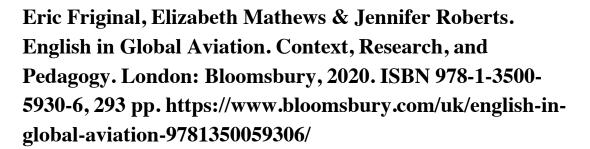# Eric Friginal, Elizabeth Mathews & Jennifer Roberts. English in Global Aviation. Context, Research, and Pedagogy. London: Bloomsbury, 2020. ISBN 978-1-3500-5930-6, 293 pp. https://www.bloomsbury.com/uk/english-in-global-aviation-9781350059306/

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The book *English in Global Aviation. Context, Research, and Pedagogy* is an innovative and useful resource not only for instructors of English in the field of aviation, but also for any ESP teacher, as many of the ideas presented can be adapted and implemented in programs where English is taught for different purposes. As the title indicates, it is divided into three different sections (context, research, and pedagogy), with three chapters in each. This approach offers a balance between theory and practice, making the book a multi-faceted resource with different applications.

Previous experience with aviation is not a prerequisite for understating the content of this clearly written book, despite the inclusion of technical concepts and vocabulary. The language employed by the authors, therefore, is targeted towards the general public. An important aspect to mention is the inclusion of a list of important abbreviations at the beginning with commonly used acronyms throughout the book. Likewise, a series of notes with clarifications about certain aspects is included at the end, which help the readers understand the context or provide additional references where they can find more information.

The first three chapters set the context. In chapter 1 the authors present and analyze several aviation accidents that help illustrate the importance of proper language use between Air Traffic Controllers (ATCs) and plane captains and First Officers (FOs) in order to ensure flight safety. The chapter starts with an extensive analysis of American Airlines 965 accident in December 1995. In their analysis, the authors explain concepts such as redundancy and discipline, and introduce the International Civil Aviation Organization (ICAO) standards of phraseology and terminology, which are used to provide clarity and brevity in aviation communication with the aim of avoiding ambiguity. One of the arguments presented in the chapter is that pilot and controller lack of English language proficiency has been, in some cases, the cause for the accidents. However, this is not always acknowledged in the investigation reports, leaving some room for improvement. The chapter concludes with the notion that there is a need for consistency in the use of teaching materials, language tests and training for aviation English teachers and accident investigators.

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Chapter 2 focuses on the International Civil Aviation Organization, which was already introduced in Chapter 1. The chapter is mostly descriptive, and starts with an introduction of the function, structure and developing process of ICAO standards. This chapter focuses primarily on the organization's Language Proficiency Requirements (LPRs) and how they were developed. Additionally, it presents features related to their assessment. In their analysis of the LPRs, which only addresses pilot and ATC verbal communication, the authors highlight the importance of fields such as applied linguistics, language testing and language teaching within the area of aviation with the aim of ensuring security and compliance with regulations.

In Chapter 3, whose authors are Aline Pacheco and Angela Albritton, language is presented as a human factor in aviation. The authors highlight the importance of Crew Resource Management (CRM) and communications for aviation safety, with culture being one of the factors that is usually neglected. One of the main takeaways of the chapter is the need for more research in many areas of language in aviation. The authors advocate for a taxonomy of communications in aviation that focuses on (1) technical, (2) procedural, (3) language and (4) cultural factors. This taxonomy, adapted from previous works, serves as a support for language use in aviation. The chapter ends with a brief description of aviation English testing. Due to the importance of the language testing industry in the field, this section could have been expanded to focus more on language compliance through valid and reliable tests. Perhaps a whole chapter on testing could be of additional value to the book.

Part 2, with three more chapters, focuses on research aspects. Chapter 4 is co-authored by Justin Taylor and Rochelle Udell, and addresses English in global aviation from a research perspective. The authors present the International Civil Aviation English Association (ICAEA) and describe their mission and contributions in the field, which are complemented by an analysis of aviation communication in popular media and a description of the work *Aviation English Research Project: Data Analysis, Findings and Best Practice Recommendations*, a report that proposes best practices to reduce miscommunication in aviation. A major part of the chapter is an annotated bibliography of aviation English research studies from 2000 to 2016. The chart includes a brief description of 27 articles highlighting keywords and the description of settings and contexts.

The topic of Chapter 5, written by Genggeng Zhang, is corpus linguistics and discourse in aviation. Register and sociolinguistics are two important concepts that are used throughout the chapter by the author, who also presents a set of linguistic and contextual variables of aviation English using corpora that are analyzed from both spoken and written aviation discourses. This is a very interesting chapter that presents a detailed and exhaustive analysis of the linguistic features of airplane maintenance manuals and concludes with a set of recommendations for Simplified Technical English (STE) editors and manual writers.

Chapter 6 closes the section related to research and presents a multidimensional analysis of pilot and controller communication. Following the same approach as Chapter 5, it examines six different pilot-controller radio/telephoned-based spoken interactions. In their analysis, the authors focus on three dimensions: (1) addressee-focused, polite, and elaborated information vs. involved and simplified narrative, (2) planned, procedural talk, and (3) managed information flow. While the study they present seems to be comprehensive, there is need for an analysis of the corpora based on speaker roles and features such as tone, accent and other suprasegmental aspects. The need for research in this area proves the limitation of corpus-based approaches to spoken discourse.

The last section of the book focuses on pedagogy and starts with a chapter that provides contexts and settings for aviation English pedagogy. The chapter is organized in a systematic way to focus on both the context and the language training of English for different sectors, including commercial airline pilots, air traffic controllers,

pilots and controllers, cabin crew, ground staff, maintenance, and flight training. The framework presented is based on a pyramid model of the infrastructure required to comply with ICAO IPRs, which focuses on research, teaching and learning materials, training programs, instructors, raters, and tests. The last section of the chapter describes the role of the aviation English teacher, paying special attention to the qualifications required based on ICAO guidelines. This chapter presents aspects that are common in all areas of Languages for Specific Purposes (LSP), such as the need for training and collaboration among disciplines.

In Chapter 8, the authors, in conjunction with Malila Prado and Patricia Tosqui-Lucks, describe the development process of Aviation English Programs. The chapter goes from the general concept of teaching English for Specific Purposes to ESP in the field of aviation. The chapter presents three different approaches (Communicative Language Teaching, Task-Based Language Teaching, and Content-Based Language Training), which are considered by the authors as the foundation of ESP courses. Later they move from a theoretical lens to a more practical approach and present real-life applications. An essential aspect that needs to be highlighted is the information provided about language analysis, a foundational tenet in ESP. The chapter ends with two sample corpus lessons that can be used as models by any ESP teacher in any field with adaptations and modifications.

Finally, the last chapter, written by the editors, presents an analysis of three courses (*Aviation Topics, English for Flight Training*, and *English for Visual Flight Rules*) that were implemented at Embry-Riddle Aeronautical University. In their description and analysis, they focus on aspects such as goals and objectives, syllabus design, activity types, and results and observations. The three courses are unique and are designed differently. Like the sample lessons presented in Chapter 8, the detailed description of the courses in this chapter can be very valuable for course designers and ESP instructors, who are exposed to different scenarios with real applications. It is worth noting the fact that in the third course (*English for Visual Flight Rules*) there are two instructors: an aviation English instructor and a Certified Flight instructor. It is an impactful way to end the book, leaving the message that collaboration is essential not only in the teaching of English for aviation, but also in the field of ESP in general.

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