PECULIARITIES OF TRANSLATING SCIENTIFIC AND TECHNICAL TEXTS

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The article describes the features of the translation of technical and scientific texts from English into Russian. To ensure the quality of the translation is possible only by observing the translation standards. The relevance of this article lies in the need to improve the quality of translation of technical and scientific texts through the collection of information on cultural and extralinguistic factors. The article indicates the purpose of technical words and terms, as well as features of the translation of technical and scientific texts.

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This article discusses the linguistic and pragmatic aspects of translating technical and scientific texts. The relevance of the study lies in the need to improve the quality of translations of technical and scientific materials by considering cultural and extralinguistic factors, as well as addressing errors that may occur during the translation process. This research aims to analyze and examine the specific features of translating technical texts that influence the translation process and the choice of translation strategies. The term "technical translation" is also reviewed.

The concept of technical translation is used in the exchange of specialized scientific and technical information between people who speak different languages. The term "technical translation" refers to the translation of technical and scientific texts. Translating technical texts involves working with materials of a scientific and technical nature that contain scientific and technical terminology.

Scientific articles on technical subjects, technical documentation for engineering equipment, user manuals for complex technical products, and similar materials are examples of scientific and technical texts.

It should be noted that scientific and technical translation is often equated with the translation of either technical or scientific texts. However, scientific and technical translation differs from the translation of purely technical or purely scientific materials. Nevertheless, there is a certain interrelation between these types of translation.

The results of this type of translation are the outcome of researchers' work. Scientific and technical translation involves conveying meaning as close as possible to the original. Any deviation from the source text can only be justified by the peculiarities of the Russian language or the requirements of the translation style.

Scientific and technical translation is based on the official-logical style. This style is characterized by accuracy, impersonality, and neutrality. However, these features do not fully encompass all the requirements of the scientific style that must be observed when translating technical and scientific texts.

The following features can describe the scientific style:

- careful selection of linguistic means;
- monologic presentation;
- preliminary analysis of the material;
- standardized language.

To explain these concepts, it is necessary to refer to the etymology of the terms "technical" and "scientific." The lexeme "scientific" indicates a connection with science. This connection is described in the Chambers Dictionary as "knowledge obtained through experiments and observations, critically analyzed, systematized, and subject to general principles." The lexeme "technical" is defined in the Oxford English Dictionary as relating to technology, which "ensures the application of scientific knowledge for practical purposes." From this, it can be concluded that the translation of scientific texts is related to science in all its theoretical aspects, while

the translation of technical texts is associated with how scientific knowledge is applied in practice.

Scientific discourse exists primarily in written form, which is why technical translations are most often required in written format. It should be noted that written language allows information to be preserved over a long period of time, which aligns with the needs of science that reflects the stable relationships of the world.

Importantly, another important aspect is that the written form is more convenient and reliable for detecting minor informational errors and logical inconsistencies, which may be insignificant in everyday communication but can lead to serious distortions of truth in the scientific context.

When translating scientific and technical texts and documents, it is essential to remember that no semantic nuance should be overlooked, as this may lead to a distortion of the text's meaning — something that is particularly critical in scientific materials. The main feature of technical translation is that this type of translation requires the translator to possess deep knowledge of specialized terminology. Regardless of the language from which the translation is being done — whether it be Chinese, English, Spanish, French, or German — the translator's general language skills may not be sufficient without a strong command of the relevant terms. A translator working with technical and scientific texts must have an excellent understanding of the terminology used in the specific field of science related to the content being translated.

Clearly, the accurate translation of terminology is an extremely difficult task; however, terms tend to have greater semantic precision and independence compared to colloquial vocabulary.

Terminology translation is an extremely demanding task. A translator should avoid using borrowed foreign words in the translation of scientific and technical texts. Preference should be given to terms of native Russian origin. Thus, a scientific and technical text is a type of material that combines features of both scientific and technical styles and is rich in technical terminology. When translating such texts, translators must take this characteristic into account.

It should be emphasized that scientific and technical texts often contain various auxiliary signaling systems. These include, for example, graphs, diagrams, schematics, and formulas, which may be unfamiliar to a broad audience of native speakers.

When translating scientific and technical texts, it is essential to remember that the translator must convey the author's ideas as accurately as possible. The translated text must be presented in a style appropriate to scientific and technical language in Russian.

The primary task of a technical document translator is to convey the original meaning with the highest possible accuracy. Legal or technical documents contain a large amount of lexically significant information. It is unacceptable to omit or distort such information.

A single error in terminology or conceptual translation can completely change the meaning of the text. The formatting of the text requires strict adherence to all existing standards and regulations applicable to this type of document. The translator has no right to alter the structure or formatting features of the text and must use the original as a reference model. Changes to the stylistic integrity of the text are not acceptable. Only scientific and business-style language should be used. The translator is not allowed to use colloquial expressions.

The technical translation of a text requires logic and clarity. It is crucial to avoid ambiguity — situations in which the meaning of the text could be misunderstood. This is especially important for contracts, agreements, and other legal documents that reflect the commercial interests of the parties involved.

An error in a contract may lead to its termination. The same applies to equipment user manuals, as inaccuracies in such documents can result in production halts.

One of the most challenging aspects of translating from a foreign language is the polysemy of terms. A single word can have dozens of meanings depending on the field of application.

In such cases, the translator's experience and vocabulary play a key role. When translating polysemous words, it is essential to use one consistent meaning throughout the entire text. Therefore, it is important for a technical translator to compile a terminology glossary when translating linguistic material.

The translation of a scientific and technical text must correspond as closely as possible to the original, and its meaning should be as close as possible to the structure of the source text. Deviations are permissible only when justified by the peculiarities of the Russian language and stylistic requirements.

In general, the translation should become neither a literal rendering of the original nor a too free interpretation, although both approaches may be acceptable in certain cases:

– if a literal translation of a phrase sounds appropriate and natural in Russian, there is no need to change it;

– on the other hand, if the idea can be expressed differently — especially when "it cannot be expressed otherwise" — then it should be done.

It is crucial to avoid the loss of key information or, conversely, the addition of content that was not present in the original (or at least not clearly implied in the subtext).

The reliability of a scientific translation depends on how well the translator understands both the subject matter and the language. However, the main priority is accurate transmission of the intended meaning. The primary function of scientific and technical literature is to convey information. When translating into Russian, it is acceptable — in accordance with the norms of the Russian language — to deviate from the grammatical, particularly syntactic, structure of the original text. The style of presentation may vary, but only within the bounds of a strictly objective tone, without emotional judgments, relying on facts, and avoiding subjective generalizations. The task of scientific editing is to ensure the accuracy, clarity, and accessibility of the scientific translation. At the same time, our focus is not solely on scientific, including terminology, precision. We also consider the issues of clarity and comprehensibility, which are traditionally emphasized within this framework.

The main stylistic feature of scientific and technical texts is the clear and precise presentation of material, with an almost complete absence of emotionally charged elements and a strong emphasis on logical structure. Authors of scientific works avoid using expressive means in order not to violate the fundamental principle of scientific and technical language — the accuracy and clarity of conveying ideas. As a result, scientific and technical texts are devoid of emotional and expressive devices.

Thus, when translating scientific and technical texts, the use of colloquial style, various abbreviations, or explanatory notes is unacceptable. Undoubtedly, scientific and technical texts are intended for specialists in a particular field or area of knowledge, who act as the target audience in this case.

To conclude, the translation of scientific and technical literature is considered a highly complex and labor-intensive task that, in addition to requiring a significant volume of work, also demands professional expertise in a specific domain. The meaning of the text must not be distorted, and the style of the original must be preserved. When translating scientific and technical materials, it is important to consider that the translator must have a sufficient understanding of the subject matter and content of the text. They are obliged to convey the meaning of terms accurately. The translated materials may require both linguistic and semantic adaptation.

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