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## LEXICAL AND GRAMMATICAL PECULIARITIES OF TRANSLATING TECHNICAL DOCUMENTS

### ЛЕКСИКО-ГРАМАТИЧНІ ОСОБЛИВОСТІ ПЕРЕКЛАДУ ТЕХНІЧНОЇ ДОКУМЕНТАЦІЇ

**Shylinska I. F.**      **Шилінська І. Ф.**

*Candidate of Pedagogical Sciences,  
Associate Professor,  
Associate Professor at the Department of  
Foreign Languages and  
Information Communication Technologies  
West Ukrainian National University  
Ternopil, Ukraine*

*кандидат педагогічних наук, доцент,  
доцент кафедри іноземних мов та  
інформаційно-комунікаційних технологій  
Західноукраїнський національний  
університет  
м. Тернопіль, Україна*

**Piatnychka T. V.**      **П'ятничка Т. В.**

*Candidate of Philological Sciences,  
Associate Professor,  
Associate Professor at the Department of  
Foreign Languages and  
Information Communication Technologies  
West Ukrainian National University  
Ternopil, Ukraine*

*кандидат філологічних наук, доцент,  
доцент кафедри іноземних мов та  
інформаційно-комунікаційних технологій  
Західноукраїнський національний  
університет  
м. Тернопіль, Україна*

Translation of scientific and technical literature is an important skill today for scientists and specialists from different countries and a necessary prerequisite for understanding the subject matter. Scientific and technical texts contain information about new achievements or trends in the developments in certain fields of science and technology. Profound knowledge of the science to which the texts belong helps the translator perform an adequate translation.

Lexical and grammatical difficulties in translating scientific and technical texts were highlighted in the works of V. Karaban, A. Kovalenko, G. Miram, L. Chernovatyi, M. Olohan, R. Krüger, J. B. Mitchel and others. Despite the availability of research works devoted to the problem of translating scientific and technical literature, translation of technical documents still requires further investigation in order to improve the quality of translation and develop translation techniques.

In our research we focus on lexical and grammatical peculiarities of the most used today types of technical documents (user's guides / manuals, maintenance manuals, advertisements, and patents) and difficulties in translating them. These documents are characterized by the use of specific language, which is rich in technical words (terms), lexical neologisms, symbols, schemes, tables, graphs, acronyms, names of companies, and brand

names. The documents mentioned are used nowadays not only by specialists in the subject field but a great majority of versatile groups of people including businessmen and users of equipment.

Technical documents explain how to operate, maintain, and make a product. They are generally created to target a specific audience. User's guides accompany devices and equipment and contain instructions for their installing, operating and troubleshooting. Maintenance manuals are technical communication documents aimed at providing the information necessary to maintain equipment or systems. The texts of user's guides and maintenance manuals contain a lot of technical words. Sentences in these texts can be without a predicate or subject.

All advertisements are intended to inform about the advertised product or service. Due to the emergence of new products and brands, new words can be created. These words can penetrate into the common language and then enrich the vocabulary of the source language (SL). It will take some time to designate this new phenomenon in the target language (TL) as there is no equivalent to this word in it and it is necessary for the translators to understand the essence of new words and use the appropriate translation techniques, e. g., descriptive translation, transcribing or transliteration to convey the meanings of new words. There are also some grammatical peculiarities in the language of advertisements, i.e., sentence structure, the use of superlative degree. To stimulate the audience to buy and attract customers, imperative, interrogative sentences and parallel structures can be used.

When translating, it is necessary to understand the semantic meanings of the sentences, the semantic relationships between sentences and the meanings of metatextual elements involved in the text structure. The largest amount of grammatical problems in translation is related to understanding the syntactic and morphological structures of the sentences as language elements that convey the information.

It is also important to follow the rules for writing numbers, i.e., instead of a period, a comma is used in the designation of fractions, numbers are separated into groups with a space every three characters, etc.

The country of product manufacture and TL speakers may use different units of measurement (e.g., Imperial system / Metric System). When translating manuals, the measurements can be written as in the source document or followed in parentheses converted to the target country's standard UoM (Unit of Measure); converted to the target country's standard UoM and followed in parentheses by the original measurement units; converted to the target country's standard UoM only.

References such as Tables of Contents and Indexes should be generated in the target language once the translation has been completed.

The layout is also important. Some texts need not only to be translated but also to be given the appearance corresponding to the original document. This applies to drawings, diagrams, etc.

Patent documentation typically involves patent specifications, lawyers' correspondence, and anything else required during the patent application and filing process. Patent translation is one of the most demanding fields of technical translation. It requires a high degree of SL and TL competence, deep knowledge of technical terms, and an in-depth understanding of legal terminology.

There are two types of patent translation: **translation for filing and translation for information** [5]. *Patent translation for filing* serves as official record in the patent application process. The target audience consists of legal professionals, patent officials, and patent licensees, whose job is to examine the application. These documents should be translated clearly and concisely, with the least technical jargon conveying the meaning of the invention. **Patent translation for information** is used as legal evidence in court proceedings for patents that have already been filed. Usually, this type of translation is used to learn the contents of already filed patents, and it should be as close to the original as possible.

The patent consists of five parts: 1) bibliographic data about the patented invention (the document number, filing and publication dates, name of the patentee(s) and addresses, etc.); 2) analysis of the state of the art in the field of technology to which the invention refers, analysis of the prerequisites for the invention; 3) the purpose of the invention, a brief formulation of the essence of the invention; 4) a full description of the invention, a description of illustrations, examples of implementing the invention; 5) a claim. The title of the patent is usually translated after the whole document has been translated [4].

When analyzing the state of the art in the actual field of technology and the prerequisites for the invention, it is appropriate to use the following phrases in the second part of the patent:

*The invention relates to a process .../ is concerned with the manufacture of ... Цей винахід стосується способу... / має відношення до виготовлення....*

*Background of the invention is... / передумовою створення винаходу є...*

In the third part of the patent, the purpose of the invention is stated with the use of such phrases as:

*It is an object of my invention to provide / Метою даного винаходу є....*

*Another object is the development of / Інша мета полягає в розробці....*

Detailed description of the patent is given in the fourth part using the following phrases:

*In particular, with reference to Fig..../ Зокрема, як показано на малюнку...*

*In the arrangement in Fig. ... У конструкції, яка показана на мал....*

The main communicative block of a patent description is a *claim* described in the fifth part of the patent, in which all the communicative aims are expressed. Patent descriptions in English usually start with such phrases as: *What is claimed as new is.... Having thus described my invention, I claim... The invention is claimed as follows... It is therefore, particularly pointed out / distinctly claimed as the invention...* All these phrases are translated as: *формула винаходу, патентна формула, предмет винаходу*. The claim translated into the TL must correspond to the text in the SL as close as possible, replacement of sentence elements and syntactic or stylistic changes are not allowed, the subject of the invention should be expressed in one sentence. Given strict regulation of patent description, set phrases and clichés can be used in translation.

Scientific and technical texts are characterized by logical structure of the presented information, the availability of standardized terminology and the lack of emotions. Technical documents are subject to repetitive content. It makes it possible to use CAT tools (systems of *Computer-Aided Translation*). Due to the use of translation memory, it is possible to understand the general meaning of the source matter and translation is completed faster but it needs to be edited by a person, who can understand the stylistic peculiarities of the text and correct it due to the norms and rules of the target language.

Investigation of lexical and grammatical peculiarities of translating technical documents is a relevant task nowadays as science and technology are constantly developing, new notions and phenomena appear and new words are required to designate them. To provide an adequate translation of technical documents, there is a need to systemize and classify new language phenomena.

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