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LEXICAL, TERMINOLOGICAL AND GENRE-STYLISTIC PROBLEMS OF SCIENTIFIC AND TECHNICAL TRANSLATION

The article attempts to consider the peculiarities of scientific and technical texts translation and analyzes the fact that all the aspects of original text are interconnected, and the actions of the translator resemble a PC, when all information is simultaneously and successfully processed. Linguistic features of scientific and technical literature, as well as characteristic language constructions and methods of their translation are considered in the work. The main difficulties, stages and types of translation of scientific and technical texts, taking into account lexical-grammatical, morphological and syntactic aspects, are analyzed. In particular, the article considers the aspect of the dependence of grammar on vocabulary (for example, the grammatical meaning of a phrase of a certain syntactic model can change depending on the words used in the phrase), and vocabulary depends on grammatical moments (for example, a change in the typical combination of words can lead to a new vocabulary – of the semantic variant of the word, that is, actually before the formation of a new word).

Similarly, vocabulary and grammar are interconnected with genre and stylistic problems. Since the stylistic characteristics of the text include both the frequency of the use of certain words and the use of certain grammatical forms and constructions, that is why the allocation of lexical, terminological and genre-stylistic problems of translation into a separate translation sphere is conditionally and to a certain extent inappropriate. However, considering in the article the problems of translation from the English language with an educational, analytical and, to some extent, heuristic purpose, it is advisable to separately consider various aspects and problems of translation, in this case – lexical, terminological and genre-stylistic difficulties.

The article highlights the following lexical difficulties in scientific and technical translation, in particular from English: the polysemy of words (terms) and the choice of an adequate dictionary match or variant of the translation of a word (term), the peculiarities of the use of popular words in scientific and technical texts, the correct use of one or another method of vocabulary translation, determination of the boundaries of the acceptability of the translation of lexical transformations, translation of neologism terms, abbreviations.

Key words: translation, lexical transformations, scientific and technical text, style, term, translation difficulties.

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ЛЕКСИЧНІ, ТЕРМІНОЛОГІЧНІ ТА ЖАНРОВО-СТИЛІСТИЧНІ ПРОБЛЕМИ НАУКОВО-ТЕХНІЧНОГО ПЕРЕКЛАДУ

У статті зроблено спробу розглянути особливості перекладу науково-технічних текстів та проаналізувати той факт, що всі аспекти оригінального тексту взаємопов'язані, а дії перекладача нагадують ПК, коли вся інформація одночасно та успішно обробляється. У роботі розглядаються лінгвістичні особливості науково-технічної літератури, а також характерні мовні конструкції та прийоми їх перекладу. Проаналізовано основні труднощі, етапи та види перекладу науково-технічних текстів із урахуванням лексико-граматичного, морфологічного та синтаксичного аспектів. Зокрема, у статті розглядається аспект залежності граматики від лексики (наприклад, граматичне значення словосполучення певної синтаксичної моделі може змінюватися залежно від вжитих у фразі слів), а лексики – від граматичних моментів (для наприклад, зміна типового сполучення слів може призвести до нової лексики – семантичного варіанта слова, тобто фактично до утворення нового слова).

Подібним чином лексика і грамика є взаємопов'язаними з жанрово-стилістичними проблемами. Оскільки стилістичні характеристики тексту включають як частоту вживання певних слів, так і вживання певних граматичних форм і конструкцій, саме тому виділення лексичних, термінологічних та жанрово-стилістичних проблем перекладу в окрему перекладацьку сферу є умовним та певною мірою недоцільним. Проте, розглядаючи у статті проблеми перекладу з англійської мови з навчальною, аналітичною та, певною мірою, евристичною метою, доцільно окремо розглядати різні аспекти та проблеми перекладу, у даному випадку – лексичні, термінологічні та жанрово-стилістичні труднощі.

У статті виділяють такі лексичні труднощі науково-технічного перекладу, зокрема з англійської мови: багатозначність слів (термінів) і вибір адекватного словникового відповідника чи варіанта перекладу слова (терміна), особливості вживання популярних слів у науково-технічних текстах, правильне застосування того чи іншого способу перекладу лексики, визначення меж прийнятності перекладу лексичних трансформацій, переклад термінів-неологізмів, аббревіатур.

Ключові слова: *переклад, лексичні трансформації, науково-технічний текст, стиль, термін, перекладацькі труднощі.*

Problem statement. In connection with the rapid development of technology and the spread of scientific and technical information, the importance of scientific and technical translation has increased. Translation and teaching experience shows that, in addition to general textbooks and dictionaries, practical manuals for the translation of technical texts aimed at studying both lexical and grammatical features of English language are necessary for successful learning of the ability to freely read, understand and correctly translate scientific and technical literature.

Technical translation is a certain type of translation activity, the basis of which is the translator's creative mental abilities. The science of translation and the theory of translation is one of the youngest sciences of linguistics. In the world, the need for communication in such spheres as science, culture, trade, etc. is constantly growing. In most cases, such mutual communication is possible due to translation. The theory of translation becomes a linguistic science, which is based on linguistic regularities inherent in any translation process.

The main difficulty in the translation of scientific and technical texts, namely the translation of terms, lies in the disclosure and transmission of foreign realities by means of Ukrainian language. It would be wrong to talk about the translation of terms as such. A prerequisite for a complete translation of any special text, especially a scientific and technical one, is its full understanding by the translator. Mechanical memorization of terms, without penetrating into their essence, without knowledge of the very phenomena, processes and mechanisms that are discussed in the original, can lead to multiple errors in the translation. The translator must study in detail the field of science and technology in which he works. Only then he will be able to safely use the appropriate terminological dictionaries.

There are several types of scientific and technical translation. For example, free translation – understanding and conveying the general meaning of the text. This type of translation is used in the form of translation – synopsis, abstract, annotation, etc. In addition to knowledge of grammar and vocabulary, he needs a certain amount of knowledge in science and technology.

Literal translation reveals the meaning of each sentence and helps to understand it correctly. In literal translation, the translated sentence has the same structure and word order as the corresponding English sentence. But a literal translation cannot be an adequate translation.

An adequate translation conveys the exact meaning of the text with all the nuances and features of the style in accordance with the norms of the native language.

Research analysis. Translation of texts of scientific and technical style became the subject of attention of scientists who tried to give different definitions of this process. Weighty contribution to the development of the problem of translation in general and translation of scientific and technical literature in particular contributed by L. S. Barkhudarov, V. E. Breus, V. N. Komisarov, V. V. Koptilov, Y. I. Retsker, and A. V. Fedorov., I. S. Byk, O. V. Burda-Lassen, V. I. Karaban paid a lot of attention to the study of translation strategies.

The purpose of the article. Scientific and technical texts are characterized by a special style that distinguishes them from other types of texts. When translating such texts, this feature creates additional difficulties and problems. The aim of the article is to analyze the most common of them and to find the best solution for their translation.

Among the lexical difficulties of scientific and technical translation, V.I. Karaban singles out multiple meanings of words (terms) and the choice of an adequate dictionary counterpart or translation variant of a word (term), the peculiarities of the use of common words in scientific and technical texts, the correct application of one or another method of vocabulary translation determination of the limit of admissibility of translation lexical transformations, translation of neologism terms, abbreviations, such “false friends” of the translator as pseudo-internationalisms, lexicalized plural forms of nouns and homonymous terms, ethno-specific vocabulary and ethno-national variant of terms, foreign language words and terms in English scientific and technical texts. To grammatical differences, the author refers to the peculiarities of the grammatical structure of the language, the form and tradition of written scientific communication.

Among the genre and stylistic difficulties of translating scientific and technical texts from English into Ukrainian is the translation of metaphorical terms, figurative and non-figurative phraseology, clichés and colloquial lexical elements that are used in scientific and technical texts, the peculiarities of the personal English use in written text, genre features of scientific and technical texts (instructions, specifications, patents, etc.), etc.

Presentation of the main material. The reasons for the existence of lexical difficulties in translation from English are, first of all, disagreements in the picture of the world of English and Ukrainian languages, the peculiarities of the ambiguity of English and Ukrainian words, the absence of correspondences of new terms in the target language, the peculiarities of word formation and term formation in English and Ukrainian languages, etc.

Among the reasons that predetermine the existence of genre and stylistic problems of scientific and technical translation from English, one should name certain disagreements in the stylistic and genre norms for presenting information in scientific and technical texts in English and Ukrainian languages, the peculiarities of the use of words and established figurative and non-figurative phrases, etc.

The main ways to solve the noted problems of translation are, firstly, the proper identification of such problems, secondly, the knowledge and ability to apply adequate methods and techniques for translating lexical elements, phrases and phraseological units, thirdly, the pragmatic adaptation of the original text during translation from English and, fourthly, the formation of permanent skills to overcome various kinds of lexical, terminological and stylistic difficulties of translation, taking into account the norms of Ukrainian language and genre norms of the original culture.

At present, there is no doubt about the need for a deep linguistic scientific study of the theory and practice of scientific and technical literature translation.

One of the most difficult areas of technical translation in terms of highly specialized terminology is oil and gas sphere. This is due to several reasons. Firstly, linguistics in general and translation is a human science, not a technical one.

Secondly, for a high-quality translation of a scientific and technical text, it is necessary to master a fairly large amount of vocabulary. Thirdly, the available dictionaries do not always correctly reflect the specifics of technical terms.

The rapid growth in the number of terminological units due to the intensive development of the oil and gas

refining industry, the development of petrochemistry, design, and scientific thought has led to the emergence of numerous encyclopedic publications and dictionaries on the subject under study. The contradictory nature of information in the literature of this kind causes a number of inconsistencies and inaccuracies in the translation of specialized literature and technical documentation, and also causes great difficulties in the communication of oil professionals.

In the field of technical translation, the problem of terminology translation is especially relevant. This is due to differences in the meaning of the same terms in relation to each of the areas of scientific and technical knowledge.

A translator of technical texts on oil and gas field is required to understand the specifics of terminology in both English and Ukrainian versions. He must not only know both languages well, but also have a good understanding of the subject. Only then will he be able to cope with the difficulties of translating technical terms specific to the oil and gas industry.

It is necessary to understand how important a high level of professionalism is for a translator of technical texts, how important it is to study specialized literature and high-quality, constantly updated reference materials in order to accurately translate technical terms from English. The complexity of technical translation in the oil and gas industry is exacerbated by the fact that technical terminology and conventions are often developed by people who are not native English speakers. In addition, the oil and gas sector combines a lot of technologies from various fields of knowledge, such as engineering, chemistry, geology, insurance, accounting, etc. Moreover, oil and gas companies often develop their own terminology.

There are significant grammatical differences between scientific and technical texts written in different languages, due to the peculiarities of the grammatical structure of the language, norms and traditions of written scientific speech. Thus, in English professional texts more often than in Ukrainian ones, passive forms and impersonal forms of verbs, adverbial inflections and specific syntactic constructions, personal pronouns of the first person singular and one-member infinitive and nominative sentences are used, etc. Nevertheless, most of the grammatical differences between English and Ukrainian scientific and technical texts are of an inventory nature, caused by the peculiarities of the construction of these languages. Thus, Ukrainian language lacks indefinite and definite articles, which are used in English not only as definite designations, but also signal the peculiarities of the distribution of information in an English sentence.

However, in a special text there is often an element of novelty, which is particularly interesting for the reader, but is connected with the use of new terms not yet recorded in dictionaries. It is clear that such cases can create serious problems for the translator. The main condition for overcoming this difficulty is a detailed analysis of the described phenomenon and its transfer in terms that are already established in science. Current scientific problems, the latest technical inventions and discoveries are covered in printed publications and, above all, in periodicals, to which the translator should refer. Consulting a specialist in this field can be of great help here. First, it is necessary to establish exactly what the problem described in the foreign language translation is and what the problems of its presentation in the translation are. As already indicated, the problem may be in the description of new processes or the latest equipment. The translator must carefully compare all cases of the use of new terms or places that are difficult to convey by the means of Ukrainian language in order to get a clear idea of the described problem from the general content of the text.

Conclusions. It is clear that such cases can create serious problems for the translator. The main conditions for overcoming these difficulties are a

detailed analysis of the described phenomenon and its transfer in terms that are already established in science. Current scientific problems, the latest technical inventions and discoveries are covered in printed publications and, above all, in periodicals, to which the translator should refer. First, it is necessary to establish exactly what the problem described in the foreign language translation is and what the problems of its presentation in the translation are. As already indicated, the problem may be in the description of new processes or the latest equipment. The translator must carefully compare all cases of the use of new terms or places that are difficult to convey by means of Ukrainian language in order to form a clear idea of the general content of the text. The translator can be greatly helped by already existing translated literature on this issue, especially if there is an opportunity to compare the original and the translation.

So, the main difficulty of translating scientific and technical texts, namely the translation of terms, lies in the disclosure and transmission of foreign realities using Ukrainian language. It would be wrong to talk about the translation of terms as such. A prerequisite for a full-fledged translation of any special text, especially a scientific and technical one, is its full understanding by the translator.

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