



WORD FORMATION PROCESS ON AVIATION TERMS IN ENGLISH FOR AVIATION BOOK

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Abstract

In today's advanced technology, the needs of word formation increase because more and more terms to support such technology advancement were invented. This also happens to aviation terms that also introduces several new terms that might be still strange to the public. Therefore, it is necessary to conduct a study on word formation of aviation terms in order to facilitate the public understanding of aviation terms. The purpose of this study is to analyze the types of word formation of aviation terms in English for Aviation Book published by Oxford. This study used a descriptive qualitative method. The data were the words contained in the listening transcript of the book. The data were analyzed based on the theories of word formation proposed by Bryson (1990), O'Grady et al. (1997), Pena (2010), Plag (2002) and Yule (2010). Based on the data analysis, it was found that there are 12 out of 17 types of word formation proposed by aforementioned experts. They are (1) Derivation, (2) Inflection, (3) Coinage, (4) Conversion, (5) Acronym, (6) Initialism, (7) Compounding, (8) Back-formation, (9) Internal Change, (10) Suppletion, (11) Onomatopoeia, and (12) Multiple Processes. Among the 12 types of word formation found, the type of word formation most frequently used in aviation terms is inflection with the frequency of 112 data (31,20%). This finding shows that words used in aviation terms are sensitive to the grammatical needs of the words in the structure.

Keywords: *Word formation, Word formation processes, Aviation, English for Aviation.*

A. INTRODUCTION

Every language has its own variation due to its historical value, geographical value, and social value (Winford and Migge, 2007). From the historical value point of view, for example, African people can speak French language since they had been colonized by France. Yet, the French language that they speak is not as French native speakers use it because it is sometimes mixed with African language which comes up to the variation of French language.

This is one of the evidences that language always develops. In relation to

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language development, language users arbitrarily use language whether in the form of borrowing, adapting or forming new words in the language they use (Rosa and Zaim, 2014). Forming new words in linguistics belongs to morphological process or word formation process (Bauer, Lieber, and Plag, 2013). Such word formation phenomena exist in every language user including the word formation of aviation terms.

The word formation itself explains how words are formed, and their relationship to other words in the same language (Wahyuni and Rosa, 2013). The structure of words, part of words such as stem, root, base, and affix, can be analyzed through morphology. The process of analyzing word structure is morphological process or word formation process. In English, there are 17 types of word formation process: They are, (1) Derivation, (2) Inflection, (3) Coinage, (4) Conversion, (5) Acronym, (6) Initialism, (7) Compounding, (8) Cliticization, (9) Back-formation, (10) Internal Change, (11) Suppletion, (12) Onomatopoeia, (13) Borrowing, (14) Blending, (15) Clipping, (16) Reduplication and (17) Multiple Processes (Bryson, 1990; O'Grady et al., 1997; Pena, 2010; Plag, 2002; Yule, 2010).

There are several reasons why this research is important to be conducted. Firstly, International Civil Aviation Organization requires people to improve their plain English into specified skill area; pronunciation, structure, vocabulary, fluency, comprehension and interactions (Ellis and Gerightly, 2008). By this point, the researcher predicts that word formation process exists in this occupation. In fact, ICAO has its own English proficiency test for Aviation fellow called Aviation English Language Test Service (AELTS). Secondly, misinterpretation of the meaning of the word formation related to aviation terms may lead to a serious flight problem. The collision of two Boeing 747s on an airport runway in Tenerife, Canary Islands, that killed 583 people on March 27th, 1977 and the midair collision over northern India of a 747 and a Tupolev TU-154 that killed 349 people on November 12th, 1996 are accidents mainly caused by the pilots' poor English language skills (Matthews and Albritton, 2014). Finally, there are no previous studies analyzing word formation in this skill area. The previous studies tend to analyze novels, movie scripts, short stories, and articles in newspaper and another written form in a language.

In addition to the reasons mentioned above, this study is conducted to complete the previous studies on aviation terms. Breul (2013) focuses his analysis on the important role of language in aviation, especially for the safety purpose. In addition, Secer and Sahin (2014) investigate the problems and challenges in teaching aviation terms or vocabulary to students at high school level. Furthermore, Baldursson (2017) examines the aviation term proficiency of private pilot students in an aviation academy in Iceland. He makes attempts to find correlations between prior education and own perception of language proficiency of the pilot students with their aviation-related vocabulary mastery. Based on the previous studies mentioned above, word formation of aviation terms is one of other possible studies in aviation-related terminology, the focus of this study.

B. RESEARCH METHOD

This study used descriptive method in analyzing word formation processes on aviation terms in English for Aviation Book. It is because the population or phenomena needs to be described and categorized. According to Pambudi (2009), descriptive research is a way to describe then interpret the data as it should be. In collecting the data, descriptive research is a study to test research questions or hypotheses to the existing events. This way of research reports these events about the data as it is.

Based on the theory above, this study investigated types of word formation, as one of the language existing event used on aviation terms in English for Aviation Book especially in listening transcript section.

C. FINDINGS AND DISCUSSION

1. Findings

The findings related to the types of word formation of aviation terms used in English for Aviation Book are presented in Table 1.

Table 1 The Frequency of Word Formation Process in English for Aviation Book.

No	Types of Word Formation	Frequency	
		Number	Percentage (%)
1	Coinage	26	38.2%
2	Compounding	10	14.7%
3	Initialism	10	14.7%
4	Multiple Processes	8	11.8%
5	Acronym	4	5.9%
6	Inflection	4	5.9%
7	Derivation	3	4.4%
8	Conversion	2	2.9%
9	Back-formation	1	1.5%
Total		68	100.0%

Based on the table above, it shows that from 68 data of word formation in English for Aviation book, coinage is type of word formation that mostly used it is about 38.2%. After that compounding and initialism are the second type of word formation that mostly used with the percentage of 14.7%. Then, it is followed by multiple processes about 11.8%. Next, there are acronym and inflection are about 5.9%, next is derivation (4.4%), conversion (2.9%), and back-formation (1.5%).

a. Coinage

The data related in coinage process in aviation found as a word and compounded word. The explanation will be shown below

Jetblue, Speedbird, Wolfair

These words are formed by compounding process, but it is used by their airline companies to its brand. *Jetblue*, *Speedbird*, and *Wolfair* have compounding process each, jet(N)+blue(N), speed(N)+bird(N), and wolf(N)+air(N). This branding indeed for promotion factor for the airline company.

Quality, Freedom, Delta

These words are root or base, but those words are used by the airline companies to promote their brands. Formed through a coinage process, the meanings of the words *Quality(N)*, *Freedom(N)*, and *Delta(N)* are not related to their meanings listed in a dictionary. Their meanings, referring to their coinage process, are the brands of the airplane which are given by their airline company. This branding is indeed the promotion factors for the airline company.

Approach, Ground, Tower

These words are root or base, but they are used to name the air traffic controller based on the position of the person in it. So, there are three work positions in air traffic controller, they are approach (controlling near airplane), tower (controlling nearer airplane), and ground (controlling the runway for airplane to land and take off). By this position, pilots name the air traffic controller to these three words in their communication through radio.

b. Compounding

In English, a word may be formed by two or more independent words, this process is called compounding. There are 12 compounds: Noun + Noun, Noun + Verb, Noun + Adjective, Verb + Noun, Verb + Verb, Adjective + Adjective, Adjective + Noun, Adjective + Verb, Preposition + Adjective, Preposition + Noun, Preposition + Verb, and Preposition + Preposition. The study found 4 compounds out of those 12: Noun + Noun, Noun + Verb, Verb + Noun, and Preposition + Adjective. One of these compounds are shown in the table below and the complete data of these compounds are in appendix.

Table 2 Compounding words in English for Aviation Book

No.	Compounding of	Words	Process
1	Noun + Noun	aircraft	air + craft
2	Noun + Verb	airborne	air + borne
3	Verb + Noun	runway	run + way
4	Preposition + Adjective	inbound	in + bound

a) Noun + Noun

aircraft

The word aircraft is constructed by two roots which are a noun air and a noun craft. It means that compounding process was occurred to this word since it was formed by connecting two separate words without eliminating each of the original ones.

b) Noun + Verb

airborne

The word airborne is constructed by two roots which are a noun air and a verb borne. It means that compounding process was occurred to this word since it

was formed by connecting two separate words without eliminating each of the original ones.

c) Verb + Noun

runway

The word runway is constructed by two roots which are a verb run and a noun way. It means that compounding process was occurred to this word since it was formed by connecting two separate words without eliminating each of the original ones.

d) Preposition + Adjective

inbound

The word inbound is constructed by two roots which are a preposition center and an adjective bound. It means that compounding process was occurred to this word since it was formed by connecting two separate words without eliminating each of the original ones.

c. Initialism

Initialism is taking the first letter of each word become a word but the pronunciation of this word is by each letter. The data found in this study are going to be analyzed are IFR, ILS and VFR.

a) IFR: Instrument Flight Rules

The initialism above refers to the rules in aircraft operations.

b) ILS: Instrument Landing System

This word formation of initialism refers to the cooperation between pilot and air traffic controller which provide the guidance during an approach to land.

c) VFR: Visual Flight Rules

The initialism above refers to the rules in aircraft operations.

d. Multiple Processes

Multiple processes are briefly defined as two or more word formation processes that occur in a word. The data related to this process are shown and analyzed below.

Table 3 Multiple Processes in English for Aviation Book

No.	Words	Processes
1	vacating (noun)	vacate(V)-ing (verb inflection)> vacating(V)-conversion
2	taxiing (verb)	blood(N)-(internal change)-bleed(V)>bleed-ing (inflection)

vacating

“It’ll take about 12 minutes after vacating the runway, GAB pan-pan.”

This word above shows that the multiple processes occurred. The process started by inflectional process of verb vacating from vacate by attaching a suffix –ing. After that, the process of conversion by changing the word class from verb into noun. It is because the word is situated after a preposition after. At the end of these processes, the word vacating is classified as a noun in this sentence.

taxiing

“Finnair 2115 taxiing slowly to intersection, but I can see snowplough is just moving off.”

This word above shows that the multiple processes occurred. The process started by a conversion process which change its class of word noun taxi become a verb taxi. Then the inflectional process of present participle, recognizing by an attachment suffix –ing, categorized this word to multiple processes. At the end of these processes, the word taxiing is classified as a verb.

e. Acronym

SIGMET (Significant Meteorological Information)

ECAM (Electronic Centralized Aircraft Monitor)

SAS (Scandinavian Airlines)

Acronym is a process when a new word formed from the initial letters of a set of other words. The data above shows that the used of initial letters which represent a word and turn those initial letters to a word in speaking way. These acronyms may be pronounced SIGMET /sIg-met/, ECAM /i-kæm/ and SAS /sAs/.

2. Discussion

There are 26 data indicate coinage category. One of the examples of the data can be seen in the sentence *“Freedom 6182, wait for Air China heavy to vacate 22 right.”* The word *Freedom* means the brand of the airplane. This phenomenon occurs because it is used to identify the plane and to easier the air traffic controller to communicate to the pilot of an airplane name *Freedom*. The word *freedom* in dictionary refers to the condition of being able to do things, say, think, etc. This branding also occurs under the same cause of the explanation above. Another words which is branded based on its job position are *Ground, Tower, Approach, Maintenance, and Tug*. In aviation term, people are classified by its position which come to the case of coinage not by personal identification while at work.

Another type of word formation related to the findings in this study is initialism and acronym. These types have each 10 data and 4 data. From initialism, there is ATC which classify *Air Traffic Controller*. This initialism is commonly known related in aviation terms. Then, SAS which classify Scandinavian Airlines. However, this acronym is commonly known related to military terms SAS which means Special Air Service. To conclude, these two examples represent acronym and initialism used in aviation terms.

In compounding process, this study found 10 data belong to compounding process. The data can be seen in the following sentence *“There are vehicles on the runway!”* The word *runway* stands as a noun because it is situated after preposition *on*. The word *runway* is formed by a verb *run* and a noun *way*. Compounding is combining two or more words to produce a single form that denotes thing. The word *runway* is constructed from two words, but it refers to one object. The word *runway* found many in the English for Aviation book because the word itself only used to aviation field and related to aircraft.

Multiple processes is there are two or more word formation processes occur in one word. This study found 8 data which belong to the process. The data can be seen in the sentence follows “‘*It’ll take about 12 minutes after vacating the runway, GAB pan-pan.*” The word *vacating* has 2 processes. The first one is inflectional process of verb by adding suffix *-ing* into *vacate* and then changing its class of word into noun by conversion process because it is situated after preposition *after*. These are the process that make the word *vacating* belongs to multiple processes.

This study compared the finding of this paper to Meisara’s (2014) study entitled “Word Formation on Medical Terms in New York Time Magazine’s Articles.” In the result finding of the study, it is found that the most used word formation process is derivation process. Meanwhile, the most used word formation process in this study is inflection. However, this previous study does not discuss the cause of this phenomena because it analyzed the article around medical terms not the communication among people in medic.

Furthermore, this study compared the research findings to Hanif’s (2015) study under title “The Analysis of Word Formation of Soccer Terms in The Jakarta Post’s Articles.” This previous study analyzing the word formation found in soccer terms by the object the articles in Jakarta Post. The study does not analyze which word formation mostly used in soccer terms. In the other hand, the study analyzes the findings with four steps in structural morphology to analyze the process of the words. They are identifying morpheme, word formation, morphological process and dictionary. These four steps to answer it research question about the readers’ difficulty in understanding the word. So, it can be said that this study showed the communication between the soccer expert and common people because the analyzed articles are published in newspaper Jakarta Post. Meanwhile, the study of word formation in Aviation showed the communication among people who are qualified in aviation through the radio.

In addition, this finding is also different from the finding of research done by Mustafa, Kandasamy and Yasin (2015) who found that abbreviation is the most common word formation process in everyday communication on Facebook with the percentage of 73%. This is mainly because the participants intend to save time, fill the communication gap or barrier among the users, indicate the group membership and show some excitements that represent the emotions and feelings through communicating on Facebook.

D. CONCLUSIONS AND SUGGESTIONS

This study found 9 out of 17 types of word formation used in English for aviation book. They were inflection, derivation, coinage, conversion, acronym, initialism, compounding, back-formation and multiple processes. Meanwhile, 8 other types – cliticization, blending, clipping, internal change, suppletion, onomatopoeia, borrowing and reduplication – were not found because these types of word formation were frequently used in informal language not in formal one like in this study. In addition, the study found that the process which mostly used in English for Aviation book was coinage. However, this study found also the other issue about using and ‘tweaking’ verb to these processes, they are inflection,

conversion and derivation. These three processes are top 3 of most word formation process used based on the data findings. It can be said that the communication among people in aviation tends in short structure of sentences and phrases in order to be effective with time. Based on this study, it was found that the communication between pilot and air traffic controller tended to be in short structures of sentences and phrases.

Based on the findings, this study suggests to do the analysis about word formation in other technology-related terms such as in computer engineering, computer software, etc. Besides, it is also suggested that the finding of this study would be an excellent source and reference for further studies.

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