

**ISSUES IN TRANSLATING TERMINOLOGY IN ENGLISH-
LANGUAGE POPULAR SCIENCE TEXTS WITH A TECHNICAL
FOCUS**

Translation of scientific terminology occupies a prominent place in translation studies. The culture of the information society has greatly enriched the language with lexical innovations such as internationalisms, initialisms, etc., which have their own specifics of translation. Therefore, it is quite justified that the problem of translating scientific and technical texts should become the subject of close attention of the scientific community. The main linguistic focus of research in this regard is the lexical-semantic aspect.

The problem of translating terms did not arise today, so it has its own history. The achievements of W. von Humboldt, O. Potebny, G. Frege and G. Steinthal are rightfully recognized as the philosophical and methodological foundations of modern linguistic research. Today, in various aspects, the problem of translating lexical innovations, in particular, scientific terms, is taken up by such well-known domestic linguists as L. Andrienko, V. Dubychinsky, A. Kapush, V. Karaban of developments that have made a significant contribution to solving the problem of translating terms.

As a rule, English scientific and technical terms have their permanent counterparts in the corresponding Ukrainian terminological systems. For example: *heater* – обігрівач, обігрівач; *alkaline medium* – лужне середовище»; *silicic acid* – кремнієва кислота; *spherical shell* – сферична оболонка. Many terminological equivalents in the Ukrainian language are formed from English terms through transcription or borrowing: *container* – контейнер, *file* – файл, *design* – дизайн. International units of measurement are often used in terminologies: *atom* – атом, *proton* – протон, *focus* – фокус,

plus – плюс, *diode* – діод [5, p. 5].

In some cases, there are parallel forms in the Ukrainian language: one formed by transcription (a borrowed word), and the second, which is usually a native word, e.g.: *equivalence* – еквівалентність, рівність; *balance* – баланс, рівновага; *resistor* – резистор, опір; *booster* – підсилювач (бустер), прискорювач; *industry* – індустрія, промисловість, *installation* – інсталяція, установка. Choosing the right match is extremely important in this case.

In general, there are about a dozen different ways of translating terms. According to the classification of V. Karaban, these are: dictionary equivalents; variant equivalents (the most common type of translation equivalents, since a significant number of terms are ambiguous and require a choice depending on the context when translating); transcoding; loan translation; contextual replacement; semantic development. The main ones are transcoding, loan translation, and descriptive translation. Transcoding is the main type of lexical transformation, – “This is a method of translation where the sound and/or graphic form of a word in the source language is transmitted using the alphabet of the target language” [2, p. 282].

There are four methods of transcoding: transcription, transliteration, mixed transcoding and adaptive transcoding.

Transcription consists in the fact that the phonetic form of a word of the original language is transmitted by graphic means of the target language, reproducing the sound structure of the term. Examples of the application of transcription can be lexical units *process* – процес, *computer* – комп’ютер.

The use of this type of transcoding is to some extent relative, given that there are some differences in the phonetic system of the English and Ukrainian languages. Therefore, it is worth listening to the similarity of the sounds of the English words.

Transliteration consists of the fact that the morphological form of the original language's word is transmitted by the linguistic means of the target language; that is, the word of the source language is transmitted by letters. This

method is not entirely practical, which is due to the peculiarities of the different structures of words in the English and Ukrainian languages. Examples of transliteration translation are the following components of multi-component terms: *compressor* – компресор, *generator* – генератор, *interval* – інтервал, *compensator* – компенсатор, *conductor* – кондуктор, *motor* – мотор, *radius* – радіус, *vector* – вектор.

According to I. Korunets, translation transformations are large and small changes in the structural form of language units that are carried out to achieve the translation's reliability. They are carried out either due to the incompatibility of the means of expression of the target language, which makes it impossible to transfer some units of the original language into it, or in order to preserve the style of the original language fragment and thus preserve its expressiveness [3, p. 361].

Dictionary equivalents, even in highly specialized industry dictionaries, do not always provide a correct and satisfactory translation. In such cases, concretization is used and, in the literal sense, clarifies and points to an unambiguous equivalent. For example: alternator of generator [1, p. 13]. Dictionary meaning of the word alternator «генератор», if we are talking about an engine. Also, words with the same root alternation «ЗМІННИЙ», «перемінний» and alternate «ЗМІНЮВАТИ», «перетворювати», are connected by the common root alter- to transform, to change. The function of converting current in the generator is performed by the inverter, which converts alternating current into constant, or vice versa; that is, the alternator of the generator will have a counterpart «ІНВЕРТОР генератора».

Generalization is the opposite of concretization, the process of narrowing the meaning of a word, giving it a generalized character. Let's consider it in the following example: Outdoor power equipment includes lawn mowers, riding tractors, snow throwers, pressure washers, portable generators, tillers, log splitters, zero-turn radius mowers, walk-behind mowers, riding mowers, industrial vehicles such as forklifts, utility vehicles, etc. [1, p. 13]. To facilitate

the perception of information, it is possible to avoid the accumulation of terms to designate equipment that is not so often found in everyday life, simply by replacing the above-mentioned specific concepts with a collective concept.

Modulation consists of replacing a dictionary equivalent with a contextual, logical counterpart, which usually comes from the implicit layer of the text or is formed according to other factors. Harder braking engages the callipers in the usual way. Finally, maximum braking while driving on slippery roads engages the ABS system to keep the tires from skidding. The computer receives input from various sensors and then determines the correct braking system [4, p. 321]. So, in the given example, the logical development is to provide a more specific description of the braking process and the operation of the anti-lock braking system, for example: harder breaking, maximum braking «різке гальмування», instead of «більш сильне гальмування», «максимальні гальмівні зусилля»; anti-lock braking system is no longer just keeps the tires from skidding «запобігає блокуванню коліс», but «запобігає втраті контролю водія над транспортним засобом»; computer becomes «блок керування АБС» and it doesn't just receives input from various sensors «отримує показники з різних датчиків», but «показники від датчиків швидкості або прискорення (уповільнення)», which in turn do not determine the required braking order determines the correct braking system, but «обчислює швидкість обертання кожного колеса й регулює гальмівне зусилля».

In conclusion, the translation of technical terms absolutely depends on the translator's knowledge of the topic of the source text. Translators should make an effort to familiarize themselves with the system of terms in the relevant field and make good use of terminological dictionaries and other reference books, as well as Internet sources. It should be remembered that a term is usually translated by the corresponding term in the target language. Such translation methods as analogs, using synonyms and descriptive translation are used only when there are no equivalent terms for translation.

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