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### **English as a coded language of aviation**

*English today is an international language medium not only for science, computers, diplomacy and tourism, it is the language of aviation, a means of communication for air traffic control. Aviation English training plays an important role in keeping the industry running.*

The language of professional communication is a functional variety of language used by representatives of a certain industry, profession, occupation. As an additional lexical system, a professional language, lacking its own specificity of phonetic and grammatical levels, remains a lexical array of a certain language. Its peculiarities are determined by the goal, the situation of professional communication, the personal characteristics of the communicator and the recipient (language competence, age, education, level of intellectual development). Depending on the situation and the purpose of communication, various language means of expressing thoughts are appropriately and correctly selected: lexical, grammatical, phraseological, etc. A professional has a conceptual and categorical apparatus of a certain field of activity and a system of terms corresponding to it. Therefore, the main feature of the language of professional communication is the presence of terminology inherent in this or that profession, and professionalisms. In addition, this language has some peculiarities in accentuation, phraseology, word formation, and grammar.

The modern English professional language of aviation developed in parallel with the corresponding field of knowledge and professional activity, confirming the similarity of evolutionary processes with other professional languages.

The professional language of aviation is used in a specialized field to ensure professional communication between specialists in this field. Its specific features are manifested on three levels: lexical, syntactic and textual. By the professional language of aviation, we understand the totality of all linguistic means used in the communicative sphere of aviation with the aim of achieving understanding between all specialists of aviation sphere.

Aviation terminology of the English language arose in connection with the emergence of aeronautics and aviation, and its development took place in parallel with the development of these branches of knowledge. The formation of the aviation terminology of the English language, which has been taking place for more than two centuries, reflects the entire complex process of the development of aviation science and technology. In contrast to general vocabulary, special vocabulary does not have general use and is understood only by those involved in a certain professional field, since it does not belong to the general language as a means of communication, but to separate sublanguages, and is necessary for mastering professional knowledge.

It is well known that pilots use their own language in the airspace of their countries, but they must also be familiar with the technical vocabulary, often called

aviation language, which allows the exchange of information between the ground and aircraft of any origin.

What does aviation language mean? These are agreed words and expressions because the language of the aviation world must be understood. That is why, since the Second World War, ready-made phrases have a certain meaning, which helps to avoid any risk of misunderstanding and accident. At a time when air travel was becoming more common in the mid-twentieth century, English-speaking countries dominated the design and manufacture of aircraft, as well as much of their operations.

At the 1944 convention in Chicago, aimed at solving some of the air travel problems of the time, English was also recognized as the language of aviation. The aim was to help avoid misunderstandings and confusion over the radio and between international crews.

Aviation communication is a specific area where standards are strictly enforced by any central authority. Aviation English is a highly specialized language. Slang often uses familiar words in completely unexpected meanings. Aviation and the aviation industry are no exception. Moreover, due to the fact that this professional field is technically complex, and the number of parts alone in an aircraft is in the thousands, the English language used in aviation and the aviation industry is a completely independent language that everyone who works in aviation and is associated with international air transportation should learn.

Pilots, flight engineers and air traffic controllers are required to know a large number of special terms and set expressions. And since familiar English words are used in completely different meanings in the aviation industry, fluency in English will not be enough to work in this field.

In the language of professional communication, a steady trend towards internationalization is clearly visible, which is connected with the international character of scientific knowledge. Internationalization is manifested in the formation of terminology, taking into account cross-linguistic consistency. For the development of international cooperation and professional communication, it is important that terms in different languages have the same meaning. The International Civil Aviation Organization (ICAO) has set its standards for those who work in the aviation industry or fly internationally. A very important aspect of learning is the ability to communicate effectively on a daily basis in what is called the ICAO language [2].

During the flight, airline pilots must constantly communicate: of course, with the control room and airport authorities, as well as with flight attendants, ground staff, passengers and other aircraft pilots. Not easy when swimming at an altitude of more than 10,000 meters! Thus was born the "secret language" meant for airline pilots, a shorthand slang meant to facilitate communication that has been continually refined over the years to ensure its accuracy and efficiency.

A terrible accident in Tenerife was the impetus. A plane crashed at Tenerife Airport (Canary Islands) in 1977. There was a terrorist threat that forced the airport administration in the area to redirect many aircraft to Tenerife North Airport. But due to bad weather and poor communication between air traffic control and the pilots, what was supposed to happen happened: the plane, during the landing phase, found itself face to face with the take-off plane. The results were terrible...[4].

Clear and concise terminology needed to be defined to prevent such a tragedy from happening again. Of course, a number of rules have already been put in place, but this time the needs were very specific. Indeed, the jargon hitherto used by pilots combined a huge number of military expressions without any definite framework and the interpretation of which was often in doubt.

Therefore, in order to remove any form of ambiguity, it was decided that pilots would henceforth use one language: English. In 2017, the European Union made the use of English mandatory for communication between pilots and air traffic controllers at each of the airports with over 50,000 international flights per year. Now, to become a pilot one needs to get a special certificate of English, Test of English for Aviation (TEA). Therefore, knowledge of English is now required to become an airline pilot.

Aviation uses a fairly clear NATO phonetic alphabet, or International Alpha Code. Developed in the 1950s by the International Civil Aviation Organization, it has since become widespread. Among all the advantages offered by the Alpha Code, the fact that it could easily pronounce and distinguish between the various letters of the English alphabet quickly made it indispensable in aviation communications, which it greatly contributed to. For example, *Alpha, Bravo, Charli, Delta, Echo, Foxtrot, Golf, Hotel, India, Juliett, Kilo, Lima, Mike, November, Oscar, PaPa, Quebec, Romeo, Sierra, Tango, Uniform, Victor, Whiskey, X-ray, Yankee, Zulu* [3].

The active processes of term formation, that take place in the aviation terminosphere, are accompanied by a significant variability of names, which necessitates the ordering and unification of this term system, not to mention the specifics of the genesis of aviation terms, since we are talking about the English language as the language-producer of terminological units in the aviation sphere. Aviation terminology of the English language has gone through a complex path of development, the dynamics of which were determined by both linguistic and extralinguistic factors. Without a scientific understanding of this dynamic in the light of modern ideas about terminology, productive work on replenishment and improvement of scientific, including aviation, terminology of the English language is unthinkable.

Beyond the phonetic alphabet, there is a whole terminology used by airline pilots and flight crew:

*Beef (captain), crump crasher (kids), boiler (reactor), coco (kerosene), bird (airplane).*

Consisting of inventive and colorful expressions, such a language especially allows flight personnel to communicate under the noses of passengers, who thus have no reason to think that they are in the center of discussions! The secret language of airline pilots causes less panic among passengers.

Let's consider some examples.

**Roger:** *instructions have been understood* The International Civil Aviation Organization (ICAO) officially defines the word "roger" to mean "I have received all of your transmission."

For instance, a pilot would say "roger" in response to an advisory from Air Traffic Control.

**Mayday:** *the international radio distress call about requiring immediate assistance* Mayday is derived from a French word, and it means "help" or "help me". Pilots say

mayday three times during emergency situations to alert Air Traffic Control and request guidance and assistance from them.

**Zulu time.** Since pilots can pass through multiple time zones in one trip and must communicate with air traffic controllers from around the world, aviators follow “Zulu time,” or Greenwich Mean Time (GMT), the universal time zone of the skies. GMT is the time kept by the Royal Observatory in Greenwich, London. So if it’s 2 a.m. in London for example, it’ll be 02:00 “Zulu time” for every pilot in the air.

**George** is a nickname for a plane’s autopilot system that follows a programmed set of points to the flight’s destination “George is flying the plane now”

**An air pocket** is just another word for the winds that jostle a plane from different directions “We’re flying through an air pocket”

**Easy Victor** means “evacuate the plane” This is a signal for the flight attendants to get the people off the plane and away from the aircraft.

**Angels** – Altitude in thousands of feet. "Angels two-five" means 25,000 feet.

**A nugget** was defined as a brand-new naval aviator who'd just received his wings of gold and was now enrolled in advanced flight training.

**Charlie-Charlie** is a fancy substitution for a standard affirmative and accepted non-standard words roger and wilco.

**Soul.** The number of “souls” on an aircraft refers to the total living bodies on the plane: every passenger, pilot, flight attendant and crew member. Pilots often report the number of “souls” when declaring an emergency, she says, so rescuers know the amount of people to search for.

A characteristic feature of the professional speech of radio exchange is the high recurrence of elliptical sentences, which are considered as a stylistic indicator of the professional speech of the participants of air radio exchange.

The language of professional communication, in addition to those already mentioned, has other features. Its characteristic feature is dialogicality. Professional activity requires the exchange of opinions, discussion of certain problems or individual issues, decision-making, therefore specialists enter into direct verbal contact, and the communication process between them proceeds as an active speech interaction. The number of communication participants can be different - two or more, and therefore, the dialogue can turn into a polylogue. The direct contact between the speaker and the listener, the use of non-verbal means (gestures, facial expressions), orientation towards the interlocutor's statement affects the syntactic design of speech. Sentences of different modalities are most often used: narrative, interrogative, encouraging, exclamatory; incomplete syntactic structures, in particular contextual and situational; unfinished and cut sentences; some types of monosyllabic syntactic constructions, infinitive sentences, etc.

For example:

a) *Controller:* ... turn left on the outer taxiway to holding point 27R.

*Pilot:* Roger, left on the outer for 27R.

*Controller:* Cleared to land, runway two seven Right” (*The pilot has permission to land on Runway 27 Right*)

b) *Ground control:* Pilot, be aware that you have traffic at 11 o'clock.

*Pilot*: Copy that, no joy so far. ( a term **no joy** indicates that no visual confirmation of another aircraft (especially an enemy) has yet been made; no information available at this time.

**Conclusion**: The professional language of aviation is a set of all linguistic means used in the communication field of aviation with the aim of achieving understanding between all specialists in this field.

In general, the characteristic features of aviation language are: evaluability, expressiveness, availability of terminological apparatus. The basic features of the English professional language of aviation are objectivity, emphasized logic and reasoning, conceptual accuracy and clarity, extensive use of sentences with a clear logical connection between components, the use of words in a direct or figurative sense, the preference for scientific terminology, the use of various standard expressions, clichés, the predominance of nouns and relative adjectives over verbs.

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