

**МІНІСТЕРСТВО ВНУТРІШНІХ СПРАВ УКРАЇНИ
ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ
ВНУТРІШНІХ СПРАВ
КРЕМЕНЧУЦЬКИЙ ЛЬОТНИЙ КОЛЕДЖ**

Циклова комісія філологічних дисциплін

ТЕКСТ ЛЕКЦІЇ

з навчальної дисципліни
«Іноземна мова (за професійним спрямуванням)»
обов'язкових компонент
освітньо-професійної програми
першого (бакалаврського) рівня вищої освіти

Аеронавігація

Тема: «Основні вимоги щодо мовної підготовки фахівців авіаційної галузі відповідно до нормативних документів Міжнародної організації цивільної авіації (ICAO)»

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університету внутрішніх справ
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СХВАЛЕНО

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Секцією науково-методичної ради
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Розробник:

1. Викладач циклової комісії філологічних дисциплін, к. пед. н., спеціаліст вищої категорії Поддубей Олена Вікторівна
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План лекції

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2. Main particularities of the ICAO Manual on the Implementation of ICAO Language proficiency Requirements (Doc 9835 AN/42).
3. Main features of the ICAO Manual on the Implementation of ICAO Language proficiency Requirements (Doc 9432 AN/925).

Рекомендована література:

Основна:

1. Doc 4444 ATM/501: Air Traffic Management: Procedures for Air Navigation Service. 15th ed. Montreal: International Civil Aviation Organization, 2001. 64 p.
2. ICAO Manual on the Implementation of ICAO Language proficiency Requirements (Doc 9835 AN/42) International Civil Aviation Organization. Montreal, 2010. 149 c.
3. ICAO Manual on the Implementation of ICAO Language proficiency Requirements (Doc 9432 AN/925) International Civil Aviation Organization. Montreal, 2007. 134 c.
4. Robertson F., and E. Johnson. Airspeak: Radiotelephony for Pilots. London: Prentice Hall, 1987.
5. Weir, C.J. Language Testing and Validation — An Evidence-Based Approach. Palgrave MacMillan, 2005.

Інформаційні ресурси в Інтернеті:

6. International Civil Aviation Organization (ICAO)
<http://www.icao.int/icao/en/trivia/peltrgFAQ.htm#lang>
7. English Language Proficiency for Aeronautical Communication (ELPAC)
<http://www.elpac.info/>

1. Background to strengthened ICAO language proficiency requirements.

Over 800 people lost their lives in three major accidents (one collision on the ground, one accident involving fuel exhaustion and one controlled flight into terrain). In each of these seemingly different types of accidents, accident investigators found a common contributing element: insufficient English language proficiency on the part of the flight crew or a controller had played a contributing role in the chain of events leading to the accident. In addition to these high-profile accidents, multiple incidents and near misses are reported annually as a result of language problems, instigating a review of communication procedures and standards worldwide. Such concern was heightened after a 1996 mid-air collision in which 349 passengers and crew members were killed in an accident in which insufficient English language proficiency played a contributing role.

Accident investigators usually uncover a chain of events lining up in an unfortunate order and finally causing an accident. In some instances, the use (or misuse) of language contributes directly or indirectly to an accident.

At other times, language is a link in the chain of events which exacerbates the problem. There are three ways that can be a contributing factor language in accidents and incidents:

- a) incorrect use of standardized phraseologies;
- b) lack of plain language proficiency; and
- c) the use of more than one language in the same airspace.

Incorrect use of standardized phraseologies. The purpose of phraseologies is to provide clear, concise, unambiguous language to communicate messages of a routine nature. One study of real en-route radiotelephony communications revealed that 70 per cent of all speech acts uttered by native and non-native speakers, and for which a phraseology is prescribed, are not compliant with the recognized standards. For phraseologies to have the most significant safety impact, all parties need to use ICAO standardized phraseology. However, while ICAO standardized phraseology has been developed to cover many circumstances, it cannot address all pilot and controller communication needs. It is widely acknowledged by operational and linguistic experts that no set of standardized phraseologies can fully describe all possible circumstances and responses.

Review of provisions prior to adoption of amendments containing language proficiency requirements

Until March 2003, provisions relating to the use of language were addressed through two Recommended Practices in Annex 10 and a Standard in Annex 1. Annex 10 recommended that English be made available whenever an aircraft station was unable to communicate in the language used by the station on the ground. There was also an attachment to Annex 10 dealing with specific language issues. Annex 1 stipulated that air traffic controllers demonstrate knowledge of “the language or languages nationally designated for use in air-ground communications and ability to speak such language or languages without accent or impediment which would adversely affect radio communication”.

These SARPs did not include similar requirements for the flight crew and did not provide a clearly defined required proficiency level, making harmonization difficult and assessment uneven.

At the time, there were hopes that the requirements for pilot and controller communications would be achieved once a radiotelephony speech based on simplified English had been developed. Linguistic research now makes it clear that there is no form of speech more suitable for human communication than natural language. Artificial languages such as Esperanto have had little impact decades after their introduction. Computer-aided voice recognition and translation technologies remain unproven in the context of the demand for high reliability in aviation. Human language is characterized, in part, by its ability to create new meanings and to use words in novel contexts. This creative function of language is especially useful in accommodating the complex and unpredictable nature of human interaction, including in the context of aviation communications. There is simply no more suitable form of speech for human interactions than natural languages.

Action taken by ICAO

Concern over the role of language in accidents led to the adoption of ICAO Assembly Resolution A32-16, in which the ICAO Council was urged to direct the Air Navigation Commission to consider this matter with a high degree of priority and complete the task of strengthening relevant ICAO provisions concerning language requirements, with a view to obligating Contracting States to take steps to ensure that air traffic control personnel and flight crews involved in flight operations in airspace where the use of the English language is required are proficient in conducting and comprehending radiotelephony communications in the English language.

In 2000, the Proficiency Requirements in Common English Study Group (PRICESG) convened for the first time. PRICESG was established by the Air Navigation Commission to assist ICAO in advancing the language competency task, which included, among other elements, the following aspects:

- a) carry out a comprehensive review of existing provisions concerning all aspects of air-ground and ground-ground voice communications in international civil aviation, aimed at the identification of deficiencies and/or shortcomings;
- b) develop ICAO provisions concerning standardized English language testing requirements and procedures; and
- c) develop minimum skill level requirements in the common usage of the English language.

The study group brought together, from Contracting States and international organizations, operational and linguistic experts with backgrounds in aviation (pilots, air traffic controllers and civil aviation authority representatives), aviation English training and applied linguistics. The PRICESG met throughout 2000 and 2001, presenting the Secretariat with a set of recommendations in the fall of 2001.

Amendments to Annex 10 and the PANS-ATM (Doc 4444) regarding the harmonization of radiotelephony speech and improvement in the use of standardized phraseology became applicable on 1 November 2001. The 33rd Session of the ICAO Assembly noted that provisions related to language proficiency were being developed and considered that the objective should not be limited to the English language.

While data-link applications are improving, and some experts hope that they will mitigate the need for a common language, there are reasons why data links will not eliminate the requirement for pilots and controllers to have good language proficiency. First, they are not yet sufficiently developed for universal use in all applications. Second, they require language reading proficiency, and translation technology also remains unproven in the face of the rigorous demand for reliability. Finally, flight crews and controllers will always need natural language proficiency in case of datalink equipment failure.

Alternative measures to circumvent the need for common language proficiency similarly fall short of safety requirements: interpreters on the flight deck or in the control room add an additional layer between the two key agents – controller and pilot – further complicating communication. In routine situations, the use of an interpreter might suffice, but in unusual circumstances or during an emergency, any procedure that slows down communication becomes unacceptably cumbersome and perhaps even dangerous. Therefore, left with human language as the best vehicle for pilot and controller communications, the ICAO language proficiency requirements seek to improve communications thereby enhancing safety.

2. Main particularities of the ICAO Manual on the Implementation of ICAO Language proficiency Requirements (Doc 9835 AN/42)

Safety experts are constantly seeking to identify means of improving safety in order to reduce the already low accident rates. With mechanical failures featuring less prominently in aircraft accidents, more attention has been focused in recent years on human factors that contribute to accidents. Communication is one human element that is receiving renewed attention.

In 1998, the ICAO Assembly, taking note of several accidents and incidents where the language proficiency of pilots and air traffic controllers were causal or contributory factors, formulated Assembly Resolution A32-16 in which the ICAO Council was urged to direct the Air Navigation Commission to consider, with a high level of priority, the matter of English language proficiency and to complete the task of strengthening the relevant provisions of Annexes 1 and 10, with a view to obligating Contracting States to take steps to ensure that air traffic control personnel and flight crews involved in flight operations in airspace where the use of the English language is required are proficient in conducting and comprehending radiotelephony communications in the English language.

Subsequently, the Air Navigation Commission established the Proficiency Requirements in Common English Study Group (PRICESG) to assist the Secretariat in carrying out a comprehensive review of the existing provisions concerning all aspects of air-ground and ground-ground voice communications and to develop new provisions as necessary. In March 2003, the Council adopted amendments to Annexes 1, 6, 10, 11, and the PANS-ATM relating to language proficiency in international civil aviation.

In 2004, the first edition of this manual, compiling comprehensive information on a range of aspects related to language proficiency training and testing, was

published in order to support States' efforts to comply with the strengthened provisions for language proficiency.

In 2007, the ICAO Assembly adopted Assembly Resolution A36-11, Proficiency in the English language used for radiotelephony communications, which directed the Council to support Contracting States in their implementation of the language proficiency requirements by supporting globally harmonized language testing criteria.

Over the past several years much activity has been undertaken on a worldwide basis to meet ICAO language proficiency requirements, including regional initiatives by Eurocontrol, EANPG, ASECNA and COCESNA. Other initiatives include those of numerous airlines and air navigation service providers on all continents to set up or acquire training and testing programmes. Aircraft and equipment constructors have also assisted their customers in choosing or setting up testing and training. The language training and testing professions, both commercial and academic, have contributed to the accelerated development of programmes, learning materials and testing services in accordance with ICAO language proficiency requirements. These have most notably emerged from countries where English is the native language.

Finally, professional associations such as ICAEA and IALCO have provided fora for the exchange of information and ideas on implementation.

ICAO has been equally active in supporting States in their implementation of language proficiency requirements. Such efforts include the publication in June 2009 of ICAO Circular 318 — Language Testing Criteria for Global Harmonization, Circular 323 — Guidelines for Aviation English Training Programmes and a second edition of this manual in 2010.

The second edition has been updated and reorganized into seven chapters and eight appendices, which have been significantly augmented. Several appendices have been formatted to facilitate the detachment of certain documents (checklists and tips) for reproduction and use as practical tools by stakeholders.

Chapters 1, 2 and 3 introduce the subject of language proficiency and specific features of radiotelephony communications.

Chapter 3 is a useful introduction to aviation radiotelephony for the language training and testing community. While Chapters 1, 2 and 3 are of primary interest to training managers and to training and testing service providers they are also highly recommended reading for State regulators and for operators and air navigation service providers for a full understanding of the implications of the implementation guidelines in subsequent chapters and for a linguistic perspective on the aviation field.

Chapters 5 to 7 provide guidance on how to achieve compliance with the language proficiency requirements. Chapters 4 and 5 give the background to the Standards and Recommended Practices (SARPs) relating to language proficiency and explanations of their meaning and implications. Chapter 6 integrates the material originally published in Circular 318 and, along with Chapter 7, aims to provide practical guidance enabling successful implementation of the SARPs from the points of view of testing and training. These chapters provide information on best practice in all domains and warn against identified pitfalls and substandard practices.

3. Main features of the ICAO Manual on the Implementation of ICAO Language proficiency Requirements (Doc 9432 AN/925).

Radiotelephony (RTF) provides the means by which pilots and ground personnel communicate with each other. The information and instructions transmitted are of vital importance in the safe and expeditious operation of aircraft. Incidents and accidents have occurred in which a contributing factor has been the use of non-standard procedures and phraseology. The importance of using correct and precise standardized phraseology cannot be overemphasized.

The purpose of this manual is to provide examples of the radiotelephony phraseology found in those two documents. While the procedures and phraseology specifically reflect the situation in an environment where very high frequency (VHF) is in use, they are equally applicable in those areas where high frequency (HF) is used. ICAO phraseologies are developed to provide efficient, clear, concise, and unambiguous communications, and constant attention should be given to the correct use of ICAO phraseologies in all instances in which they are applicable. However, it is not possible to provide phraseologies to cover every conceivable situation which may arise, and the examples contained in this manual are not exhaustive, but merely representative of radiotelephony phraseology in common use.

Users may find it necessary to supplement phraseologies with the use of “plain” language. When it is necessary to use plain language, it should be used according to the same principles that govern the development of phraseologies in that communications should be clear, concise, and unambiguous. Sufficient proficiency in the language being used is also required. (ICAO language proficiency requirements are found in ICAO Annex 10, Volume II and Annex 1 — Personnel Licensing.)

In addition to correct use of phraseologies and adequate language proficiency, it is also important to keep in mind that the language being used in radiotelephony is often not the first language of the receiver or originator of a transmission. An awareness of the special difficulties faced by second-language speakers contributes to safer communications. Transmissions should be slow and clear. Direct statements which avoid idiomatic expressions are easier to understand than indirect statements or colloquialisms or slang. Furthermore, certain States may specify in their aeronautical information publication (AIP) particular requirements on first contact when entering their airspace or prior to leaving their airspace. Pilots should, therefore, ensure that they are aware of such procedures by referring to the relevant instructions (e.g. AIP and NOTAM) before undertaking international flights. Examples of phraseology of this type are beyond the scope of this manual.