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Aviation Technical Documentation in English as a Challenge for Non-Native Speakers

General analysis of challenges aviation technical documentation in the English language poses for non-native specialists and their potential consequences is provided. Recommendations considering training future aircraft maintenance personnel and translating aviation technical documentation into Ukrainian are also suggested.

Drastic and excessive development of aviation industry – both scientific and technological components of it – provides the necessity of linguistic research and studies within this field as many nationalities are currently involved in this process. Though there is a number of international languages used in creation of the official technical documentation, English among them, it is worth paying attention to linguistic issues considering this documentation and its acquisition in different countries. In this article, we will endeavour to conduct a general linguistic analysis of aviation technical documentation in English from the point of view of a non-native speaker and also cover the translation aspect.

As we mentioned above, the English language is the international language of aviation – and therefore the language most frequently used in technical and maintenance documents [4, p. 17]. However, it is often not the native one for the maintenance staff who use these documents in different countries all over the world. Consequently, there may occur minor and major accidents caused by misunderstandings which, in their turn, mostly track their origin from the problem of linguistic barriers. The matter of critical challenges posed by language “incompatibility” has drawn attention of the International Civil Aviation Organization (ICAO) which said in a 1996 article in the *ICAO Journal* that, because of development of aviation and aircraft manufacture process fractured among many different countries with many different languages spoken, language errors had become very frequent [4, p. 17]: “Sometimes, the technical language of the manufacturer does not translate easily into the technical language of the customer, and the result can be maintenance documentation that is difficult to understand [3].” Since the state of affairs in 1996, significant changes have occurred – including broadened linguistic training of future aviation specialists and a wide range of international mobility programs aimed at global interaction and cooperation; nevertheless, this area is still in the need of further observation, studies, and development.

It is worth noticing that aviation technical texts are very specific regarding the usage of certain lexemes that may have different meanings within widely used and professional discourses [1, p. 236]. Moreover, aviation terms are characterized by special trends in word formation, e.g. one of the very frequent ways of creating new terms is semantic development of a word: Eng. *jacket* – *куртка* and *кожух*, *jar* – *глекчик* and *конденсатор*, *to load* – *навантажувати* and *заряджати*; Ukr. *крило*

птаха (wing of a bird) and крило літака (wing of an airplane) etc. [2, p. 183]. In aviation, many terms often obtain a too long form – usually resulting from the desire to provide the most comprehensive verbal representative of a particular notion. Therefore, for the sake of conciseness, abbreviations and acronyms are widely used (GA (general aviation) – авіація загального призначення; EAP (effective air path) – діюча повітряна траса; Psia – абсолютний тиск в англійських фунтах на квадратний дюйм; Satcom – центр зв'язку з супутником; WIDE (Wide-angle Infinity Display Equipment) – призначена для наземних тренажерів широко кутова система, що сприймає інформацію від ЕОМ). As we see, in both English and Ukrainian the system of aviation terminology appears to be very specific and complicated with, if we look at it within the translation aspect, many ways of their rendering into another language – ranging from simple transcoding to wide descriptive translation, often resulting in the process of abbreviation. Hence, much attention is to be paid to creation of special aviation dictionaries (preferably thesauruses with profound explanations of terms and examples of their usage with context) and style guides covering specific issues of translating technical documentation of different countries, e.g. of the FAA and the ICAO, which have their peculiar features. And, of course, the cornerstone of this matter lies in further promotion of linguistic education of future aviation specialists and comprehensive training of aviation translators.

Though language errors are generally inevitable so far since the area of aviation translation is still not clear and standardized enough, these defects are usually reported well before any maintenance or inspection errors have been committed, or before the aircraft is released for service [4, p. 18]. Nowadays, aircraft maintenance teams do consist of young specialists who typically have better reading skills which results in a certain decrease of the number of language errors. Most members of aviation personnel also begin studying English in order to be able to interact with foreign colleagues and share experience; moreover, they aspire to turn to original technical documentation, omitting Ukrainian translations which they consider misleading and incorrect. But does this practice actually lead to smaller percentage of linguistic errors?

In the near past, the ICAO launched implementation of the so called “simplified English”. Partially it was aimed at elimination of the need in translations of official technical documentation into many different languages since it is expensive and slow, and computer-aided translation is far from being reliable. The invented “language” provided editors from across the globe with a single framework within which they were to write. Nevertheless, the language-error study conducted by the FAA showed that this practice failed to result in the decrease of language errors among non-native speakers of English dealing with aviation technical documentation [4, P. 20–21]. What is to be concluded from this case is that standardized unilingual documentation of such a global-scaled industry as aviation remains utopian. Many different countries have many different languages, and, even under the conditions of today’s globalization, international languages haven’t yet entered the verbal competence of different peoples to the extent that would be sufficient for fulfilling this idea – which, we must admit, does not sound absolutely utopian.

For now, there was made a decision of providing translations into different languages with leaving technical terms in English or mentioning them in brackets. As

for maintenance personnel, their training is recommended to include extensive preparation in written and spoken English, practice with technical documents, and development of the ability to identify potential misunderstandings and language errors in order to prevent them as early as possible.

Conclusions

Translating technical documentation of a complex and constantly developing industry – such as aviation – inevitably faces a number of problems resulting from differences between source and target languages and sophistication of the terminology. In order to eliminate the number of language errors and following misunderstandings, it is recommended to provide additional language training of maintenance personnel, special aviation courses for translators, and developing comprehensive dictionaries and style guides.

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