, bombardment, or observation work. Most sought assignment to pursuit squadrons.

The growth of the Army Air Service from April 1917 to November 1918 was amazing. Although promises to "darken the skies with aircraft" were not fulfilled, the Air Service, American Expeditionary Force, fought for seven months at the front, mustering 740 US-built and squadrons of foreign aircraft. Cadet schools in the US and Europe graduated more than 10,000 students.

The 1918 armistice began a series of reductions in funding, personnel, and aircraft. The Air Service bottomed out from 1923 to 1926 with 880 officers and 8,000 enlisted. The numbers would improve only marginally until just before World War II.

A small aviation cadet program was required to offset the loss of reserve officers. A new era began on June 20, 1930 when Randolph Field, Tex., opened, consolidating several training efforts.

Standards for the flying cadets were extraordinarily rigorous from the entrance

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A group of cadets gather around an AT-6 Texan during a training session. Texans are among the most famous of World War II-era training aircraft.

exams to the flight line. An estimated 90 percent of applicants failed the physical or the entrance exams.

Flight instruction was often conducted in a rigorous, almost brutal manner, with the average student expected to solo in 10 hours. The cadet was continuously monitored by instructors for any failure in technique or discipline. (The time-to-solo gradually increased as training aircraft grew more complex.)

Washouts were frequent, either for a perceived lack of flying ability or a failure to meet military standards. Students of the time were actually counseled not to be ashamed about washing out—the standards were considered so high, only the most gifted could meet them.

During the interwar years, funds were so limited that graduating classes were tiny. Between 1919 and 1926, some 1,494 flying cadets entered primary flying school, but only 415 graduated.

Even in the 1930s, a newly graduated second lieutenant pilot would often be immediately placed in the reserves without ever seeing active duty.

The interwar years also saw changes in equipment from World War I surplus Jennys, S.E.5as, and de Havilland DH-4s to specialized trainers.

It is difficult to overstate the importance of the flying cadet program to the Air Force. The aviation cadet program produced leaders such as generals Jimmy Doolittle, George C. Kenney, Curtis E. LeMay, Thomas S. Power, and Elwood R. Quesada. Ten of the service's top aces of World War II were former cadets. And 28 of 38 USAAF Medals of Honor were awarded to aviation cadets.

"Stanine"

With wars raging around the world, the United States finally ordered a buildup with bewildering speed. The forecasted size of the Air Corps rose to an unprecedented 24 groups in July 1939. This called for annual pilot training classes of 1,200—six times the previous annual rate.

In March 1941, the goal grew to 84 groups, 30,000 pilots per year, and 100 training bases.

Graduating 30,000 pilots required 60,000 candidates and 300,000 applicants. The numbers were clearly beyond the capacity of the Air Corps to handle

In June 1941, the Army Aviation Cadet Act created the grade of "aviation cadet" instead of "flying cadet." When the uncannily accurate Air War Plans Division Plan No. 1 was accepted in August 1941, the annual pilot requirement was estimated to be 85,236—with complementary requirements for navigators, bombardiers, gunners, radio operators, mechanics, and other skills necessary for a wartime air force.

It was immediately apparent that aviation cadet qualifications had to be lowered to get sufficient numbers into training. In the years to come, these qualifications would be adjusted according to the perceived need of the service. Among the first restrictions to go was the requirement for two years of college.

Three general classes of aviation cadets were sought. They were "aviation cadet (pilot and bombardier), aviation cadet (navigator, nonpilot, flying), and aviation cadet (ground duty, as meteorologist and engineer.)"

The size of the programs grew to staggering numbers. When war began in December 1941, there were 16,733 cadets in flying training. One year later, there were 89,973, peaking at 109,000 two years later.

Aviation cadet examining boards around the country gave candidates a three-part classification test in addition to the physical exam. These were intended to determine whether the candidate would be best suited as pilot, navigator, or bombardier. The new test measured judgment, mathematical skills, mechanical ability, comprehension, and leadership qualities. Another section measured reflexes, hand-eye coordination, the ability to perform under pressure, and visual acuity. An interview with a psychologist formed the third part.

Scores on the three tests were aggregated on a nine-point scale—the famous "stanine" (for "standard nine") score. Most of the volunteers wanted to be pilots, and many were dissatisfied if assigned as a navigator or bombardier.

The Air Corps Chief, Maj. Gen. Henry H. "Hap" Arnold foresaw the extent of the new pilot requirements and solicited aid from established civilian flying schools.

The initial group of nine primary flight training schools increased to 56 by 1943.

Contractors were paid per student. The Air Corps supplied the aircraft, flying equipment, and a cadre of supervisory officers. Contractors were then frequently inspected. They had to supply "adequate" facilities, but the degree of "adequacy" was often challenged by cadets who were alternately freezing or sweating in the barracks.

A typical school with a 300-student class size had 278 civilian personnel, with 128 flying instructors. They were supported by a 56-man military component, with a major commanding. Similar arrangements were made on a smaller scale to train technical personnel. In time, Air Corps schools were provided for nonpilot rated officers.

Arnold also developed the College Training Program to help qualify potential aircrew members. From March 1943 to June 1944, the program examined aircrew candidates—those who passed were

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Lt. Gen. Russell Davis, who retired in 2002, is believed to have been the last aviation cadet to serve on active duty.

enrolled at one of 153 colleges affiliated with the program.

Almost 100,000 men entered aviation cadets through the CTP.

In the short term, World War II's aviation cadet program helped produce the sheer volume of officers needed for the war. Along with the almost 200,000 pilots, the aviation cadet program graduated about 100,000 navigators, bombardiers, and observers. Another 2,576 graduated as enlisted pilots.

With America's massive postwar demobilization, aviation cadet training was closed down from shortly after the end of the war until December 1946, when it was opened on a very limited basis to unmarried enlisted men with at least two years of service remaining. In 1947, aviation cadet training was opened to civilians with at least two years of college.

The new United States Air Force had an annual pilot quota of 3,000, requiring 4,800 candidates.

The requirement for navigators, bombardiers, and radar observers was recognized by the establishment of the Aircraft Observer Bombardment program, which was opened to aviation cadets in 1949, with the same standards as for pilots.

In June 1950, North Korea invaded South Korea, the US came to South Korea's aid, and this meant another massive explosion of pilot training. Air Training Command needed 10,000 candidates to produce 7,200 pilots per year, based on an expected 29 percent attrition rate.

Unfortunately, recruitment was low and the attrition rate was more than 50 percent. ATC expanded, but the only solution was to repeat World War II's aviation cadet success. Nine contract pilot flying schools were opened between 1950 and 1953.

A Change in Focus

During those three years, entry conditions were eased and the stanine test score requirement was lowered. Airmen who had served for 18 months no longer needed two years of college, although civilian applicants did. The minimum age for applicants was lowered to 19.

In 1952, a "revitalized" program was introduced with the hope of reducing the washout rate below its then current 34 percent level. Preflight training at Lackland AFB, Tex., was lengthened to 12 weeks, permitting flying training bases to concentrate on flight activities. Wings and commissions were awarded after 12 months, but an additional four months of specialized training followed.

Collectively, the requirement for 7,200 pilot graduates was almost met in 1953.

When the Korean War drew to its grudging halt with the 1953 armistice, the Cold War persisted. The Air Force became a permanent force in being, not just a cadre waiting for the next emergency.

USAF decided to stabilize pilot training at 4,800 per year and to improve training quality. The Air Force sought higher quality students by increasing the entrance requirements once again.

Then came a permanent change in focus spurred by the shocking launch of the Soviet satellite Sputnik on Oct. 4, 1957. At that time, only 31 percent of the officers in Strategic Air Command and Tactical Air Command possessed college degrees. USAF began an immediate effort to recruit scientists and engineers for officer training schools, and after 1961, 95 percent of Air Force officers were to have degrees.

Gradually, graduates from the academy, ROTC, and OTS supplanted the aviation cadets. The last cadet pilot training class was in 1961, the last navigator class in 1965.

The final pilot aviation cadet was William F. Wesson, who graduated Oct. 25, 1961. Wesson had entered flight training in December 1959, but broke his back and hip in an ejection. He fought a medical dismissal, and in June 1961, resumed training as the sole aviation cadet at Webb AFB, Tex.

It was a lonely time for the only member of the specially designated Class 62-B, but Wesson persevered and won his wings and commission. Sadly, he died in a civil aircraft accident a few years later.

On March 3, 1965, the very last aviation cadet to graduate was navigator Steven V. Harper. Foulois, who had helped start the program so many years before, presented Harper with his wings.

Lt. Gen. Russell C. Davis is thought to be the final aviation cadet who was on active duty. He retired in 2002 as chief of the National Guard Bureau.

No matter the time period, from World War I to the 1960s, all of the aviation cadet programs had some essential characteristics in common.

First, and certainly most important, they attracted people who wanted to serve their country, fly, and who were hungry for an upward career path.

Second, the aviation cadet programs were usually done in concert with a sector of the civilian flying population.

Third, they created an environment that most participants enjoyed, despite the danger, discomfort, and hard work implicit in the program.

Former aviation cadets have often called for a return of the system, but the decline in total pilot requirements makes a return of an aviation cadet program unfeasible for the foreseeable future. Memories, however, are being cultivated at the still-growing Aviation Cadet Museum in Eureka Springs, Ark. ■

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