

TRANSLATION STRATEGIES AND SEMANTIC ADAPTATION OF INFORMATION TECHNOLOGY TERMS IN ENGLISH AND UZBEK

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ANNOTATSIYA (o'zbek tilida)

Ushbu maqolada ingliz tilidagi axborot texnologiyalari terminlarining o'zbek tiliga o'tishida kuzatiladigan semantik va strukturaviy moslashuv jarayonlari tahlil qilinadi. Tadqiqot qiyosiy-terminologik yondashuvga asoslanib, maqsadli tanlangan 24 ta termin juftligini namunaviy material sifatida ko'rib chiqadi. O'zlashma, kalka, tavsifiy muqobil va gibrid shakllarning qo'llanish doirasi mazmun aniqligi, morfologik moslashuv hamda foydalanish kontekstiga ko'ra izohlanadi. Natijalar mazkur cheklangan namuna bo'yicha tavsifiy tahlil bo'lib, umumiy til korpusi uchun statistik xulosa sifatida talqin qilinmaydi.

Kalit so'zlar: IT terminologiyasi, semantik moslashuv, kalkalash, o'zlashma, ingliz tili, o'zbek tili.

АННОТАЦИЯ (на русском языке)

В статье рассматриваются семантические и структурные механизмы адаптации англоязычных терминов информационных технологий в узбекском языке. На основе сопоставительного терминологического подхода проанализированы 24 целенаправленно отобранные пары терминов. Особое внимание уделено заимствованию, калькированию, описательным эквивалентам и гибридным образованиям, а также точности передачи значения и контексту употребления. Представленные количественные данные характеризуют только иллюстративную выборку и не претендуют на репрезентативность для всей терминологической системы.

Ключевые слова: ИТ-терминология, семантическая адаптация, калькирование, заимствование, английский язык, узбекский язык.

ABSTRACT (in English)

This article examines how English information technology terms are semantically and structurally adapted into Uzbek. A contrastive terminology framework is applied to a purposively assembled set of 24 illustrative term pairs. The analysis distinguishes borrowing, calquing, descriptive or functional rendering, established lexical equivalents, and hybrid formation, while evaluating conceptual accuracy and morphological integration. The tabulated examples and descriptive distribution expose recurrent translation choices but are not presented as representative corpus frequencies. The article argues that terminological consistency requires concept-based validation rather than automatic preference for either loanwords or native-language forms.

Keywords: IT terminology, semantic adaptation, borrowing, calquing, English, Uzbek, terminological standardization.

1. INTRODUCTION

The expansion of digital infrastructure has accelerated the circulation of English-language technical vocabulary in Uzbek educational, administrative and professional communication. Terms for hardware, software, cybersecurity and artificial intelligence often reach users before stable Uzbek equivalents have emerged. As a result, one concept may be expressed by a direct loan, a translated phrase, or a mixture of the two. The problem is not merely stylistic: inconsistent labels in a user interface or a textbook can change how a technological operation is understood.

A term is effective when it identifies a concept sufficiently precisely within a relevant subject field. ISO 704:2022 explicitly relates concepts, definitions and designations, providing a useful basis for evaluating cross-language equivalence. Terminology scholarship also distinguishes conceptual structure from linguistic form (Cabr , 1999; Sager, 1990). This distinction is particularly relevant to Uzbek, where borrowed stems can coexist with locally generated compounds and productive grammatical endings.

The purpose of this paper is to describe the semantic and structural mechanisms by which selected English IT terms are rendered in Uzbek and to propose a practical evaluation sequence for translators and technical editors. Two questions guide the study: which mechanisms are visible in a controlled illustrative sample, and where can apparently straightforward translation create terminological ambiguity?

2. METHODOLOGY AND LITERATURE REVIEW

The study employs qualitative contrastive analysis supplemented with descriptive counting. A purposive sample of 24 English–Uzbek term pairs was assembled to cover

recognizable types of transfer rather than to estimate population frequencies. Each pair was assigned one primary transfer label: borrowing, calque, descriptive/functional rendering, established equivalent or hybrid. Structural labels distinguish simplex terms, compounds and phrases; alternative analyses are possible for borderline examples. Because the sample was manually curated and is not extracted from a balanced corpus, neither inferential statistics nor claims about national usage frequencies are appropriate.

Cabré (1999) treats terminology as simultaneously linguistic, cognitive and communicative; this supports an analysis grounded in concept identity and usage context. Sager (1990) emphasizes the organization and processing of specialized terms, including their standardization. ISO 704:2022 supplies a contemporary concept-oriented framework. In the specific English–Uzbek setting, Norqobilova (2023) discusses contrastive aspects of IT terms, while Sadikova (2026) describes borrowing, calquing and descriptive strategies in Uzbek and Karakalpak. These studies motivate closer attention to the relation between lexical economy and semantic transparency.

Coding was performed at the level of the preferred illustrative rendering shown in Table 1. A word-for-word translation was not assumed to be valid solely because its components appeared equivalent. Contextual appropriateness was judged in relation to a basic technical definition; terms that differ across computing subfields would require separate sense-specific entries in a full terminological database.

3. RESULTS

Table 1 presents selected entries from the illustrative dataset. The sample deliberately includes both integrated internationalisms and semantically transparent Uzbek phrases, showing that the surface length of an equivalent is not a measure of terminological quality.

Table 1. Selected English–Uzbek IT term correspondences and principal transfer mechanisms

English term	Uzbek rendering	Primary mechanism
server	server	Borrowing
brauzer	brauzer	Borrowing
router	router	Borrowing
modem	modem	Borrowing
platform	platforma	Borrowing
scanner	skaner	Borrowing
interface	interfeys	Borrowing

algorithm	algoritim	Borrowing
database	ma'lumotlar bazasi	Calque
operating system	operatsion tizim	Calque
artificial intelligence	sun'iy intellekt	Calque
machine learning	mashinaviy o'rganish	Calque
download	yuklab olish	Descriptive/functional
upload	yuklash	Descriptive/functional
firewall	tarmoq xavfsizlik devori	Descriptive/functional
backup	zaxira nusxa	Descriptive/functional
user account	foydalanuvchi hisobi	Calque
webpage	veb-sahifa	Hybrid

The complete classification of 24 examples comprises nine borrowings, eight calques, four descriptive or functional renderings, two established equivalents and one hybrid. These counts are properties of this deliberately selected list only; their proportions do not measure the prevalence of mechanisms in Uzbek IT discourse.

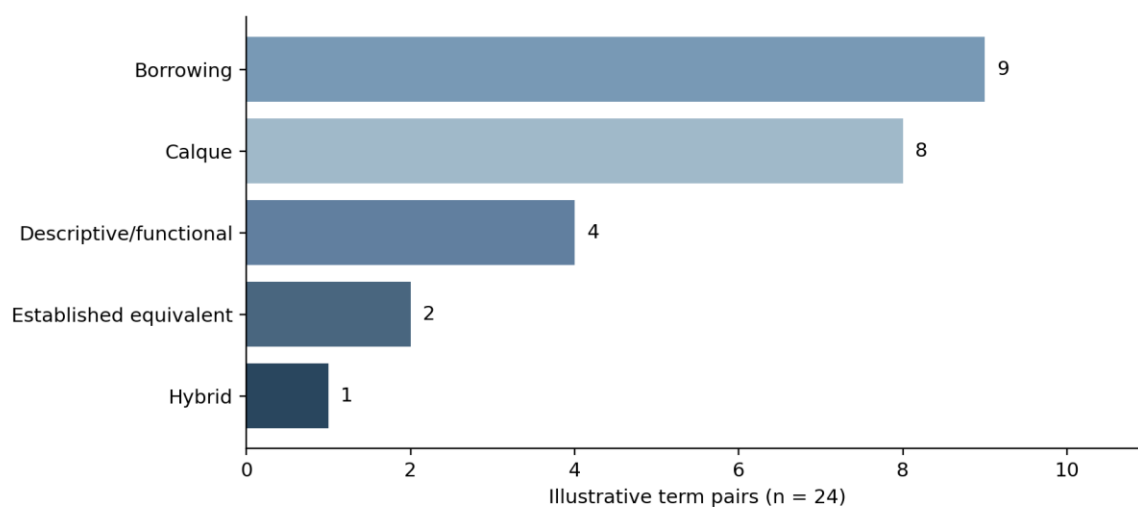


Figure 1. Distribution of primary transfer mechanisms in the illustrative 24-term sample (author's classification)

Borrowings such as server and skaner preserve a recognizable international technical label, while the compound ma'lumotlar bazasi renders the semantic components of database. The contrast is important: a direct loan can provide international recognition yet require orthographic stabilization; a calque can improve transparency yet introduce structural or conceptual mismatch when a source term is polysemous.

Figure 2 offers a compact decision model for editorial validation. It separates identification of the technical concept from selection of a linguistic form, reducing the risk that a familiar English word is translated without checking its specialized meaning.

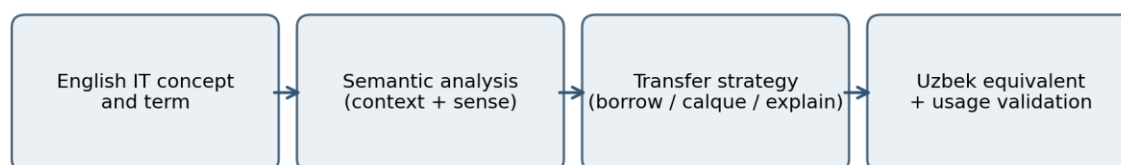


Figure 2. Concept-based workflow for validating English–Uzbek IT term equivalents (author’s scheme)

4. DISCUSSION

The central trade-off is between international recognizability and local semantic accessibility. Borrowing is efficient when a designation is already entrenched in software documentation or professional speech; however, uncoordinated spelling variants may complicate indexing and teaching. Calquing can strengthen comprehension when the parts map clearly onto the underlying concept. Yet metaphorical English labels, especially in cloud services and cybersecurity, require contextual checks: an attractive literal form is not necessarily an adequate technical definition.

An additional issue is grammatical integration. Uzbek suffixation permits productive combinations with borrowed bases, which can be useful for technical writing but may conceal inconsistencies in root spelling. Hybrid formations such as *veb-sahifa* illustrate this interaction. Conversely, an expression such as *yuklab olish* makes an operation transparent but may vary according to whether the speaker means retrieving a file, installing software, or synchronizing data. Terminological dictionaries should therefore record domain, definition, approved variant, usage example and any disfavored variants rather than publish isolated bilingual word lists.

The evidence presented here has clear limitations. The 24 terms were selected to display categories and were not sampled from an independently documented corpus. The classification is analytically useful but cannot establish diachronic change, users’ preferences, or translation effectiveness. Stronger future research would collect parallel documentation, textbooks and interface strings, then report corpus provenance, inter-

annotator agreement and frequency by domain. User comprehension could be assessed experimentally by comparing competing labels in matched tasks.

5. CONCLUSION

English–Uzbek IT terminology develops through several interacting mechanisms, none of which should be treated as universally preferable. In the illustrative material, loans facilitate recognition, calques make conceptual structure visible, and explanatory renderings can resolve specialized meanings. A concept-first approach provides a defensible basis for choosing among them. For publishers, translators and educators, the immediate practical priority is a consistently maintained bilingual terminology register with definitions, examples and editorial rules. Representative quantitative conclusions must await a systematically collected corpus.

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