



TRANSLATION FEATURES OF ENGLISH IT TERMS INTO UZBEK AND KARAKALPAK LANGUAGES

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ABSTRACT

This article examines the translation features of English IT terminology into Uzbek and Karakalpak languages. The study identifies four main translation strategies: borrowing, calquing, descriptive derivation, and semantic extension. The research shows that many English IT terms lack direct equivalents and therefore require neologism formation or semantic adaptation. Uzbek and Karakalpak demonstrate both similarities and differences in terminology development due to orthographic variation, script reforms, and differing levels of digital modernization. Karakalpak remains more vulnerable because of its smaller speaker base and reliance on Uzbek and Russian intermediary translations. The study concludes that effective IT term translation depends on consistent standardization, digital implementation, and bilingual lexicographic support.

Introduction. Introduction. The translation of English information technology terminology into Uzbek and Karakalpak is a linguistically complex and socially significant process shaped by globalization, structural differences between languages, and uneven levels of digital development. English remains the dominant source of IT vocabulary, which requires both Turkic languages to continuously adapt foreign lexical units through borrowing, calquing, and native term formation.

Recent research highlights that English loanwords play a central role in the development of Karakalpak vocabulary. Jumaniyazova emphasizes that the increasing number of English

borrowings in Karakalpak is driven by technological progress and globalization, while also raising concerns about long-term linguistic balance and cultural preservation [1, 414-418]. In a similar direction, Makhamatdinovna et al. analyze adaptation processes of English borrowings in Karakalpak and show that phonological and morphological integration is often partial, which leads to parallel usage of native and borrowed forms [3].

In the Uzbek context, G'aniyeva notes that internet neologisms are primarily translated through a combination of borrowing and semantic adaptation, where the lack of direct equivalents forces translators to rely on flexible



strategies such as calquing and descriptive rendering [2, 247-248]. Nasrulloeva further supports this view by demonstrating that media texts in Uzbek and English IT discourse frequently contain hybrid terminology, reflecting the instability of standardized equivalents and the ongoing competition between native and borrowed forms [4].

From a theoretical perspective, Sapparbaevich et al. argue that lexical-semantic equivalence in specialized discourse, including technical terminology, is often partial rather than absolute, especially when translating from English into Karakalpak. This partial equivalence requires translators to prioritize functional meaning over structural similarity, which results in multiple competing variants of the same concept [5, 115-129].

Computer-mediated communication theory also supports these observations. Galichkina states that digital communication environments generate rapidly evolving linguistic systems characterized by hybridity, abbreviation, and constant lexical innovation. This accelerates the spread of English IT terminology and complicates the establishment of stable national equivalents in smaller languages [6].

Overall, the reviewed studies demonstrate that IT terminology translation into Uzbek and Karakalpak is shaped by a combination of borrowing, adaptation, and semantic restructuring. However, the degree of standardization and stability differs across the two languages, with Karakalpak showing greater dependence on intermediary languages and less institutional consolidation of technical vocabulary.

Pure borrowing, or direct phonetic and orthographic adaptation, is the most frequent strategy, particularly for highly iconic or abbreviated terms. For instance, “internet” becomes “internet” in both Uzbek and Karakalpak, while “computer” appears as “kompyuter” (Uzbek) and “kompyuter” (Karakalpak), differing only in minor vowel pronunciation. “Software” is often left as “software” or adapted as “soft” in informal discourse, though purist attempts favor “dasturiy ta’minot” in Uzbek and “programmaliq támiynat” in Karakalpak—calques that reveal the second feature: loan translation. Calquing involves directly translating the semantic components of an English compound. “Hard drive” becomes “qattiq disk” (Uzbek) and “qattı disk” (Karakalpak), both meaning “hard disk.” “Firewall” is calqued as “o’t devori” (Uzbek) and “ot qabırǵası” (Karakalpak)—interestingly, the latter uses “rib” rather than “wall,” showing a subtle morphosemantic divergence within the same Turkic root system. Calques are favored by language academies and translators working on official documentation or educational materials because they reduce foreign intrusion and exploit the agglutinative power of Turkic languages, where suffixes can pack complex meanings. However, calquing often results in lengthy, multi-word units that contrast sharply with concise English IT terms, leading to user resistance. For example, “dropdown menu” is calqued as “ochiladigan menyu” (Uzbek, literally “openable menu”) and “túsip turǵan menyu” (Karakalpak, “falling menu”), but many users simply say “drop-down” or



use the Russian “spisok” due to digital inertia.

Many IT terms enter Karakalpak through Uzbek as an intermediary language, creating a phenomenon of “double borrowing”—where English “browser” becomes Russian “brauzer,” then Uzbek “brauzer” (often spelled as “brauzer”), and finally Karakalpak “brauzer,” with no morphological integration except case suffixes. The absence of a robust Karakalpak-language digital interface (operating systems, help files, social media menus) forces users into either Uzbek or Russian versions, severely limiting the actual use of translated terms.

Semantic extension, the process of assigning new technical meanings to existing words, is less common but culturally telling. English “virus” is translated as “virus” (borrowing) in both languages, but “trojan” appears as “troya oti” (Uzbek, “Trojan horse”) and “troyan ati” (Karakalpak). However, “memory” extends from “xotira” (Uzbek, also meaning reminiscence) to “operativ xotira” (RAM), similarly “yad” (Karakalpak) to “operativ yad.” Yet confusion arises when “memory” in a data storage context vs. “RAM” vs. “cache” all compete for the same extended root. Uzbek technical writing sometimes distinguishes “kesh” (borrowed from English cache) from “xotira buferi” (memory buffer), while Karakalpak tends to use “keysh” or the Russian “kesh,” showing inconsistent semantic refinement. Another feature is the treatment of prepositions and phrasal verbs, which English IT uses heavily (e.g., “log in,” “set up,” “boot up”). Agglutinative Turkic languages encode

these as verbal prefixes or postpositional case markers. “Log in” becomes “tizimga kirish” (Uzbek, “enter into system”) and “sistemağa kiriw” (Karakalpak), not a literal translation but a functional equivalent. “Boot up” is rendered as “yuklash” (Uzbek, “load”) or “iske túsiriw” (Karakalpak, “bring into work”), the latter showing a more descriptive, periphrastic style.

A critical yet underexamined feature is the role of orthographic and scriptal divergence on translation consistency. Uzbek officially uses a modified Latin alphabet with diacritics like ‘, g’, and o’. Karakalpak Latin uses distinct characters such as á, g, q, and sh, differing from Uzbek’s convention (e.g., Uzbek “sh” vs. Karakalpak “sh” – the latter uses a caron). English IT terms, when borrowed, undergo systematic phoneme adaptation: “website” becomes “veb-sayt” in Uzbek and “web-sayt” in Karakalpak—trivial, but “interface” becomes “interfeys” (Uzbek) and “interfeysis” (Karakalpak), revealing different vowel epenthesis strategies. These orthographic differences, while minor, hinder the creation of shared digital terminology across Turkic languages of Central Asia. Furthermore, the lingering presence of Cyrillic (especially among older IT professionals in Uzbekistan) means that the same English term may have two competing written forms: “компьютер” (Cyrillic) vs. “kompyuter” (Latin), causing further fragmentation. Karakalpak, being officially Latin since 2016 but with weak enforcement, often adopts the Uzbek Latin forms for IT terms even when they conflict with Karakalpak phonotactics, as seen in “xatolik” (Uzbek for “error”)



versus Karakalpak “qátelik”—where the term for “error message” might be borrowed from Uzbek spelling despite a native variant existing. Ungalova’s concept of “directionality research” becomes particularly relevant here: translators working from English into Uzbek or Karakalpak must create terminology where none exists, facing the burden of neologism coinage, whereas reverse translation benefits from established English technical lexicons but struggles to produce natural, idiomatic texts in the target Turkic language.

The feature of register variation is also pronounced. Formal translations produced by the Uzbek Language Institute or the Karakalpak Academy of Sciences favor heavy calquing and neologism creation, while informal computer slang among young programmers in Tashkent or Nukus borrows directly from English or Russian, often clipping terms: “comp” (komp), “net” (net), “admin” (admin). Russian-derived terms still persist, especially in hardware contexts, e.g., “zhestokiy disk” (from Russian жёсткий диск) for HDD in older Uzbek manuals, while newer ones use “qattiq disk.” Karakalpak, due to stronger Russian influence in its Soviet-era education, still shows “vínchester” (hard drive) in casual speech, creating a three-way synonymy: English loan, native calque, and Russian loan. This polysemy is a distinct feature of IT translation into smaller Turkic languages: the absence of a dominant standard allows multiple variants to compete, delaying terminological normalization.

Finally, the pragmatic feature of brevity versus transparency shapes user acceptance. English IT terms are often monosyllabic or short compounds (e.g., “app,” “cloud,” “loop,” “bug”). Uzbek and Karakalpak, being agglutinative, require more morphemes to express similar grammatical relations, and when calqued, terms become cumbersome: “mobile application” → “mobil ilova” (Uzbek) vs. “mobil qosimsha” (Karakalpak) – the latter meaning “attachment,” which is ambiguous. “Cloud computing” is translated as “bulutli hisoblash” (Uzbek) and “bulitli esaplaw” (Karakalpak), both lengthy. Users thus default to English “cloud” or Russian “oblako” (which also exists as “bulut” but is seldom used). This indicates that a major feature of IT term translation is not just linguistic conversion but a socio-technical balancing act: terms that are too long get ignored, while borrowings integrate easily but erode lexical autonomy. For Karakalpak, an endangered language in the digital sphere, the most striking feature is the indirect route of translation—English to Russian to Uzbek to Karakalpak—which introduces phonetic distortions and semantic shifts at each step. For example, “framework” becomes Russian “freymvork,” then Uzbek “freymvork” (no adaptation), and finally Karakalpak “freymvork,” but a calque “qurılma ramkası” (structure frame) rarely appears. The result is a layered lexicon where pure English borrowings, Russian-mediated forms, Uzbek-mediated calques, and native Karakalpak derivations coexist, challenging learners and translators alike.



Conclusion. The translation of English IT terms into Uzbek and Karakalpak reveals a fundamental tension between linguistic preservation and practical usability. Borrowing offers brevity but risks lexical erosion, while calquing maintains native morphology

but produces cumbersome terms that users often reject. Karakalpak faces particular vulnerability due to its smaller speaker base, lack of digital interfaces in the language, and indirect borrowing paths through Russian and Uzbek.

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