

“Fly or Die” – CAA “Air Conditions” America

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By the mid-1930s, the public fascination with aviation had grown exponentially from its humble beginnings two decades earlier. Pioneering flights, such as Amelia Earhart’s solo flight from Hawaii to the U.S. mainland in 1935, enthralled adults and children alike. Popular magazines touted the economic benefits of the airplane and covered technical advancements in aviation. Now, with political and military unrest increasing in Europe and threats of another world war on the horizon, many in the United States wondered if the country would be ready for another large-scale war. In particular, could the U.S. hold its own in aerial warfare?

Fear that America would not be ready for the next war provided the Civil Aeronautics Authority impetus to develop a strong aviation education program. As CAA Chairman Edward Noble described:

We have neglected our boys and girls . . . In Europe aviation is begun in kindergarten . . . Germany and Italy spend hundreds of thousands of dollars training young people. France has appropriated millions of francs for . . . and in England last year 25,000 pounds were set aside for glider instruction alone . . . Here the Government sponsors the theater, and various art projects, and outside of the C.C.C. [Civilian Conservation Corps], which gives some small vocational aviation ground training, not one penny of Government money goes to flying instruction outside of the military services.

Believing aviation education critical to the nation’s future, in December 1938, Noble created a Private Flying Division within CAA to coordinate with and educate private fliers. The following month, he announced a prototype aviation training program that would be initiated at a dozen colleges. The division oversaw the program, which focused on training pilots for possible military service. On February 16, 1939, Purdue University became the first school to participate in program. The 1939 Civilian Pilot Training Act made the demonstration project permanent and

provided an annual appropriation. When President Roosevelt reorganized the CAA in 1940, responsibility for the Civilian Pilot Training Program (CPTP) went to the new Civil Aeronautics Administration. By the program's peak, 1,132 educational institutions and 1,460 flight schools participated in the program with the majority of its graduates entering military service during World War II.

The focus on the CPTP did not hinder activities devoted to educating younger school children about the benefits of aviation. In the spring of 1940, CAA sponsored two groups of writers, eight at the University of Alabama and three in Washington, DC, to write a series of aviation textbooks. Six of the books focused on elementary school instruction and four on more advanced students. The Government Printing Office printed and sold the books, which cost \$4.50 for the set. By July 1942, over one million copies had been sold.

In April 1942, CAA moved to provide additional educational resources for teachers of students too young to join the war effort. That month, CAA and the U.S. Office of Education announced a joint program to "air condition" American youth by stimulating aviation education in elementary and high schools. By encouraging schools to teach aviation topics, the two federal offices hoped to provide school-aged children basic aviation knowledge and increase public interest in aviation. According to Robert Hinckley, Commerce Assistant Secretary for Air, the program would "assure a flow of youth versed in aviation to meet war needs and to prepare for the tremendous post-war expansion that is in store for civil aviation." As Hinckley bluntly stated, "History has faced us with the plain alternative: Fly – or die! The entire nation must become air-conditioned."

In his 1942 book, *Air-Conditioning Young America*, Hinckley explained "to be air-conditioned means to be in a state of readiness to do something about aviation and not just feel

strongly about it . . . the term, it should be clear, does not imply merely vocational proficiency, in some field of aviation. Rather, it means a saturation of the American people in aviation skills and a general comprehension of the significance of aviation.”

In July 1942, CAA announced arrangements to open aviation ground school classes to high school teachers who planned to participate as instructors in the national “air conditioning” program. More than 650 colleges and universities participated in the program. CAA reimbursed the colleges for each teacher who completed the required number of classroom hours and took the prescribed examination.

Public school aviation courses began in the fall term of 1942, and, according to CAA Administrator Charles Stanton, 14,000 high schools instituted preflight aeronautics training that year. Students in those programs received a CAA certificate of aeronautical knowledge after completing the required courses and passing an examination. This document signified a student had completed all ground subject requirements for the private pilot license. By May 15, 1943, the “air conditioning” program, now called the CAA Preflight Aeronautics Program, had paid for the training of 3,500 teachers, and by June 15, 1943, 250,000 students between the ages of 16 and 18 were nearing the completion of preflight training. Edgar Fuller, Ph.D., chief, CAA Aviation Education Service, explained the popularity of the program, saying, “Forward-looking educators are aware that we are entering an air age in which every student will need to know the basic principles of aeronautics and their broad social implications. Such an understanding will be necessary whether or not the student ever becomes a civil or military flier.”

To provide classroom materials for elementary and secondary schools, a team of researchers and writers from Columbia University and the University of Nebraska, in cooperation with the CAA and sponsored by the Institute of Aeronautical Sciences, produced a

series of booklets for the Air-Age Education Series. The researchers and writers, known as the Aviation Education Group, produced 20 manuscripts published by the MacMillan Company in 1942 and 1943. *Time* magazine said the books,

add an aeronautical third dimension to mathematics, physics, biology, history, geography, economics, politics, even literature. History lessons now plug a new crop of aero-heroes (from Leonardo da Vinci to the Wright Brothers). Biology lessons describe what happens to a pilot when he blacks out. Social science lessons picture a post-war world of "aerial freight trains," and decentralized living. Anthologies of the rich, adventurous literature of flying enliven English lessons.

During the summer of 1943, CAA held a number of clinics around the country to assess the preflight program. CAA education manager Bruce Uthus reported "more high school youth wish to enroll than the present restricted facilities of schools can accommodate." He explained the increasing interest in aviation education "illustrates that young people are not averse to working strenuously in a course which is functional, interesting, practical, and realistic . . . in addition to its specific contribution to military and civil aviation, preflight aeronautics is proving itself an excellent education vehicle. Mathematics and physics are being absorbed with avidity. Edgar Fuller reiterated the importance of these courses:

Our schools are rapidly recognizing the implications of human flight. Most teachers know that established courses and teaching procedures in the sciences, social studies, and other fields must be adapted to the implications of human flight as well as to other modern needs . . . Life would be simpler if the airplane had not been developed at all. But the air age is here . . .

For its education efforts during World War II, CAA received the first National Aeronautics Association Brewer Trophy, now awarded annually to an individual, a group of individuals, or an organization for significant contributions of enduring value to aerospace education in the United States. Vice President Henry A. Wallace presented the award to CAA for "making it possible for 250,000 youths, 15 to 18 years of age, to exploit their interest in aviation,

by availing themselves of aviation education on a nationwide basis in high schools." In 1944, CAA's Dr. Fuller received the Brewer Trophy for his work organizing aviation education curricula in elementary and secondary schools, as well as colleges.