

G. Maksymovich, senior lecturer,  
S. Tkachenko, senior lecturer,  
O. Yashchuk, senior lecturer  
(National Aviation University, Ukraine)

### **Communicative competence of aviation specialists in the field of flight safety (aviation security)**

*The increasing role of civil aviation in the economic systems of the modern world determines increased international requirements for the professional knowledge of English by air personnel. The article considers the relevance of improving the professionally-oriented language training of civil aviation specialists and the aviation English characteristics for radio communication and its impact on flight safety.*

The relevance of this article is due to the increasing role of aviation in the modern transport system of freight and passenger traffic. Air transport has become a mass and regular mode of transportation, perspectives and communication. The development of civil aviation opens up new and wider prospects for its use in the economies of states around the world. It is obvious that the growth of air transportation will continue to follow economic growth, which will be characterized by a further increase in the level of training of civil aviation specialists in compliance with new requirements and a modern approach to the quality of teaching professionally oriented English.

Today, English affects many professional fields of activity. The aviation sphere is no exception. What is Aviation English and how does it differ from spoken English? The term "aviation language" covers a relatively broad area. It includes a wide range of vocabulary related to different areas in aviation (aircraft construction, aircraft maintenance, flight operations, air traffic management, flight management, airfield operations, passenger services, flight crew work).

International security experts are constantly looking for the ways to improve safety in order to ensure a further reduction in the number of accidents. The safety of flights directly depends on how well pilots and air traffic controllers know the phraseology of "air-air" radio communication and how well they speak general English. The International Civil Aviation Organization (ICAO) recommends pilots and air traffic controllers to conduct all negotiations in English, since historically English has been established as an international language. While the number of accidents due to mechanical malfunctions has been decreasing in recent years, increased attention has been paid to the human factor as one of the causes of accidents and aircraft crashes. One of such factors, again evoking increased interest, is the problem of communication. On international air routes, the language barrier is increasingly becoming not a secondary, but one of the main causes of aviation accidents. Aviation accidents (AP) often occur where there is a language misunderstanding between pilots and controllers. The language factor leads to accidents and incidents in cases when:

- the crew or dispatcher does not use the standard phraseology of the radio exchange when performing routine procedures;
- pilots do not speak English at a level sufficient to explain the problem that has arisen on board;
- the crew or air traffic controller moves from English into their native language during communication in the same airspace (ICAO, Doc 9835)

In 1998, considering the sad experience of a number of accidents and incidents directly or indirectly related to the lack of language competence of pilots and air traffic controllers, the ICAO Assembly formulated Resolution A32-16, urging the ICAO Council to instruct the Air Navigation Commission to prioritize the problem of English language proficiency and oblige Contracting States to take measures to ensure that flight controllers and flight crew members involved in the provision and performance of flights in airspace, where the use of English is required, had sufficient skills to conduct radiotelephone communication in English. In 1951, for the first time in history, ICAO proposed that English be de facto the language of world civil aviation. In 2003, the ICAO Council approved the "Guide for the Implementation of ICAO Language Proficiency Requirements" to assess the knowledge of English aviation language by pilots and dispatchers working on international airlines. Therefore, the commission of experts prepared the relevant Annexes to the documents of 1951, according to which English became the standard language of ICAO, and on the basis of which the English language proficiency assessment system was developed, the qualification scale for the assessment of linguistic knowledge, which is called the ICAO Scale ". The scale was introduced to ensure safety in civil aviation. As is known, the concept of "safety" in the field of aviation security is seen as the control and management of risk factors at the technical, psychological and linguistic levels.

At a new stage in the development of aviation, the high, specific requirements for the level of language training on the basis of mandatory testing and certification are an indispensable condition for the implementation of flight safety. ICAO uses a six-level scale for assessing English proficiency: Level 6 (Expert) - expert; Level 5 (Extended) - advanced; Level 4 (Operational) - working; Levels 1-3 (Non-operational) - non-operational levels. When passing the ICAO compliance test, six language proficiency indicators are assessed:

Fluency is a connectedness of speech, sufficient for the dispatcher to communicate with several planes simultaneously and without delays. Pilots should be able to receive information and instructions and respond to them adequately and in a timely manner.

Interaction between pilots and controllers should be effective, in the process of which both sides should check, confirm and clarify the information received.

Vocabulary should be sufficient for routine communication and communication in non-standard situations.

Grammatical structures, used, must help to clearly communicate information between pilots and controllers.

Pronunciation must be sufficiently clear and legible to be understandable in the international aviation community.

Comprehension means the ability of dispatchers and pilots to communicate in routine situations in case of emergence of non-standard situations.

All 6 indicators are evaluated on a 6-point scale. As a common mark, the indicator with the lowest result is taken.

Today, there has been a significant change in the approaches to aviation language training, in particular, the definition of clear objectives presented in the ICAO language assessment scales. The determining factor in the development of the language training system for aviation specialists is the need to reach working level 4 on the ICAO qualification scale. That is, at the working level 4 on the ICAO scale, a person should have an emphasis that does not complicate understanding; to master grammatical constructions so that errors, if they arise suddenly, do not distort the meaning of the message; to be able to rephrase a statement if the vocabulary is not sufficient to explain; speak at a pace corresponding to the ICAO scale; understand the interlocutor, be able to resolve doubts in the accuracy of understanding by checking, confirming or clarifying.

To improve the quality of language training of aviation specialists is applied the "immersion" technologies in speech situations typical for future professional activity in the aviation sphere. Taking into account the above features of professionally-oriented language training, the following approaches are proposed as well:

- Application of quasi-professional technologies that most closely approximate employment to real professional activity.

- Intersubject integration with the use of knowledge in such disciplines as "Navigation", "Meteorology", "Aircraft Operations", "Air Traffic Management", etc.

- Use of records of real radio communications on the communication channel "Pilot-Dispatcher".

To achieve the required level of proficiency in professional English, it is recommended for aviation specialists, including air traffic controllers, to intensify the work with the latest ICAO guidance documents of the updated and revised editions. The language of exchange is standardized by ICAO. This organization has developed and published the following documents to address the issue of teaching the phraseology of radio communication in English: - Appendix 10 "Aeronautical Telecommunications" to the Convention on International Civil Aviation; - Doc 4444 "Air Traffic Management"; - Doc 9432 "Manual on radiotelephone communication". One of such documents is the Cabinet of Ministers of Ukraine resolution "On the approval of rules for radiotelephone communication and the phraseology of radio traffic in the airspace of Ukraine" of June 10, 2004. In 1992, Ukraine became a member of ICAO by accepting the Chicago Convention on International Civil Aviation, which is the main international treaty governing civil aviation. Ukraine, as a state that is a full member of the ICAO, adheres steadily to international agreements in the field of civil aviation and air navigation, and therefore the process of training future aviation specialists is guided by the regulatory legal acts of Ukraine on air navigation provision in accordance with ICAO standards and recommended practice: -legal documents of this organization, regulatory documents of the European Aviation Safety Agency (EASA) "Code of Regulations the Joint Aviation Authority of Europe (JAA), the content of the Chicago Convention on

International Civil Aviation. All this necessitates the training of future aviation specialists with the active use of such a means of vocational training as a foreign language. According to the text of the order of the Cabinet of Ministers on the approval of the air transport strategy until 2030, to date, the aviation market of Ukraine begins its revival after a period of decline in activity over the past few years. As of the beginning of 2018, Ukraine has 66 intergovernmental agreements regulating air communication with the countries of the world. Regular flights between Ukraine and the countries of the world are carried out by 10 domestic airlines to 42 countries and 28 foreign airlines to 27 countries. The growth of passenger traffic through Ukrainian airports in 2030 is expected to reach 71.2 million people. The increase in the volume of international transportation through the airspace of Ukraine implies the improvement of the language training system for pilots and air traffic controllers (ATC).

A memo for the pilot will be useful to pilots flying on international flights, as well as giving an opportunity to expand the horizons of any person. At airports that serve many Delta Air Lines flights, such as Hartsfield-Jackson Atlanta International Airport, the word "Delta" is replaced with "Data", "Dixie" or "David" in order to avoid confusion, because "Delta" is also the call sign of the airline.

- In "Brunei", Indonesia, Malaysia and Singapore, "Lima" is replaced with "London", because "Lima" means "five" in Indonesian, Malay and a number of other languages of these countries. Thus, confusion can arise if the line contains a mix of numbers and letters.

- In Saudi Arabia, the ICAO phonetic alphabet is used in many commercial communications projects, however, since alcohol is banned in the country, the word "Whiskey" is replaced by "Washington."

- In Pakistan, tolerance to alcohol is changing, so the word "Whiskey" rather than "Washington" is most often used. But there is another substitute: the word "India" is replaced with the word "Italy" for socio-political reasons.

It has been established that the aviation language is an independent kind of language, since it has a number of characteristic features that distinguish it from spoken English. The purpose of aviation English language training is conditioned by the requirements of ICAO to ensure the appropriate high level of professional language competence of pilots and air traffic controllers in order to minimize the number of cases of inadequate communication on air achieving a world-class level of safety performance.

## References

1. Международная организация гражданской авиации. Издание второе. ИКАО, 2010.– 180 с.
2. Организация воздушного движения. Дос 4444. Издание пятнадцатое. ИКАО, 2007. - 102 с.
3. Правила аэронавигационного обслуживания. Издание восьмое. ИКАО, Монреаль, Канада, 2010. - 102 с.

4. Руководство по внедрению требований ИКАО к владению языком. Дос 9835. Издание второе. Международная организация гражданской авиации. 2010. – 180 с.
5. Руководство по радиотелефонной связи. Дос 9432. Издание четвертое. Международная организация гражданской авиации. 2007. — 134 с.
6. Сокращения и коды ИКАО. Дос 8400. Издание седьмое. ИКАО, 2007. - 105 с.
7. Лаврухіна Т. В. Формування ключових компетентностей майбутніх авіаційних диспетчерів як умова готовності до професійної діяльності / Т. В. Лаврухіна // Актуальні проблеми соціології, психології, педагогіки. - № 16. - К. : Київський національний університет імені Тараса Шевченка, 2012. - С. 168-174.
8. Повітряний кодекс України // Відомості Верховної Ради України (ВВР). – 2017. – № 29. – 315 с.
9. Комп Лэнг - Тестирование на определение уровня владения английским языком по Шкале ИКАО. Html.
10. <https://www.icao.int>. Международная организация гражданской авиации.
11. <http://uk.wikipedia.org>. Збірник аеронавігаційної інформації. Управління повітряним рухом.