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PECULIARITIES OF TRANSLATING ENGLISH TEXTS ON INFORMATION TECHNOLOGY: STRATEGIES FOR REPRODUCING NEOLOGISMS

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The progressive domain of information technology demands an adequate translation of specialized texts written in English. This necessity arises for translating manuals, literature, and software interfaces. The complexity of translating texts in the IT sector stems from the fact that a significant number of computer terms are new, referred to as neologisms, and belong to an untranslatable lexicon. This means that they lack regular equivalents in the Ukrainian language, yet this does not render their translation impossible. The study of neologisms and their translation is identified as a particularly relevant and important task in contemporary linguistics. The specificity of translating neologisms lies in the fact that these words often lack counterparts in the target language, requiring translators to determine how to convey their meanings and nuances in another language. This can be a challenging task, as neologisms may possess unique semantics and contextual usage. Translators need to find effective strategies and methods for rendering new words and expressions from one language into another while preserving their semantics and structure. This task demands not only a deep understanding of the source language by the translator but also openness to innovation and creativity in the translation process. To preserve the authenticity of neologisms during translation, it is important to consider their context and employ creative approaches to find suitable equivalents. Translators must be sensitive to shifts in semantics and connotations to accurately convey the innovative meanings of words in the new language. Furthermore, the use of explanatory inserts or terminological explanations can aid the target audience's understanding of new terms. Special emphasis should be placed on the collaboration between translators and experts in cutting-edge technology and science to guarantee translations' precision and scholarly rigor. This collaboration presents an opportunity to creatively enhance linguistic tools, facilitating their seamless integration into a new linguistic context, thereby transforming the challenge of translating neologisms into a chance for creative advancement.

Keywords: *neologisms, translation methods and techniques, descriptive translation, calquing, transcription, abbreviation, acronyms, transcoding.*

Problem statement and justification of its relevance. The advancement of science, society, and technical knowledge in specific fields leads to the emergence of numerous realities and concepts that require specific designations, resulting in the creation of neologisms to denote these new concepts. The emergence of such terms poses significant challenges during translation, as these words have not yet been recorded in dictionaries. The appearance and functioning of neologisms indicate that a language is alive and evolving, embodying the human desire to express the richness of knowledge and reflect civilization's process. The emergence of new vocabulary in contemporary English demonstrates an active process of lexical enrichment. This article broadly addresses the

problem of the formation and translation of English neologisms in the field of information technology and innovation. This issue is pressing, as new objects and processes are constantly being created in technology, necessitating new names to fill lexical gaps. The chosen topic is **relevant** because there is a need to convey the meanings of English neologisms within the information technology sector into the Ukrainian language. Additionally, it is essential to identify and classify scientific ideas on the peculiarities of translating neologisms in English texts.

The **objective** of this article is to identify the challenges that arise when translating English neologisms within English texts in the field of modern information technology into Ukrainian. To achieve this goal, the following **tasks** need to be addressed:

− to examine and investigate the existing types of neologisms and their formation.

− to determine the specific usage of neologisms in the English language.

− to conduct a study on the use of neologisms in the language of information technology.

− to explore all methods and peculiarities of translating English neologisms in texts related to information technology.

− to identify the difficulties and peculiarities of translating neologisms in the chosen field and demonstrate ways to overcome the challenges encountered when translating these units into Ukrainian.

The **subject** of the study is the specificity of translating English neologisms in information technology into Ukrainian.

The **object** of the study is neologisms in English texts in the field of information technology.

The **theoretical significance** of the research is in uncovering all existing possibilities for identifying the main methods of augmenting the lexical composition of a language and detecting trends in lexical development that are most characteristic of Ukrainian and English at the current stage of their evolution.

The **practical significance** involves the potential application of neologisms in scientific research in the fields of information technology, modern Ukrainian and English languages, stylistics, and in the compilation of dictionaries of neologisms for teaching courses on the language of information technology and translation practice.

Analysis of scientific research and publications. Many linguists, including Yu. Zatsnyi, V. Nechyporenko, V. Hladka, Z. Tsyhankova, O. Panchenko (Panchenko, 2020), K. Kovalenko, and O. Dziubina (Dziubina, 2014, P. 17-23), have studied and continue to study the main methods of enriching the lexical composition of modern English, highlighting the importance of this issue in linguistics. This emphasizes the relevance of the topic of vocabulary enrichment in English from both theoretical and practical perspectives. According to L. Verba (Verba, 2003), the most common method of forming English neologisms is word compounding. However, the specificity of the field of information technology and innovation lies in the rapid communication and convenience of word usage, leading to the frequent occurrence of acronyms and terms formed through telescoping among neologisms.

Presentating the main research material. It is well known that language is constantly changing and developing, with its vocabulary being the most dynamic component of the linguistic system. A vivid indication of this linguistic dynamism is the emergence of new words, which enrich the lexical system. Today, the English language, like many other languages worldwide, is experiencing a so-called "neological boom." The colossal influx of new words and the necessity of documenting them, especially in the domain of information technology, have led to the creation of a new branch of lexicology – neology, the study of neologisms. Every year, 800 new words appear in the English language, which is several times more than in other languages. Consequently, dictionaries lag somewhat in recording these neologisms. This presents a complex task for linguists, as, in addition to documenting new words, they must also study them.

Researching translation methods for neologisms in the field of information technology is particularly relevant due to the rapid development of this sector and is characterized by certain important features. The fast-paced growth of technology leads to the continuous creation of new objects and processes, which require new terms to fill lexical gaps. This makes the study of neologisms and their translation not only necessary but also urgent:

a) the process of analyzing IT terms is complicated because of the large number of neologisms and the heterogeneity of terminology (professional jargon, argot, slang);

b) the terminology of the IT sector in its word formation adheres to the rules of the Ukrainian language. Specifically, common methods of term formation include affixation, non-affixation, and lexical-semantic methods;

c) IT discourse is characterized by the use of means of linguistic expression;

d) the particular development of IT technologies in English-speaking countries, most notably in the

USA is one of the reasons for the large number of English borrowings (Bohachyk, 2015).

Several translation methods are employed for translating English IT terms. Four main methods are identified: transcoding, calquing, descriptive translation, and equivalent translation.

Transcoding of neologisms is applied in translation when the target language lacks a corresponding concept and translational equivalent, and it is not possible to find a word in the target language that accurately conveys the concept's meaning and adheres to terminological norms (Kyvliuk, 2017).

Transcription and transliteration are not often used in their pure form. Transcription with elements of transliteration may be employed. Transliteration/transcription is used to translate English terms such as *"Alpha" – "Альфа," "monitor" – "монітор," "click" – "клік,"* and so on. Examples of pure transcription include terms like *"code" – "код," "file" – "файл," "interface" – "інтерфейс."* Examples of transliteration are less common*: "script"– "скрипт," "server"– "сервер,"* and so on. For adequate translation of terminology represented by a single word, it is necessary to consider that consonant doubling between vowel letters is not rendered. For instance, *"account"* is rendered as *"акаунт."* Notably, the letter "r" at the end of a word is rendered as the sound [r], regardless of whether it is pronounced in the original English word, as in *"server" – "сервер."* The letter [x] in Ukrainian is represented by the letters "к" and "с," for example, "*syntax" – "синтаксис."*

The advantage of transliteration and transcription among translation methods lies in their reliability. Transcoding, in this context, conveys only the phonetic form of the word, particularly useful when translating unfamiliar or poorly understood concepts. The meaning of such a term is understood through context, thus avoiding the interpretation of its specific characteristics in the target language. Today, this translation model is widely employed in translating English IT terms. Translitera tion and transcription are highly productive translation methods that enrich both standard and slang vocabularies, for example, *"user"* is rendered as *"юзер"* (Yenikieieva, 2001). When transliteration and transcription are used, the translation of individual word combinations often occurs through calquing and explication.

Adapted transcoding is a translation method that involves not only transcoding but also its transformation to convey it in a different form, driven not by the organization of information in the original but by the specific task of interlingual communication (Hrytskova, 2013, P. 104). Adapted transcoding aims to transform the information contained in the original text into a specified form. Terms such as *"profile"* and *"viewer"* are translated using adapted transcoding, resulting in *"профіль"* and *"в'ювер,"* respectively. A notable feature of using this translation method in Ukrainian is the softening at the end of the word, which is not present in the English word, as seen in *"модуль" (module).* Another characteristic of adaptive transcoding is the presence of gender-specific endings in the target language, as observed in *"модифікація" (modification)*.

When translating English texts in the IT discourse, complete semantic calques are used, such as *"disk storage" – "дискова пам'ять"* and *"image recognition" – "розпізнання зображення,"* as well as partial semantic calques, such as *"cyber world" – "кіберсвіт."* Calques are prone to assimilation, and in some cases, they are classified as translation loans. Calquing is most frequently employed in the translation of term phrases. Occasionally, in the process of translating IT terms, calquing and transcription are used simultaneously, for example: "*file system" – "файлова система*." Calquing is used to translate the names of technological standards, software products, and names of computer equipment, such as corporations – *AMD, Microsoft, Intel*, etc. For instance, the name *Microsoft* is used more frequently than others in IT discourse. As a result, it is often transcribed in Cyrillic in journalism – *Майкрософт*.

Calquing is a translation technique that is applied not only in the translation of compound words but also in translating one of the components of a composite term. Calquing is frequently used when translating complex terms that have been created using common words. Transcription and calquing are often employed simultaneously during translation, for example, *"composite key" – "композитний ключ,"* and *"file system" – "файлова система."* In these cases, the Ukrainian equivalents of English IT terms are created by selecting the primary dictionary equivalents for each term component. Calquing is justified when translating compound terms whose components are already established in the target language's terminology system and are readily understood by specialists (Yenikieieva, 2001, P. 54-59). An additional advantage of calquing is the brevity of the resulting term and its correspondence to the source word. Calquing can be used when the translated term does not violate norms of usage and word compatibility (Kyvliuk, 2017, P. 25).

In situations where a phrase is created from terms that are not commonly used in a specific IT

field in the target language and needs explanation, a descriptive translation is used (Karaban, 2002, p. 178). This involves replacing a word from the source language with a phrase that explains the term.

Explication is a highly productive method for translating IT terms, as the rapid development of this field helps many terms find appropriate equivalents and become established in the target language (Karaban, 2002, P. 180). Explication is used to translate multi-component phrases.

The productivity of explication in translating English terms into Ukrainian is explained by the differences in the ways words and phrases are formed in the two languages.

In English terminology, multi-component prepositionless phrases are predominant, which are not typical of the Ukrainian language and create certain difficulties during translation (Karaban, 2002, P. 181). Such difficulties are often resolved by using calquing with a change in the components of the phrase: *BIOS (Basic Input/Output System) – базова система введення-виведення*, *DPB (Disk Parameter Block) – блок параметрів диска*. Among the advantages of calquing over explication is that explication tends to be wordy, whereas in calquing, each part of the phrase in the source language corresponds to one element in the target language phrase, thereby fulfilling the condition of the linguistic economy (Kyvliuk, 2017, P. 36). Sometimes descriptive translation is used together with calquing, for example, *MS-DOS – дискова операційна система фірми Microsoft.*

To properly use the descriptive method of translation, it is necessary to have a good understanding of the subject area of the text being translated to accurately convey the concept's meaning: *schema statements – SQL вирази управління схемою даних*, *bigint – ціле число великого діапазону.*

When the meaning of an English term fully corresponds to the Ukrainian equivalent, this method is considered **equivalent**. This translation method is quite common when translating English IT terms, although, in reality, the Ukrainian language does not have a large number of analogs in this field. For example, *"desktop" – "робочий стіл," "notepad" – "записна книжка."* Equivalence is the communicative equality by which a text is transformed into a translation. Equivalence involves conveying the content of the text in translation, viewed as information that includes the stylistic, figurative, and aesthetic functions of lexical units (Kyvliuk, 2017, P. 112). Equivalence is one of the most important tasks for a translator, reflecting the most complete transmission of the text's content, and true correspondence between the original and the translation is very important. Equivalence also depends on the origin of the source text and its reflection in the target language.

Compound terms are often used in the form of abbreviations/acronyms, many of which are commonly used in IT discourse. **Abbreviations**, as a word formation method, are among the most productive in contemporary English, which can be explained by the accelerated pace of life and the desire to economize on linguistic means. Acronyms are a characteristic feature of IT discourse. The use of abbreviations is possible when the recipient shares a common thesaurus with the author. In IT discourse, the widespread use of acronyms is driven by the large number of compound terms, whose abbreviation is necessary to save space, for example, *RAM – Random Access Memory*.

If translators encounter a term they are unsure about, it is important to check whether it belongs to the category of non-translatable terms. The next step is to determine whether there is an existing translation for this term. If a translation already exists, it should be used regardless of the model by which it was created. The denotative model of translation described above does not attempt to change the norms of translating IT discourse terms but merely to describe them. Only if the term does not yet have an established translation equivalent the translator can independently choose a translation method. Preference should be given to semantic equivalents that ensure an adequate conveyance of the term's visual-logical meaning (Diakova, Kyiak, Kudelko, 2000, P. 98). Compared to transcription, the equivalent method of translation allows for a better understanding of the translated term by ordinary Ukrainian speakers. When translating compound terms, it is preferable to choose elements with Ukrainian, rather than borrowed, bases (Karaban, 2002, P. 260). The issue of standardizing the translation of IT discourse terms is related to the creation of adequate glossaries of translation equivalents to be used in Translation Memory systems. Terms should be translated consistently and unambiguously, which is possible with the proper use of a well-formulated translation model.

Conclusions and directions for future research. The translation of terminology is a crucial task in translation studies, as terms represent a rapidly evolving lexicon enriched with new words. Translating IT terms requires a solid understanding of the computer science field. Various methods can be employed to translate IT terms: calquing, descriptive translation, equivalent translation, and transcoding, whereas calquing is the predominant method for translating English terms.

Calquing is frequently used for translating complex terms. This method is justified for translating phrases whose components already have an established place in the terminology of the target language and are understood by specialists.

When there is no suitable equivalent term in the target language and no word can adequately convey the meaning, transcoding is applied. Transcoding is a translation method where the phonetic and/or visual form of a word from one language is rendered using the alphabet of another language.

When compound terms consist of elements that are not frequently used in the professional field but require translation, a descriptive translation is employed. This translation transformation replaces a word from the source language with a phrase that explains the term. Descriptive translation is a highly productive method for translating computer terms because the rapid development of the field often means that ready equivalents are not always available in the target language.

Equivalent translation corresponds to the concept of communicative equality. Equivalence is a method of conveying the meaning of a term from the original language in the way that the text retains the functions of the lexical units while preserving the information content.

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ОСОБЛИВОСТІ ПЕРЕКЛАДУ АНГЛІЙСЬКИХ ТЕКСТІВ З ІНФОРМАЦІЙНИХ ТЕХНОЛОГІЙ: СТРАТЕГІЇ ВІДТВОРЕННЯ НЕОЛОГІЗМІВ

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Прогресуюча сфера інформаційних технологій диктує потребу адекватного перекладу фахових текстів, написаних на англійській мові. Це необхідно для перекладу інструкцій, літератури, інтерфейсу програмних продуктів. Складність перекладу текстів ІТ галузі полягає в тому, що велика кількість комп'ютерних термінів є новими, їх ми називаємо неологізмами, і належить до безеквівалентної лексики, це означає, що вони не мають регулярних відповідностей в українській мові, але це не зумовлює неможливість їх перекладу. Дослідження неологізмів та їхнього перекладу в сучасному мовознавстві визначається як особливо актуальне та важливе завдання. Специфіка перекладу неологізмів полягає у тому, що ці слова часто не мають аналогів у цільовій мові, і перекладачам доводиться вирішувати, як передати їхнє значення та відтінки в іншій мові. Це може бути складним завданням, оскільки неологізми можуть мати унікальну семантику та контекстуальне вживання. Перекладачі повинні знайти ефективні стратегії та методи для передачі нових слів та виразів з однієї мови в іншу, зберігаючи при цьому їхню семантику та структуру. Це завдання вимагає від перекладача не лише глибокого розуміння мови-джерела, але і відкритості до інновацій та креативності в процесі перекладу. У зусиллях збереження автентичності неологізмів під час перекладу, важливо враховувати їхній контекст та використовувати творчі підходи для знаходження адекватних еквівалентів. Перекладачі повинні виявити чутливість до змін у семантиці та конотаціях, щоб вірно відтворити інноваційний зміст слів у новій мові. Крім того, використання пояснювальних вставок чи термінологічних пояснень може сприяти кращому розумінню нового терміну читачами цільової аудиторії. Особлива увага повинна бути приділена співпраці між перекладачами та експертами в області новітніх технологій та науки для забезпечення точності та наукової обґрунтованості перекладів. Це дозволить зробити процес перекладу неологізмів не лише викликом, але й можливістю творчого вдосконалення мовних засобів та сприяти їхньому плавному впровадженню в новий лінгвістичний контекст.

Ключові слова: *неологізми, засоби та способи перекладу, описовий переклад, калькування, транскрибування, скорочення, абревіатури, транскодування, експліція.*