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Features of translating phrasal verbs in English-language technical texts

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Abstract: This paper investigates linguistic and translational specifics of English phrasal verbs in technical texts, analyzing translation strategies in Ukrainian. Phrasal verbs constitute specific lexico-grammatical layer of English language, which combines semantic information density with high functionality load. Although phrasal verbs are traditionally associated with informal speech, they are widely used in technical documentation, instructions, and manuals in order to convey operational, procedural meanings. Their polysemy and structural variability make them difficult to translate and can lead to semantic inaccuracy or stylistic inconsistency.

The study aims to identify the main types of phrasal verbs used in English technical texts and to determine effective strategies for translating them into Ukrainian. The research material have become a corpus of authentic English technical texts and their Ukrainian translations. The study uses comparative, contextual and structural-semantic analysis to define the frequency of translation decisions.

The results of the research proves that the most effective choice of translation is lexical replacement using single-world verb equivalents. It meets the requirements of accuracy, conciseness and stylistic neutrality of technical discourse. Literal translation is applied selectively for phrasal verbs with transparent semantics, while idiomatic and structurally complex constructions require paraphrasing or descriptive translation method. Obtained results confirm the relevance of a functionally oriented and contextual approach to the translation of phrasal verbs in technical texts.

Keywords: phrasal verbs, technical texts, translation strategies, technical translation, semantic transparency, English–Ukrainian translation

1. Introduction

In increasing globalization and rapid technological development, English has become the dominant lamguage of technical documentation, manuals and professional communication. Technical texts must be accurate, consice and clear to ensure the correct transmission of information. Along with ststandardized terminology, such texts often use phrasal verbs, which represent a specific and complex phenomenon in English language.

Phrasal verbs are traditionally considered as a feuture of informal speech, but their widespread use in technical manuals and instructions demonstrates their functional importace in professional settings. Phrasal verbs frequently cause difficulties during translation, especially when reproducing them into Ukrainian. It is occurred due to their polysemy, structural variabilities and idiomatic nature. Poor translation choices can result in semantic distortions or stylistic inconsistencies. That is why a systematic analysis of phrasal verbs in technical textx and strategies for their translation is relevant in theoretical and practical terms.

The introduction section should provide a context for your manuscript. When preparing the introduction, please bear in mind that some readers will not be experts in your field of research.

2. Object and subject of research

The object of study is English phrasal verbs in technical use, particularly in instructions, manuals, technical descriptions and professional documents. As a linguistic phenomenon, phrasal verbs are multi-component verbal constructions formed by combining lexical verbs with one or more particles. Their main features include semantic conciseness, structural variability, polysemy and the ability to operational, procedural and aspectual meanings. In technical discourse, phrasal verbs often tend to become semantically specialized and partially terminological, which distinguishes them from their use in informal speech. The function of phrasal verbs in technical context is based on the interaction between the verb and the particle, where the particle specifies the direction, completeness, intensity or result of the action. This principle ensures conciseness and accuracy in the presentation of technical information, while at the same time complicating its interpretation and translation.

The subject of the study involves the translation of English phrasal verbs into Ukrainian within the context of technical discourse. The paper analyzes their semantic characteristics, structural types, functional roles and translation strategies intended to provide accuracy, clarity and stylistic conformity to the norms of Ukrainian technical language.

A significant drawback inherent in the subject of research in the current conditions of translation practice is the lack of established and unified Ukrainian equivalents for many phrasal verbs, especially those with idiomatic or aspectual meanings. This leads to inconsistency in translation decisions, excessive calquing or unjustified paraphrasing. It negatively affects the clarity and terminological consistency of technical texts.

3. Target of research

The purpose of this study is to identify effective strategies for translating English phrasal verbs into Ukrainian in technical writings. The study aims to determine how semantic transparency, structural complexity and functional role influence the choice of translation method.

To achieve this goal, the following tasks were set:

1. Classify phrasal verbs found in English technical texts, according to structural and semantic criteria;

2. Analyze the main translation strategies employed in Ukrainian translations;

3. Identify typical difficulties and weaknesses in translation;

4. Formulate practical recommendations for improving the consistency and adequacy of the translation of phrasal verbs in technical documentation.

4. Literature analysis

The issue of phrasal verbs is widely discussed in linguistic and translation studies. Researchers such as Vorobyova, I. V. Dvoretska, and A. Burkovska have studied the semantic structure, polysemy and translation of phrasal verbs into Ukrainian. V. I. Karaban emphasized the importance of functional and genre-oriented approaches in technical translation.

Foreign scholars, in particular B. Brady and P. Rodriguez-Puente, analyzed the use of phrasal verbs in technical manuals and professional discourse, pointing out their gradual terminologization. In spite of significant research, the issue of translating phrasal verbs in technical texts remains insufficiently organized, which confirms the importance of this study.

5. Research methods

The research was conducted using multidimensional linguistic and translation studies approach designed to examine the structural, semantic, and functional characteristics of phrasal verbs in English technical discourse. The method of research encompassed several basic scientific methodology,

particularly the method of continuous selection to identify phrasal verbs from a 120-page of technical documentation, as well as methods of observation and generalization to analyze their functioning in a professional context. A comparative analysis was applied to evaluate these English multiword units together with their Ukrainian translations, allowing us to establish effective strategies for achieving functional equivalence. The research material covered approximately 420 examples of phrasal verbs identified within a broader set of over 6000 lexical units. They were subsequently narrowed down to a focus group of 300 words for statistical analysis.

The results show that the frequency of strategies for translating phrasal verbs in technical texts follows a clear hierarchy. The dominant strategy is lexical replacement, which occurs in 61% of the cases analyzed. This approach involves replacing a multi-word English construction with a neutral single-word Ukrainian equivalent (e.g., "boot up" — 'завантажувати' or "log in" — "авторизуватися"), thereby ensuring terminological discipline and accuracy. The second most frequent method is literal translation, which accounts for 22% of the sample. This strategy is mainly used for phrasal verbs with transparent semantics that describe physical actions with equipment. Periphrasis and descriptive translation are used in 12% of cases to convey complex technical processes that have no direct equivalents in the target language (e.g., "phase out" — "gradually decommission"). Finally, the least common strategy is compensation and deletion (5%), where the semantic load of the English particle is integrated into the Ukrainian prefix (e.g., "fill in" — "заповнити"). [Figure 1]
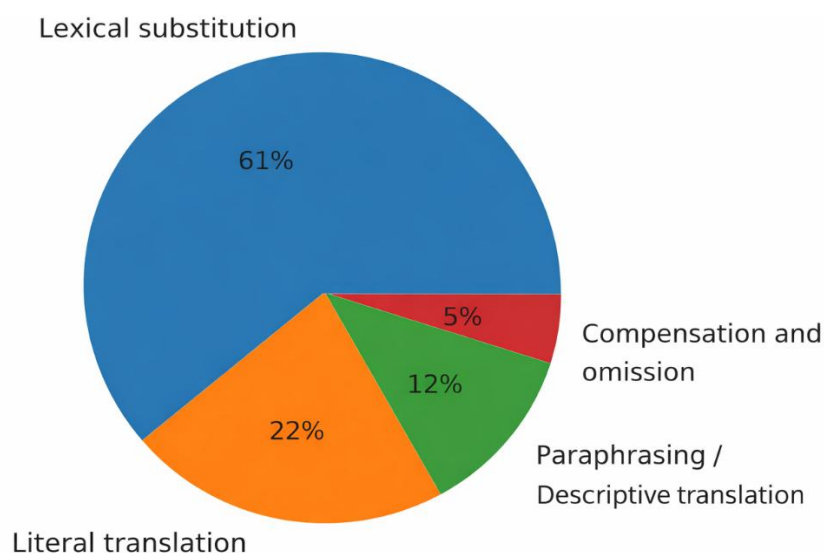

Fig. 1. Frequency of translation strategies of phrasal verbs.

The analysis by industry sector classifies phrasal verbs according to their specific technical application, demonstrating how their meaning and translation requirements change according to the professional field. Based on the research, it was found that the IT and software sector (28%) is the most prominent and includes verbs such as log in and boot up, which function as standardized technical commands. The electronics and equipment sector (22%) focuses on physical connections and power states (e.g., plug in, wire up), which are typically characterized by higher semantic transparency. The Mechanics and Manufacturing sector (25%) covers verbs describing assembly, maintenance, and mechanical breakdowns (take apart, break down), where clarity of instructions is vital for safety. General scientific operations (25%) cover basic verbs such as carry out and find out, which are necessary for describing the methodology and results of experiments in all scientific fields.

Table 1. Distribution of Phrasal Verbs by Industry Sector

Industry Sector	Typical Examples	Percentage of Sample
IT & Software	log in, roll back, boot up	28%
Electronics & Hardware	plug in, power off, wire up	22%
Mechanics & Production	take apart, set up, break down	25%
General Research	carry out, point out, find out	25%

6. Research results

The results of the study allowed us to describe comprehensively the specifics of the functioning and translation of phrasal verbs within English technical discourse. It was found that these words form a special lexical-grammatical category that combines structural simplicity with a high degree of semantic specialization, which makes them similar to terminology in terms of function. The primary outcome of the study is a statistical analysis of the hierarchy of translation strategies, with lexical replacement being the dominant method, accounting for 61% of the analyzed material. This approach ensures terminological accuracy and conciseness, which is critically important for technical communication, while literal translation accounts for 22%, paraphrasing for 12%, and compensation of meaning through prefixes for only 5%.

The practical value of the results obtained stems from the possibility of optimizing the process of localized technical documentation, given that the use of the identified patterns allows for a significant decrease in editing time and load on the translator. Unlike existing approaches based on general lexical equivalents, the proposed approach is more effective because it minimizes the risk of ambiguous interpretation of instructions and increases operational safety when working with equipment. In addition, the research is relevant to the international community because it provides a methodological basis for the development of unified English-Ukrainian glossaries. It is expected increase project profitability through high-quality translation.

7. Prospects for further research development

A prospective direction for further development of this work is to deepen corpus analysis by creating a specialized parallel English-Ukrainian corpus of technical documentation. It will possibly automate the process of identifying new phrase combinations and their terminological equivalents using machine learning and artificial intelligence methods. Future research should pay particular attention in particular the analysis of how different strategies affect the speed and accuracy of technical information processing for reproducing phrasal verbs. Given the tendency towards digitalization, the research could be developed in the direction of assessing the quality of neural machine translation when working with three-component and idiomatic phrasal verbs. This will allow the development of methodological recommendations for improving algorithms for the automated translation of technical language, which will make the research product attractive to international IT companies and translation agencies.

8. Conclusions

The study involved a linguistic and translation analysis of phrasal verbs in English technical discourse. It was found that phrasal verbs in technical texts lose their idiomatic expressiveness,

characteristic of informal speech, and acquire the status of terminological elements. They mainly convey operational and procedural meanings, which requires the translator to be particularly accurate and stylistically neutral. Although most of the data show clear patterns, the question of translating new occasional phrasal verbs that arise in the field of high technology remains ambiguous. Such entities often combine professional jargon and official terminology, which can lead to variability in translation. Thus, the study proves that the adequate reproduction of phrasal verbs guarantees functional equivalence and translation safety in a professional environment.

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