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**LINGUISTIC PROFILE OF GROUND-TO-AIR**

**RADIOTELEPHONY COMMUNICATION**

*Annotation: Linguistic profile of radiotelephony communication has been studied on the basis of 37 radio telephony exchanges between an air traffic controller and a pilot in non standard situations. Percentage of standard phraseology and plain English used in the exchanges has been calculated.*

      **Introduction**. It is well known that a language related human factor is one of those contributing significantly into civil aviation events. It might mean that during all flight stages the quality of verbal communication between an air traffic controller and a flight crew is at high stake. The radiotelephony exchanges serve to provide safe both aircraft operation and traffic control. In order to improve safety the International Civil Aviation Organization (ICAO) has put forward new requirements regarding the level of language proficiency of pilots and air traffic controllers of non-English speaking countries.

The language of radiotelephony is based on standard ICAO phraseology and plain Aviation English. The latter is used when standard phraseology is not sufficient to achieve successful communication between the interactants [1]. It often takes place in non routine situations at any flight phase due to extreme flight conditions and the complexity of the aircraft control under stressful and threatening negative consequences. The literature overview showed that over the passed 15-20 years, 60-65% of aviation events have occurred due to lack of reliability of the aviation personnel knowledge, skills and knowledge of English, which leads to lower levels of professional reliability under extreme conditions and time limits to assess the flight situation for decision-making [2]. So, the question is how much phraseology is substituted by plain Aviation English due to insufficiency of the former.

ICAO Doc 9835 defines the standard phraseology as a linguistic phenomenon which is a set of operating rules. Its main linguistic characteristics are as follows: limited vocabulary (about 400 words) where each word has a precise meaning applied to mainly limited field of aviation and short sentences. Phraseology language is restricted or lack of articles, possessive pronouns, verbs, the personal pronouns and prepositions. [1]

Under the plain language in radio communication one means spontaneous, creative and non-coded to use a specific natural language [4]. In our research we used term of plain English defined by ICAO as the general English in aviation context used by any participant of a radiotelephony exchange (air traffic controllers and crew members) to compensate lack of the standard phraseology [1].

 In the course of our study a method of sample survey was used. For the analysis we selected 37 radio telephony authentic episodes of various unusual situations. The episodes have been analyzed according to the criteria of evident quantity of standard phraseology clusters and plain English lexis used simultaneously in the exchanges with a purpose to achieve success in communication.

The analysis of the episodes showed that plain English increases up to nearly 19% of the total number of words used by radiotelephony participants. Therefore phraseology was used in 80% of interaction. The fact proves that the phraseology is substituted in a proportion of 1 plain English unit to 5 phraseology units. Total 23010 (100%) lexis have been studied where there were 18660 (81.1%) phraseology and 4350 (18.9%) plain English units.

Some examples of the radio telephony episodes analyzed are as follows:

*1 )C: AB nine four six PAPA, report the reason please*

 *P: We have smoke in cockpit, but we have no fire, light indication now*

 *C: Do you need fire brigade?*

*2) C: X DELTA X, stand by*

 *C: X DELTA X, do you need position another apron?*

 *P: Yes, sir, so we need GOLF two, MIKE one nine*

 *C: Stand by, please, hold position.*

*3)C: X Y eight five, zero, what flight level do you wish ?*

 *P: We need flight level one hundred emergency, Mayday, Mayday, Mayday, X Y eight five.*

*4) C: Speedbird seven four Delta, say again, please.*

 *P: Do we have to fly full departure route or do you give us a heading as usually?*

 *C: Speedbird seven four Delta, say again, please.*

*5) P : ABC zero two nine four, we would like to come back to the gate, please?*

 *C: ABC zero two nine four,roger and confirm, are you ready to taxi by own?*

 *P: Yes, ready taxi by my own.*

Linguistically the radiotelephony communication between a pilot and an air traffic controller lacks of phonetic, grammatical, lexical, syntactic and stylistic features which normally take place in real world conversation.

Phonetic characteristics of broadcasting as a whole are subject to general rules of the English language, and some phonetic pronunciation differences concern numbers (two, four, six) and the presence of special phonetic alphabet which is characterized by specific names of letters of the English alphabet to avoid misunderstanding (e.g., PAPA, MIKE, DELTA) [3].

Syntactically, this type of communication is characterized mainly by incomplete grammatical structure of sentences in which there is no subject, verb bunch to be, as well as other secondary members of the sentence. The radiotelephony interaction is characterized by neutrality, impersonality and lack of emotional expressions utterances [3].

It is important to note that professional communicative competence places a leading role during the radiotelephony exchange on international air routes. Consequently professional (English language related) communicative competence of aviation personnel includes the foreign language knowledge and communicative skills as well as their ability to implement the appropriate use of communication strategies to interact effectively in radiotelephony exchanges on international air routes. Appropriate level of the language communicative competencies using both phraseology and plain English in conditions of professional interaction might be provided by an interaction and interpenetration of linguistic, social, cultural and communicative competencies of a person, which allows the level of development of aviation professionals to effectively implement the English language, and therefore, cross-language, cross-cultural and interpersonal communication [4].

Other research results showed that the main reasons of miscommunication are the following:

a) Improper use of standard phraseology due to underdeveloped foreign language competence.

b) Insufficient spoken language competence development.

c) Use of more than one language in the same airspace (lack of social and strategic competence). [5]

**Conclusions.** Analysis of 37 episodes of authentic exchanges between air traffic controllers and flight crew clearly showed that the ICAO standardized phraseology is used in all cases where it is required. Only when standardized phraseology can not be used for the purpose of effective communication the plain English language is applied. Therefore two English ‘sublanguages’ are used in a proportion 5/1 (or 80% - phraseology; 20% plain English). They are usually used together in a single session in non routine situations.

Therefore standard phraseology can not account for all non-standard , abnormal and sometimes emergency situations encountered by aviation personnel; also it is not sufficient to convey additional information about many unforeseen situations at any stage of flight. So, English language training of aviation personnel must be provided by integrative course using aviation simulator to model various unusual situations in the flight.

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