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LEXICAL AND GRAMMATICAL TRANSFORMATIONS OF SCIENTIFIC-TECHNICAL TEXTS

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Abstract. *The primary focus of the study and analysis is the main challenges encountered when translating technical materials from English to Ukrainian. Technical translation has been identified as one of the most challenging categories of translation, with terminology replication posing the most challenge. It has been determined that the most common translation and translation modification techniques used in the translation of foreign technical writings include calquing, transliteration, addition, deletion, rearrangement, and substitution).*

Key words: *technical text, translation, transformation, term*

Since the need for scientific and technical text translation is rising due to the quick development of new scientific and technological breakthroughs, the translation of scientific and technical literature is currently a pressing issue in modern translation studies. The question of how to translate technical texts will always be important because experts have differing opinions on the primary techniques and modifications employed in the translation process. This is because, despite the high demand for technical translation, there are still a lot of unanswered or understudied problems pertaining to the translation of technical literature. Technical translation is now an essential component of cross-cultural communication; the sharing of information across numerous nations is inconceivable without it.

Since there are many distinct formulas, acronyms, graphs, drawings, diagrams, and other visual aids used in science and technology, the language used in these fields is complex and varied. As a result, a translator must be precise, competent, and cognizant of the fundamental concepts found in scientific and technical literature. Phonological units that lack a clear counterpart in the target language are known as ambiguous lexical units.

In the translation of any technical writing, they are an essential idea. The rapid advancement of science and technology, coupled with notable accomplishments and discoveries, can be used to explain why there isn't an equivalent in the target language. This makes terminology more difficult for experts to learn, but also easier for general people to understand.

Finding a direct comparable is frequently impossible since terms are created so quickly that even the most recent dictionaries are unable to capture them all.

Technical literature translation is an extremely difficult task that calls for knowledge of theoretical subjects, comprehension of intricate technical procedures, the ability to communicate with any target audience, and a minimum of two languages.

Examples of this type of literature include various manuals and supporting documentation. Technical writings are typically written for experts, or members of a particular profession with both language and extralinguistic expertise. The necessity



to guarantee accurate translation of technical materials in the broad sense and specialised terminology in the narrow sense establishes the relevance of our research. Technical texts chosen from internet sources using continuous sampling are the study's subject.

The study's focus is on the unique characteristics of translating technical English materials into Ukrainian, including the primary techniques and translation transformations applied during the translation process.

The study's goal is to pinpoint the primary challenges encountered when translating technical publications from English into Ukrainian. The study material was derived from English-language physics texts that provide a detailed description of how elastomers function. These texts have been translated into Ukrainian and are freely accessible on the Internet. Technical documents are characterized by their accuracy and objectivity, their content, their informativeness (all technical texts are informative), and their logic—a clear presentation of information with a particular connection between the major idea and the tiniest details.

Technical texts are written in the scientific manner, which is gradually impacting literary language by introducing new phrases into common people's speech. Because words can have several meanings, it can be nearly hard to distinguish between what is and is not a term in this context. Since terms themselves express all the characteristics of the scientific style and, to the greatest extent possible, satisfy the requirements of communication in scientific circles, terminology serves as the foundation of the scientific style. The English language is distinguished by a highly developed synonymy because of its intricate evolutionary history. Many terms (synonyms) can be used to represent the same idea.

Despite the fact that synonymy and ambiguity oppose the operation of a terminological unit, misinterpretation of terms is inappropriate when expressing a specific scenario in the scientific and technological fields. During our investigation, we discovered that service words play a vital role in technical writing. Within individual sentences, they provide logic and coherence. Typically, these are prepositions and conjunctions.

Given their typical form, translating phrases is usually a matter of locating a direct counterpart in dictionaries. When a term is made up of many words, the translation becomes more involved and does not always have a direct counterpart. In this instance, translators might use a variety of reference books and explanatory dictionaries to assist them in translating a certain term. A term must be a member of a well-defined logical system. Terms' meanings cannot contain inaccuracies or contradictions.

The major distinction between translating technical texts and translating general texts is that the translator must be familiar with specific vocabulary. It makes no difference what language or languages are being translated from or into; the translator may simply lack the necessary expertise and experience.

Terms are independent semantic units with respect to the context, not just words in the text.

Only the meaning of the word is changed when semantic borrowing is used; in actuality, a literal translation occurs. Literal borrowing is getting increasingly



prevalent as it becomes increasingly difficult to identify equivalents in the target language. Depending on the industry in which they operate, terms might have multiple meanings.

The most popular translation technique when the two sentences have the same structure is calquing; transliteration is the most popular technique when translating individual phrases. Transformations including addition, deletion, rearrangement, and substitution are employed in tandem with these translation techniques. We consider the investigation of alternative approaches to technical text translation to be a legitimate research perspective.

Preliminary translation analysis, the first step in the translation process, plays a crucial function in helping translators evaluate texts and choose the resources they'll need for their work while translating written military publications published in English.

The translation process is aided by the usage of translation modifications. Translators can avert a great deal of issues and adapt foreign materials to the morphological and stylistic characteristics of the target language by using transformations. Translation transformations performed alone are extremely uncommon; instead, they are typically done in tandem.

We can therefore draw the conclusion that a translator with subject-matter expertise in the field of modern technology can translate terminology in the field of technology in medicine adequately, provided that the translator is aware of the quirks of the original language and can accurately convey them in the target language. Furthermore, it is imperative to maintain the distinctive attributes of the scientific language in the translated text while utilizing translation techniques and transformations, the most popular of which were previously covered.

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