

ISSN: 2792 – 1883 | **Volume 2 No. 10** https://literature.academicjournal.io

Specifics of Translation of Scientific and Technical Texts

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Abstract: This article touches upon the problems of translation of scientific and technical texts. Features, similarities and differences of English and Russian scientific and technical literature are given. The issues of translation of neologisms, stylistic adaptation of texts, morphological and grammatical specifics of languages are considered.

Keywords: specificity, vocabulary, term, syntax, stylistic adaptation.

Introduction

Among the current problems of modern linguistics, or linguistics, the leading place is occupied by the development of the field of translation of scientific and technical text. A high-quality translation of a scientific and technical text is currently a necessary resource for a constantly developing scientific community. Correct, adequate translation of studies and reports not only determines the informational relevance, it also brings to the reader the most clearly and clearly communicated information. This information should not have any lexical or syntactic connotation compared to the original test. Logically substantiated factual material should be presented without excessive agitation or emotionality.

Main Part

It is known that the scientific and technical text has a number of characteristic features. It should be distinguished by accuracy and clarity of presentation, informativeness and conciseness. It is these criteria that contribute to meeting the needs of the scope of its application. The specific features of scientific and technical texts include lexical features, morphological features, syntactic features and grammatical features. The lexical features of a scientific and technical text are primarily based on an excess of highly specialized and general scientific terms, neologisms, various lexical constructions, abbreviations: acronyms and initials.

According to statistics, the share of terminology in scientific and technical material is on average 15-20%. This feature is primarily associated with the need to use new words in the study of previously unexplored phenomena or the application of new scientific methods. So, a distinctive feature of a scientific and technical text is a high concentration and redundancy of special terms. In scientific and technical literature, it is almost impossible to find any forms of literary expressiveness, in particular epithets, metaphors, comparisons and personifications. The imagery of presentation in scientific and technical materials plays an auxiliary role.

Due to the high concentration of special terms in scientific and technical literature, it is important for a translator of scientific and technical texts, in addition to knowing the basic concepts, to have an idea about abbreviations (many of which are unacceptable in Russian, but are widely used in English), notation, and accepted systems measurements in a particular field of science. It should be

ISSN 2792-1883 (online), Published in Vol. 2 No. 10 for the month of oct-2022



ISSN: 2792 – 1883 | **Volume 2 No. 10** https://literature.academicjournal.io

especially noted that often terminological dictionaries do not keep up with the dynamic development of scientific and technical branches and the development of terminology. In this case, the translator in the process of a scientific and technical text faces the difficult task of searching and finding an accurate translation of a non-equivalent term. Fortunately, in the field of translation studies, there are long-established algorithms for selecting a translation of a non-equivalent term, namely transcription and transliteration, tracing. Very often, to difficult to translate, unparalleled neologism terms, the method of descriptive translation is used, which consists not in the selection of the nearest semantic unit, but, on the contrary, in the verbose disclosure of the existing concept.

This method is certainly convenient in the case described above, but it has a number of very significant drawbacks. Such shortcomings include the deprivation of the translation of accuracy and conciseness, as well as its redundancy and approximation. It should be noted that the system of translation correspondences has a dynamic character, which is expressed primarily by a certain system of relations between communicative-equivalent units. It is on them that the real interchangeability in the translation process depends, the methods of selecting contextual correspondences in cases where the conditions of the translated text do not allow the use of a generally accepted term. I would also like to pay special attention to the use of special technical phraseology. In terms of scientific and technical materials, the concept of phraseology is presented in a different form. In this case, a phraseological unit is a word of a common language, which acquires the meaning of a term only in certain combinations. The key factor in the translation process is the identical semantic transmission in comparison with the source text. Extensive terminology of the subject of speech greatly complicates the translation of a scientific and technical text. When it comes to the morphological features of scientific and technical texts, one should most often pay attention to the predominance of non-prepositional constructions, the dominance of relative adjectives over qualitative ones.

Scientific and technical literature also has its own syntactic specificity, which should be taken into account by the translator in the process of work. English texts of scientific and technical content are distinguished by a construction that is difficult to perceive. The syntactic specificity includes a wide system of various connecting elements, namely conjunctions and allied words, the regular use of clichéd structures, as well as the nominal nature of the morphological structures of the sentence. Participles, infinitives, gerunds, as well as some book constructions are widespread in English scientific and technical materials, which often make it difficult to understand the text and, accordingly, put additional barriers before the translator. It should be especially noted that in scientific and technical materials written in English, the use of simple sentences slightly exceeds the use of complex ones, while in Russian, on the contrary, the frequency of using complex sentences is much higher than the frequency of using simple ones. In this regard, in the English-Russian scientific and technical translation, a technique is often used in which two simple sentences of the original English text will correspond to one complex sentence of the translation. In addition to the lexical, morphological and syntactic features listed above, the scientific and technical text has a number of stylistic features. A stylistic feature of scientific and technical texts is the ambiguity or amorphousness of the sentences used in them.

In this case, the translator has to face difficulties associated to a greater extent with the incorrect grammatical construction of sentences, when grammatical relations between words prevent understanding its meaning, and the content itself becomes clear only when the semantic orientation of the phrase is taken into account. Shifting the logical stress in a sentence is another stylistic feature that one has to deal with. At the same time, a very common mistake in translation is the formation of a logical stress on the predicate, and not on the subject, as is customary in Russian. Since the word order in Russian is much more flexible than the word order in English, the shift in



ISSN: 2792 – 1883 | **Volume 2 No. 10** https://literature.academicjournal.io

logical stress greatly affects the semantic orientation of the phrase. The formation of "parasitic" links between words in the process of translation can lead to a serious effective distortion of the meaning, which is categorically not allowed in the translation of scientific and technical literature. The sphere of use of scientific and technical material requires absolute accuracy and unambiguity, therefore this stylistic feature should be under special control of translators.

To obtain an adequate and correct translation of scientific and technical literature, it is necessary to take into account the grammatical features of the composition of sentences in a particular language. In terms of the use of verbs in scientific and technical texts, one can note a tendency towards the use of impersonal and indefinite personal forms. Very often, the main semantic load in the sentence is carried by the noun, and not by the verb, which in this case plays a more grammatical role in the sentence. Given the above, we can conclude that the modern English style of scientific and technical literature is based on the general norms of the written language with the characteristic features of vocabulary, syntax, grammar and morphology inherent in the scientific and technical style. The subject or predicate in sentences may be absent. These texts, of course, are difficult for people to understand without special training.

Auxiliary sign systems may be of particular interest to the translator. Namely, graphs, drawings, diagrams, formulas. Here the translator faces another great difficulty. He needs to correctly interpret the representations of measuring systems, auxiliary symbolic applications and notations. The scope of scientific and technical texts obliges to convey the author's thought absolutely clearly and accurately. And, accordingly, the English-Russian translation must be done in a style that is inherent in the scientific and technical text of the Russian language. Conversational style is not allowed. Once again, it is worth emphasizing that in translation, the emphasis is placed, first of all, on conciseness, conciseness, certainty and unambiguity. Therefore, preference is given to the impersonal description of experiences, experiments, reasoning, the process of achieving a particular result. In Russian, various verb constructions with indefinitely personal, impersonal or passive meanings are used for this. Preference is given to linking verbs and verbal constructions of the present tense with a touch of abstractness and indefiniteness. These forms contribute to a more accurate presentation of the process, phenomenon, phenomenon. It is necessary to make the description timeless and as objective as possible in terms of aspects of observation, reasoning, and conclusions. Often nouns with an abstract or abstract meaning are used, and adjectives are often substantiated.

A separate problem for the translator is the translation of the passive voice in a scientific and technical text. The difficulty lies in the fact that the use of the passive voice has differences in Russian and English. The frequency of the use of the passive voice is much higher in English speech. It should be noted that constructive differences in the construction of the passive voice are caused primarily by the general nature of the grammatical structure of the English language, together with the almost complete absence of cases, which makes it difficult to express the object of action in the case form of a noun or pronoun. In this case, in Russian there is much more ways of expressing the same idea. In such a hopeless situation, one or another method of transforming the translated text is often used. Such a need arises for the translator due to the presence in the text of sentences that cannot be translated literally, often this is due to the peculiarities of the structures or the presence of speech turns that cannot be translated. Given the above, it should be emphasized that the translator of scientific and technical literature needs to know all the possible methods of transformation in order to effectively cope with his work. He must be able to brilliantly change the order of the elements in the sentence relative to the original text, skillfully replace the lexical, grammatical and syntactic units of the sentence, use the description to specify and eliminate the verbal redundancy of the text, and this without any distortion of the meaning of the original



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scientific and technical text. The fundamental goal of the translation of a scientific and technical text is the closest semantic or meaningful transmission of information. This method of transmission should correspond to the form of the original material, because the purpose of scientific materials is the most objective, unambiguous, concise, understandable and concise presentation of this or that scientific information to the specialist reader. All digressions must be interpreted solely by the requirements of style and the specifics of the Russian language. In the translation, the partial presence of elements of literal and free retelling is possible, which will not distort the content of the scientific and technical text.

Conclusion

Summing up, I would like to note that the main difficulty and specific feature of the translation of a scientific and technical text is the combination of technical knowledge of the subject of speech of the object in question with knowledge of the language. A translator of scientific and technical literature should not only know the grammatical constructions of the language of the source material, the stylistic and syntactic features of the translated text, and be basicly oriented in the field of the subject of study of scientific and technical literature, but must also have an extensive vocabulary, in particular, a stock of frequently used terms in a particular other field of science. He should be able to determine the meaning of the term as accurately as possible in the existing context, establish the correct connections between terminological components, be able to find and highlight secondary or internal terminological combinations. The presence of these knowledge and skills in a translator is a specific feature that he must possess in order to carry out a high-quality translation of scientific and technical materials that meets all the requirements, which, as mentioned above, must be distinguished by accuracy and clarity of presentation, informativeness and conciseness.

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