# DIGITAL TECHNOLOGIES IN TEACHING THE TRANSLATION OF ENGLISH MILITARY ABBREVIATIONS INTO RUSSIAN AND UZBEK

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***Abstract.*** *The article examines the features of rendering English military abbreviations into Russian and Uzbek within the context of the development of modern philological education. Particular attention is paid to the linguodidactic potential of digital technologies and computer programs used in teaching the translation of specialized terminology. The purpose of the study is to identify the most effective methods for translating English military abbreviations and to analyze the possibilities of digital educational tools in developing professional translation competencies among philology students. The methodological framework of the study includes comparative analysis, translation analysis methods, and quantitative analysis of translation transformations. The research material consists of abbreviations taken from the U.S. Army Field Manual. The analysis identified 182 examples of initial abbreviations translated using various translation techniques, including calque translation, modulation, explication, compression, decompression, concretization, transliteration, and others. The results of the study show that the most common methods of rendering abbreviations are calque translation and modulation. The use of digital technologies, including electronic corpora, terminological databases, and computer translation programs, contributes to a more effective acquisition of military terminology and to the development of students' translation skills.*

***Keywords:*** *military abbreviations, terminology translation, English language, Russian language, Uzbek language, digital technologies, linguodidactics, philological education, computer programs, translation transformations.*

## Introduction

In the context of globalization and the rapid development of international cooperation, the importance of accurate and adequate translation of specialized terminology has significantly increased. A special place in this system is occupied by the translation of military abbreviations and acronyms, which are widely used in professional communication, documentation, and scientific and technical texts. The system of abbreviations is an integral part of the lexical and semantic system of any language. At the same time, different languages are characterized by different models of abbreviation. For example, the English language is widely known for its extensive use of acronyms, whereas in some other languages the frequency of such forms may be considerably lower. This creates additional challenges in translation and requires the application of specific translation strategies.

In modern philological education, the training of specialists capable of working with such units of professional vocabulary plays an important role. In this regard, the use of digital technologies and computer programs becomes particularly relevant, as they significantly expand the possibilities of teaching the translation of specialized texts. The purpose of this article is to

analyze the methods of rendering English military abbreviations into Russian and Uzbek and to identify the linguodidactic potential of digital technologies in teaching philology students the translation of specialized terminology.

**Literature Review**

The problem of translating abbreviations and shortened units occupies an important place in modern linguistics and translation studies. It is particularly relevant in the sphere of scientific, technical, and military communication, where abbreviations serve the function of linguistic economy and ensure the accuracy of information transmission. Research shows that the translation of such units requires consideration of structural, semantic, and pragmatic features of the languages involved [Komissarov, 1990; Garbovsky, 2020].

The theoretical foundations of translating terminological vocabulary were established in the works of classical translation scholars. For instance, L. S. Barkhudarov in his fundamental monograph *Language and Translation* notes that the translation of abbreviations requires the application of various translation transformations such as concretization, generalization, and modulation, since the structures of the source and target languages may differ significantly [Barkhudarov, 1975]. According to the researcher, when translating terminological units it is necessary to take into account their place within the lexical and semantic system of the language.

The works of V. N. Komissarov are also of great importance for the development of translation theory. He considers translation as a process of achieving equivalence between the source text and the target text [Komissarov, 1990]. The scholar emphasizes that the translation of abbreviations presents particular difficulties because such units have a high degree of informational density and often function as terms. The choice of translation strategy, according to Komissarov, depends on the context of usage and the traditions of terminology in the target language.

The problems of rendering terminological vocabulary are also discussed in the works of Ya. I. Retsker, who identifies various methods of translating terms and abbreviations, including calque translation, transcription, and descriptive translation [Retsker, 1974]. The researcher notes that when translating specialized texts the translator should strive to preserve the functional equivalence of terminological units. The features of translating scientific, technical, and specialized terminology are analyzed in detail in the works of L. L. Nelyubin, who views translation as a complex interlingual process involving the analysis of the structure and meaning of the unit being translated [Nelyubin, 2009]. According to the scholar, abbreviations are an essential element of professional communication and require a specific approach in translation.

A significant contribution to the development of terminology studies was made by S. V. Grinev-Grinevich, who considers a term as an element of professional communication and emphasizes the systemic nature of terminological units [Grinev-Grinevich, 2008]. The researcher notes that abbreviations constitute an important part of the terminological system and should be examined within the context of the entire system of scientific concepts. Modern research on translation activities is presented in the works of N. K. Garbovsky, who considers translation as a multi-level process of interpreting a text [Garbovsky, 2020]. The scholar emphasizes that the translation of specialized texts requires consideration of pragmatic factors as well as cultural and linguistic characteristics.

In recent years, considerable attention has been paid to the digitalization of translation activities and the use of information technologies in translator training. For example, the studies of I. S. Alexeyeva examine modern approaches to translator education, including the use of

electronic corpora and terminological databases [Alexeyeva, 2020]. Similar issues are explored in the works of O. V. Alexandrova, who highlights the importance of digital tools for terminological analysis and professional translation training [Alexandrova, 2019]. In the research of Uzbek scholars, significant attention is also devoted to the problems of translation and terminology. For instance, Sh. Safarov in his works on cognitive linguistics analyzes the functioning of terminological vocabulary in different languages and emphasizes the necessity of considering cultural and linguistic factors in translation [Safarov, 2021].

Methodological aspects of foreign language teaching and translator training are discussed in the works of B. Jalolov, who stresses the importance of integrating modern technologies into the educational process [Jalolov, 2020]. According to the researcher, the use of digital educational platforms contributes to the development of students' professional competencies. Issues related to the digitalization of philological education and the application of information technologies in foreign language teaching are also investigated in the works of N. Yuldashev and D. Hasanova. These scholars emphasize that the use of electronic dictionaries, online corpora, and specialized programs significantly increases the effectiveness of teaching terminology translation [Yuldashev, 2020; Hasanova, 2022].

Thus, the analysis of scholarly literature demonstrates that the problem of translating abbreviations lies at the intersection of several academic fields, including translation studies, terminology studies, and linguodidactics. Contemporary research confirms the need for a comprehensive approach to studying this issue, combining traditional methods of translation analysis with the use of digital technologies in the educational process. This is especially important for the training of future philologists and translators who must work with specialized terminology in the context of the digitalization of education and the development of the information society.

**Research Methodology**

The methodological framework of this study is based on a comprehensive approach that combines methods from translation studies, comparative linguistics, and linguodidactics. Such an approach makes it possible to conduct a thorough analysis of the ways English military abbreviations are rendered into Russian and Uzbek, as well as to determine the potential of digital technologies in teaching the translation of specialized terminology. The research material consists of abbreviations and shortened lexical units recorded in the **U.S. Army Field Manual**, as well as in other English-language military sources. During the analysis, **182 examples of initial abbreviations** representing different types of military terminology were identified and selected. For each example, existing or possible translation equivalents in Russian and Uzbek were examined.

The following research methods were employed in the study.

**1. Continuous sampling method.** This method was used to extract abbreviations from the selected texts. All abbreviations found in the sources were identified and systematically recorded in a separate database. This procedure made it possible to create a representative corpus of the units under investigation.

**2. Comparative analysis method.** This method was applied to examine the structural and semantic characteristics of abbreviations in English, Russian, and Uzbek. The comparison made it possible to identify differences in abbreviation formation and to determine the most effective strategies for their translation.

**3. Translation analysis method.** Each abbreviation was analyzed in terms of the translation transformations used in its rendering. Particular attention was paid to strategies such as

*calque translation, modulation, explication, transliteration, compression, decompression, concretization, and generalization.* This analysis helped determine the frequency of various translation strategies and identify the most productive ones.

**4. Quantitative analysis method.** To identify patterns in the translation of abbreviated units, a quantitative analysis was conducted. Statistical processing of the data allowed the calculation of the percentage distribution of different translation strategies. This approach provided an objective evaluation of the frequency of particular translation techniques.

**5. Linguodidactic analysis.** This method was applied to evaluate the potential use of the research findings in the educational process. Modern digital resources used in translation training were analyzed, including electronic terminological databases, online text corpora, and specialized computer programs. The analysis demonstrated that such tools significantly facilitate students' acquisition of specialized terminology.

Digital technologies played an important role in the study by enabling the systematization and analysis of the research material. Electronic dictionaries, online terminology databases, and digital text corpora were used for data processing. These tools significantly accelerated the process of searching for translation equivalents and made it possible to more accurately determine the functioning of abbreviations in different contexts. Thus, the application of a comprehensive methodology combining linguistic, translation, and statistical analysis made it possible to identify the main patterns of rendering English military abbreviations into Russian and Uzbek and to determine promising directions for the use of digital technologies in teaching the translation of specialized terminology.

**Research Results**

As a result of the conducted study, a corpus of **182 English military abbreviations** recorded in the U.S. Army Field Manual and a number of English-language military documents was analyzed. The main purpose of the analysis was to identify the most effective methods of rendering these abbreviations into Russian and Uzbek, as well as to determine the frequency of various translation transformations. The analysis demonstrated that translating military abbreviations is a complex process that requires consideration of the structural, semantic, and pragmatic features of both the source and the target languages. During the study, the following main methods of rendering English abbreviations were identified.

The most common translation method was **calque translation**, which was used in 80 cases (43.95%). This method involves translating the full form of the abbreviation while preserving the structure of the original phrase. Calque translation is most often used when translating terminological units that have stable equivalents in the target language. Examples include:

**AM (Amplitude Modulation)** → Russian: *amplitude modulation* → Uzbek: *amplituda modulyatsiyasi*

**FDC (Fire Direction Center)** → Russian: *fire control center* → Uzbek: *o't ochishni boshqarish punkti*

**FLOT (Forward Line of Own Troops)** → Russian: *forward line of own troops* → Uzbek: *qo'shinlarning old chizig'i*

The high frequency of this method can be explained by the need to preserve the accuracy of military terminology.

The second most common method was **modulation**, identified in 54 cases (29.67%). This technique involves semantic transformation of the source unit, where the meaning of the abbreviation is conveyed through a logically related concept. Examples include:

**ADA (Air Defense Artillery)** → Russian: *anti-aircraft artillery* → Uzbek: *havo hujumidan mudofaa artilleriyasi*

**BTC (Bridge Team Commander)** → Russian: *bridge unit commander* → Uzbek: *kechuv guruh komandiri*

**MRE (Meal Ready to Eat)** → Russian: *field ration* → Uzbek: *eyishga tayyor quruq ovqat*

The use of modulation is обусловлено differences in the lexical and semantic structures of English, Russian, and Uzbek.

The next most frequent method was **explication**, used in 27 cases (14.83%). This technique involves providing a detailed explanation of the abbreviation's meaning. Explication is typically used when there is no direct equivalent in the target language. For example:

**HALO (High Altitude Low Opening)** → Russian: *a parachute jump with parachute opening at low altitude*

**LBE (Load Bearing Equipment)** → Russian: *equipment for carrying military gear*

This method is particularly common when translating terms related to military equipment and special operations.

In addition to these methods, several other translation strategies were identified.

**Compression** was used in 12 cases (6.59%). This method involves reducing the structure of the original unit while preserving its core meaning. Examples include:

**BDU (Battle Dress Uniform)** → *combat uniform*

**EPW (Enemy Prisoner of War)** → *prisoners of war*

**Decompression** was recorded in 5 cases (2.74%). This technique involves expanding the translated unit in order to convey its meaning more accurately. Example:

**RAAMS (Remote Anti-Armor Mine System)** → *a system for remote deployment of anti-tank mines*

**Concretization** was identified in 4 cases (2.19%), when the meaning of the source unit is expressed through a more specific concept. Example:

**ROE (Rules of Engagement)** → *rules of combat operations*

**Calque translation with the creation of a new abbreviation** was also used in 4 cases (2.19%). In this case, the full form of the term is translated and a new abbreviation is created in the target language. Examples include:

**TOC (Tactical Operations Center)** → *combat operations center* – Russian abbreviation **ЦБУ**

**NOD (Night Observation Devices)** → *night vision devices* – Russian abbreviation **ПНВ**

**Transcription and transliteration** were used in **3 cases (1.64%)**, mainly when translating the names of military units. Examples include:

**ATL (Alpha Team Leader)** → *Alpha team commander*

**BTL (Bravo Team Leader)** → *Bravo team commander*

Finally, **generalization** was identified in only **one case (0.54%)**. Example:

**CLGP (Cannon-Launched Guided Projectile)** → *guided artillery projectile*

The obtained results indicate that the most effective methods of translating military abbreviations are **calque translation and modulation**, which together account for more than 70% of all translation cases. This can be explained by the need to preserve the accuracy of terminology and ensure the adequacy of translation. Furthermore, the study showed that expanded descriptive translation is used more frequently when translating into Uzbek, since many military abbreviations

do not have established equivalents in the Uzbek terminological system. In such cases, translators employ descriptive constructions to ensure better comprehension of the terms.

It was also established that the use of digital technologies, such as electronic dictionaries, terminology databases, and online text corpora, significantly facilitates the search for translation equivalents and contributes to more efficient analysis of terminological vocabulary. Thus, the research results made it possible to identify the main patterns in rendering English military abbreviations into Russian and Uzbek and to determine the most productive translation strategies used in specialized texts.

**Discussion**

The results obtained in the study confirm that translating English military abbreviations is a complex multi-level process that requires consideration of the structural, semantic, and pragmatic characteristics of the languages involved. The analysis has shown that the most productive methods of rendering abbreviated units are **calque translation and modulation**. This finding corresponds to the conclusions of many scholars in translation studies, who emphasize that these techniques allow for the most accurate transmission of specialized terminology (Komissarov, 1990; Garbovsky, 2020). The high frequency of calque translation can be explained by the fact that many military terms have an international character and possess relatively stable structural patterns. In such cases, translating the full form of the abbreviation helps preserve the accuracy of meaning and ensures compliance with the terminological norms of the target language. However, the use of calque translation is possible only when semantic equivalence exists between the source and target languages.

Modulation, which ranks second in frequency, is applied in situations where the structure of the original expression cannot be directly transferred into the target language. This method allows the meaning of the term to be adapted to the lexical and semantic features of Russian and Uzbek. The use of modulation supports the idea that the translation of terminology often requires semantic interpretation rather than literal reproduction of the original form. An important finding of the research is the identification of specific features in translating military abbreviations into Uzbek. Unlike Russian, which has a relatively developed system of terminological abbreviations, many military terms in Uzbek are rendered in an expanded descriptive form. This is due to the specific features of the formation of the national terminological system and the need to ensure clarity and accuracy in conveying meaning.

In modern conditions, the use of digital technologies plays a particularly important role in teaching the translation of specialized terminology. Electronic dictionaries, terminological databases, corpus systems, and specialized computer programs significantly facilitate the process of searching for translation equivalents. The use of such tools enables students to navigate terminological systems more efficiently and contributes to the development of their analytical skills. Within the framework of the linguodidactic approach, digital technologies can be considered an effective tool for developing professional translation competence. Their integration into the educational process helps students acquire skills in working with terminological resources, increases their level of independence in translation activities, and expands opportunities for analyzing specialized texts.

Thus, the results of the study confirm that the integration of traditional translation analysis methods with modern digital technologies can significantly enhance the effectiveness of teaching the translation of specialized terminology.

**Conclusion**

The conducted study made it possible to identify the main features of rendering English military abbreviations into Russian and Uzbek and to determine the most effective translation strategies. The analysis of a corpus consisting of 182 abbreviations demonstrated that the most common translation methods are calque translation and modulation, which together account for more than 70% of all translation cases. These methods ensure the accurate transmission of the content of terminological units and help preserve their functional meaning in the translated text.

Furthermore, the study showed that the choice of translation strategy depends on several factors, including the structural characteristics of the abbreviation, the features of the terminological system of the target language, and the context of use. In some cases, it becomes necessary to apply descriptive translation, transliteration, or the creation of new abbreviations. Special attention in the study was given to the role of digital technologies in teaching the translation of specialized terminology. The use of electronic terminological resources, corpus databases, and computer programs significantly expands the possibilities for analyzing and systematizing terminological vocabulary. This contributes to the more effective development of professional competencies among future philologists and translators.

The practical significance of the research lies in the fact that its results can be used in designing academic courses on translation theory and practice, as well as in creating electronic terminological databases for training philology students. Prospects for further research include expanding the corpus of analyzed abbreviations, studying the translation features of other types of abbreviated units, and developing digital educational platforms aimed at improving the methodology of teaching the translation of specialized terminology.

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