

Millbrooke, A.M. (1999). Aviation History. Englewood, CO: Jeppesen Sanderson.

Aviation History delivers an entertaining account and perspective on international aviation history. This book is an excellent resource to students, educators, and aviation enthusiasts. In reviewing this book, the principal criteria included content, organization, and reference sources. While editing errors and organizational incongruities plague some of the latter chapters, many of the shortcomings of this first edition will likely be alleviated by later editions. These problems are only a minor distraction to the story being told.

Starting with the first unmanned hot air balloon flight in 1783 through the announcement of the X Prize that will be awarded to the first non-government sponsored manned spacecraft, the author shows the detailed progression of international aviation and aerospace technology. The reader is taken on a journey through the world of aviation and receives first-hand accounts from the inventors and dreamers who made it possible. The tone of the book reflects a learned appreciation for the marvel of aviation as illustrated by a quote from the 1759 aviation-related novel Rasselas by Samuel Johnson, which explains flight in this fashion: "So fishes have water, in which yet beasts can swim by nature, and men by art. He that can swim needs not despair to fly: to swim is to fly in a grosser fluid, and to fly is to swim in a subtler" (2-5).

The author, Anne Marie Millbrooke, is a proven historian and author specializing in science and technology with an emphasis on aviation history. In addition to acting as a historian for such organizations as the National Park Service and the National Aeronautics and Space Administration (NASA), she has also managed the Archive and Historical Center at United Technologies Corporation and served as a Research Collaborator with the National Air and Space Museum. Her educational accomplishments include earning her doctoral degree from the University of Pennsylvania as well as her pilot certificate. Millbrooke's multifaceted background establishes her in a strategic position to gather and assemble key pieces of aviation history that span the globe.

The organization of Aviation History allows the reader to easily follow the evolution of aviation. The book is divided into ten chapters. Opening with early aviation of the 18th century, the book progresses through the Wright Brothers, early flight, World War I, peacetime aviation, the Golden Age of Charles Lindbergh and aviation firsts, World War II, the Cold War, space-age aviation, and finally modern aerospace through 1999 with glimpses of the 21st century and beyond. The appendices conclude with a listing of aviation firsts and space flights, as well as a copy of the Wright U.S. Patent. While it is impossible to thoroughly explore all topics, the

detailed bibliography provides sources for obtaining more information. This format spotlights the key phases of aviation development.

The construction of the book meshes well with its organization and lends itself successfully to the study of different time periods in history. Each chapter is broken down into four sections, which typically fit logically into the topic of the chapter. All chapters are composed of several defining parts that maintain a sense of continuity throughout the volume. A Summary of Events for the time period under review leads into the introduction and the chapter goals. Within the text of the chapter, there are an assortment of breakout boxes that either describes an historic event, provides historical evidence to support aviation theories, or relates bibliographical information about individuals who were propitious in shaping aviation history. Unfortunately, the intriguing stories may also confuse readers when they are so numerous as to distort the flow of the text. The chapter is completed by a thorough bibliography, study questions reviewing the material covered, and a timeline augmented by providing events not directly associated with aviation. The book is well-referenced, making skillful use of first-person sources.

The orderliness of the book conforms to an academic curriculum. While the chapters create neatly parceled packages, certain areas seem forced to conform to the ten-chapter plan. For instance, Chapter 9: Space Age Aviation seems oddly burdened by the last third of the chapter which focuses on fighter aircraft and various wars, from Vietnam to the U.S. invasion of Granada, as well as a final section completely on private and general aviation. These subjects can be better covered by creating another chapter or by parceling them into both earlier and later sections. In this situation, the author provides good material and content, which is hampered by poor organization. Overall, a detailed story of the advancement of aviation is shown in readable and entertaining style.

Millbrooke presents a broad analysis of aviation history that focuses on developments worldwide, as opposed to the many history books that single out achievements of the United States. Aviation History offers an objective view of aviation developments and illustrates the interactive nature of the industry. War spurred many of aviation's most significant advances, with countries openly borrowing new procedures and operations from enemy progress in the field creating the most effective fighting fleets. "Nationalistic pride in aviation went beyond the romance and fads of aviation, to national identity and claims of distinctiveness and superiority Legends grew around the British S.E. (scout experimental made by the Royal Aircraft Factory), the French Spad, and the German Fokker" (4-4).

Each chapter is filled with pictures and colorful quotes from people of that era. These firsthand accounts provide deeper insight into what, in some history books, is just a listing of factual information. When the "Red Baron" Manfred von Richthofen describes his victory over British ace Lanoe Hawker on November 23, 1916, the day comes alive. "I was on patrol that day and observed three Englishmen who had nothing else in mind than to hunt. I noticed how they ogled me, and since I felt ready for battle, I let them come . . ." (in Richthofen's *The Red Baron*, 4-29).

The author supplies an in-depth analysis of various aspects of aviation often glossed over in aviation books. Some of the areas explored include the development of aerial photography, air-to-ground communication with early wireless radio equipment, and airmail expansion beyond the United States. Antoine de Saint-Exupery flew a la Ligne mail route between France and Spain that sometimes crossed hostile territory. On a flight in February 1927 he recounts the following in a letter to his mother. "The trip went well, aside from a breakdown and the plane crashing into the desert" (Schiff. 1994 in 5-41). As evidenced by the stories recounted throughout the volume, early pilots were part mechanic, part inventor, and part adventurer in order to survive.

Aviation History is a collection of significant events in aviation accented by the people who made it happen and correlated with world affairs. The book's use of color and vivid stories helps to make the advancements come to life as something more than significant events on a timeline. While at times the stories may clutter the page, they also breathe life into what is considered by many to be a dull subject. The author's enthusiasm for the topic is obvious throughout the book. More thorough proofreading could help alleviate some of the confusion that is caused by typos and a few mislabeled illustrations. The credibility of the content does not suffer due to these obvious errors which will likely be corrected in the next edition.

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