Issue on Study of Aviation English as a Lingua Franca: A Documents Review

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Abstract

This article presents issues related to English as a lingua franca for communication in aviation. English is a universal language for communication among regions, and it is used as the main language in aviation. Three main points were discussed, including communication errors between native English and non - native English speakers, the characteristics of standard aviation languages, and the study of other issues related to English for aviation. This study showed that most of the research studies focused on finding linguistic errors in miscommunication. Some articles demonstrated the characteristics of standard aviation language, which seemed to be different from standard English. The other studies

focused on aviation academy's teaching methods.

Keywords: Aviation, English, Variety

ภาษาอังกฤษในฐานะภาษากลาง
ของการคมนาคมทางอากาศ: บทความปริทัศน์

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บทคัดย่อ

บทความนี้นำเสนอประเด็นที่เกี่ยวข้องกับภาษาอังกฤษสำหรับการเป็นภาษากลางเพื่อการสื่อสารในการคมนาคมทางอากาศ เนื่องจากภาษาอังกฤษเป็นภาษามาตรฐานสำหรับการสื่อสาร ภาษาอังกฤษที่ใช้ในการบินก็ถือเป็นภาษากลางที่ใช้สื่อสารระหว่างภูมิภาค ในบทความนี้จะมีการกล่าวถึงประเด็นหลัก 3 ประเด็นที่เกี่ยวข้องกับการใช้ภาษาอังกฤษสำหรับการเป็นภาษากลางในการคมนาคมทางอากาศ ได้แก่ ข้อผิดพลาดในการสื่อสารระหว่างเจ้าของภาษา กับผู้ใช้ที่ไม่ใช่เจ้าของภาษา ลักษณะพิเศษของภาษากลางทางการบิน และการศึกษาประเด็นอื่น ๆ ที่เกี่ยวข้องกับภาษาอังกฤษเพื่อการสื่อสารในการคมนาคมทางอากาศ ผลการศึกษาพบว่า การศึกษาส่วนใหญ่มุ่งเน้นไปที่การค้นหาข้อผิดพลาดทางภาษาศาสตร์ซึ่งเป็นต้นเหตุในการสื่อสารที่ผิดพลาด มีบทความบางชิ้นที่แสดงให้เห็นถึงลักษณะของภาษาอังกฤษมาตรฐาน

ที่ใช้ในการคมนาคมทางอากาศและมีความแตกต่างอย่างชัดเจนกับ
ภาษาอังกฤษมาตรฐานทั่วไป อีกทั้งยังมีการศึกษาในด้านอื่น ๆ ที่
เกี่ยวข้องกับวิธีการสอนของสถาบันการบิน

คำสำคัญ: การคมนาคมทางอากาศ ความหลากหลาย ภาษาอังกฤษ

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Introduction

World Englishes have been originated by Kachru and Smith (1988). The definition of world Englishes is the classification of English users into three groups, including the inner circle, outer circle, and expanding circle. The first group is the inner circle, which includes traditional English users referred to as the native Englishuser. This group also owns the power of being a standard English user. The next group is the outer circle, which includes the countries that are historically related to the first group, such as India, Singapore, and the Philippines in which English is an official language. The last group is the expanding circle, which includes the countries that need to use English for jobs, commercial communication, etc.

English used in business can be called business English as a lingua franca (BELF). The concept of BELF is specific English in business transactions. An example of BELF is when two persons have to do a business transaction; person A speaks the A language as the mother tongue while person B speaks the B language as the mother tongue. From the situation, they need some common language to communicate with each other, so they might pick a lingua franca to communicate. The lingua franca in this case is simplified English. It might be easier to understand because the interlocutors are not familiar with plain English.

Aviation English as a lingua franca is considered a subsidiary of BELF. It refers to radiotelephony communication

between pilots and air traffic controllers (ATC). English is the default language in international aviation communication. Although English is a lingua franca, there are many problems with communication. This is the reason why this article addresses this point, which is related to the fact that English users have a variety of mother tongues.

Definitions of Terms

1) English as a lingua franca refers to any use of English among speakers of different first languages for whom English is the communicative medium of choice and often the only option (Seidlhofer, 2013).

2) Aviation standard English refers to an artificial language designed to help pilots and air traffic controllers. The language is designed by International Civil Aviation Organization (ICAO).

Objectives

This article aims to explore research and academic work that focuses on linguistics issues on aviation English as a lingua franca. Another purpose is to find educational approaches, including trends and limitations in language study in the issue. The phrase "Aviation English as a lingua franca" has been searched via the Bielefeld Academic Search Engine (BASE). The 51 hits are shown throughout the 274, 923, 912 documents. There are 4 hits out of 183, 141 articles shown in The Thai Journal Citation Index (TCI).

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Articles which are not related to the topic are excluded from this review. Classification of the research and the gaps in past work, including researches, document analysis, book reviews, and thesis are selected and classified as follows.

Overall Review

Overall studies can be divided into three groups. The first group is the studies related to miscommunication. The second group is the features of standard aviation English, and the third group is prosodic study and English language teaching studies at the aviation institute.

1) The study of miscommunication issues was initially reported by Cushing (1995) when the Dutch pilot used the nonstandard phrase "at take off", rather than a clearer phrase such as "taking off". The form of a verb that expresses the action of "doing" in English is the suffix - ing, but in Dutch grammatical rules, the equivalence of "be + ing" (continuous tense) is "at + infinitive". The Spanish controller, who was proficient in English, did not understand the subtleties of linguistic phenomena. He had no clue when the code - switching was going on. The "at" was interpreted in the literal way, which indicated that the plane was at the take-off position.This is the cause of the famous aviation accident in 1977, the crash between two Boeing 747 in Tenerife, one of the worst aviation accidents in history. This miscommunication between the pilot and the air traffic controller (ATC) causing the fatal accident was also reported in Tajima (2004).

Other aviation incidents which are caused by misunderstandings are also reported by the British Civil Aviation Authority. For example, non - standard phraseology from air traffic control plays a part in those incidents. The evidence shows that some UK pilots use "plain language" with interlocutors. The use of plain English sometimes confuses non - native air traffic controllers (Moder, 2013). Bieswanger (2013) stated that native speakers have their own ideology of being native speakers. They believe that the way they speak is correct and the non - native ones are considered to be wrong. Native speakers are sometimes impatient with non - native speakers. Sometimes they reveal their impatience by increasing the rate of speech and volume.

Miscommunications between UK controllers and the non - UK speakers were reported by Clark (2017). The miscommunications occurred in mid-air, during climb, cruise, and circuit patterns. The incidents included failing to fly as instruction and infringement of airspace. According to the report, the incident involving English accents happened in Bangkok, Paris - CDG, Paris - Orly, Toulouse Blagnac, Delhi, Cairo, and Barcelona.

The most likely reason for miscommunications in this group is the difference regarding the nature of the native and the non - native. Said (2011) claimed that any messages from air traffic control which are longer than 15 seconds are not easy for a pilot to remember and take action appropriately, especially in the case of native English speakers

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communicating with non - native ones. Communications between a native speaker and a native brain can be smooth because the native brain will separate English phases into chunks. A chunk may include familiar English intonation and patterns which help the native to expect the information in predictive ways.

Some examples of studies involving misunderstanding issues were presented by Coertze and Conradie (2013), who used questionnaires to study language - related communication problems in aviation. Kim (2009) also conducted another study in South Korea which investigates the issue of miscommunication like the previous study, but the data in this research were considered unusual circumstances such as emergency landing. The study pointed out that all officers at the situation were qualified by the international aviation authority, but they still made mistakes due tothe lack of understanding of pronunciation which is a linguistic issue that the approver has overlooked. Hazrati (2015) claimed that intercultural communication is considered a cause of miscommunication. Although the standard aviation language covers vocabulary, grammar/structure, pronunciation/accent, fluency, comprehension, and interactions, it is still not enough to mitigate miscommunication problems.

2) Overall features of standard aviation English

Because of miscommunication problems, the International Civil Aviation Organization scripts the standard aviation language. The characteristics of the standard

language are also employed to communicate via radio. Philips (1991) presented language for communication between air traffic controllers and pilots. He proposed the features of standard aviation English as follows:

1) Rules about priority between different types of messages

2) A specific spelling code for each letter and number

3) Rules for the expression of callsigns (i.e. callsign is the name of airliners, which identify aircraft and ground stations)

4) Rules about the structure of a message

5) Rules about a message in an emergency case

6) Conventional expression lists and expression meanings

7) Skeleton messages such as phraseology

Standard English and aviation English are different at all language levels. These are examples of linguistic features in phonology, lexis, and syntax as shown in Table 1.

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Table 1 Examples of characteristics of International Civil Aviation Organization's standard aviation English and normal standard English

Linguistics features	ICAO standard aviation English	Normal standard English	Description
Phonetics			
Dental fricative	∅	[θ, ð]	cut the dental fricative [θ, ð] out
Digit "five"	[faɪf]	[faɪv]	reduction of voiced to voiceless
Digit "nine"	[naɪnə]	[naɪn]	prevent phonetic confusion with digit five
Lexis			
Specific expressions "yes"	affirm	yes, of course, etc.	Prevents the confusion of word meaning
Specific expressions "no"	negative	'no', 'of course not', etc.	Prevents the confusion of word meaning
Syntax			
Imperative	resume own navigation	resume your own navigation	Determiner deletion

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Table 1 Examples of characteristics of International Civil Aviation Organization's standard aviation English and normal standard English (Continued)

Linguistics features	ICAO standard aviation English	Normal standard English	Description
Imperative	climb 150	climb to 150	Deletion of prepositions
Declarative	will shortly lose radar contact	you will shortly lose radar contact	Pronoun deletion

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The linguistic features of aviation standard English have been identified by several studies. For example, Campbell - Laird (2004) reviewed the language of international aviation, while Seiler (2009) defined the features of aviation English as a lingua franca. In addition, McGrath (2011) defined the grammar of radiotelephony in aviation, and Douglas (2007) mentioned that the features of aviation English are considered a separated language. Native English, such as American English or British English, may take advantage of this language, but it is not confirmed that there occurs less misunderstanding in a real situation.

The research in prosodic study of aviation English was conducted by Trippe and Baese - Berk (2021) who studied the prosody of aviation English and standard American English. The results of the study clearly showed that aviation

English is different from standard American English in pitch range, articulation rate, uniform vowel intervals, and variable consonant intervals.

3) Studies on other issues related to aviation English. Some examples of these studies are from Sirikanjanawong, and Wasanasomsithi (2018), who compared language proficiency between aviation standard English scores and the Test of English for International Communication (TOEIC) scores for Thai airways staff, and Ishihara, and Lee (2021) who studied the face and impoliteness of aviation English from radio recorders. Besides, Loedlukthanathan, Prenmanisakul, Mahasap, Apichatiyakul, and Griffiths (2020) studied problems on communication between foreign tourists' engagement perspective and flight attendants of Thai aviation and airports, while Maliwan (2018) studied preparation techniques for the Test of English for International Communication in the aviation personnel development institute. Monteiro (2021) confirms the importance of teaching aviation English in aviation colleges. Applied linguistics, corpus linguistics, intercultural communication, and related disciplines should also be included in teaching.

Conclusion

A study of aviation English may be important for studying English as a lingua franca because aviation English in the communication on air transportation might be considered

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another variety of English. Therefore, understanding aviation English can benefit the English research. The systematic use of non - native English is still in controversy. However, some observations are made by the authors.

1) Although there is a standard language for aviation communication, errors are still found. Mostly, miscommunications were found ininterlocutors of different native languages, especially the pilots and the air traffic controllers.

2) Many studies have criticized teaching English in aviation schools which teaches only standard English but is not concerned about the key issues in linguistics. However, the authors do not agree with this point. It is difficult to identify linguistic issues whether or not they are related to learning aviation English, and there is time constraint for the lessons at aviation schools because English is only one part of the courses at those institutes.

3) The limitation of the collected data was present, which is only by the Bielefeld Academic Search Engine. There might be some other research studies on the global search engines, such as Google Scholars.

4) Several articles have alleged the linguistics issue as the cause of the misunderstanding, but in fact, there might be other issues such as the quality of radio sound, or the distracting sounds.

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