

WAYS

OF STANDARDIZING BORROWED TERMS

FORMAS DE ESTANDARIZAR LOS TÉRMINOS PRESTADOS

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ABSTRACT

In this we evaluate the prevailing approaches to the standardization of borrowed technical terms, with a focus on the Azerbaijani linguistic context and comparable multilingual settings. Borrowings are central to the diffusion of scientific and technological knowledge, yet their adaptation often produces orthographic, morphological and terminological inconsistencies that hinder communication, documentation and pedagogy. The literature exhibits definitional ambiguity regarding “unification” and a practical gap between normative, institution-led procedures and empirically grounded usage. To address these issues, it was conducted a systematic review of theoretical contributions, national orthographic rules, terminological dictionaries, and representative terminological examples to compare three principal models of standardization — top-down (institutional codification), bottom-up (corpus and community-based adoption), and hybrid (corpus extraction followed by institutional validation). Findings indicate that each model has distinct strengths and weaknesses: top-down strategies prioritize coherence and interoperability but risk poor uptake; bottom-up procedures enhance legitimacy and speed but may proliferate incompatible variants; hybrid models offer the best trade-off provided they implement transparent selection criteria. The analysis further documents the legacy influence of intermediary languages (notably Russian) on Azerbaijani orthographic practice and highlights the analytic necessity of distinguishing loanwords from international terms when selecting standard forms. We conclude with operational recommendations: adopt hybrid workflows, formalize evaluation criteria (phonological, morphological and derivational checks), and coordinate corpus resources with institutional bodies to produce updated, reliable monolingual and bilingual terminological references. These measures will improve terminological clarity and support consistent technical communication across languages.

Keywords: Terms, Written form, Language, Unification, Systematization.

RESUMEN

En este trabajo se evalúa los enfoques predominantes para la estandarización de términos técnicos prestados, con especial atención al contexto lingüístico azerbaiyano y entornos multilingües comparables. Los préstamos son fundamentales para la difusión del conocimiento científico y tecnológico; sin embargo, su adaptación a menudo produce

inconsistencias ortográficas, morfológicas y terminológicas que dificultan la comunicación, la documentación y la pedagogía. La literatura muestra ambigüedad en las definiciones respecto a la “unificación” y una brecha práctica entre los procedimientos normativos institucionales y el uso empíricamente fundamentado. Para abordar estas cuestiones, se realizó una revisión sistemática de contribuciones teóricas, normas ortográficas nacionales, diccionarios terminológicos y ejemplos terminológicos representativos para comparar tres modelos principales de estandarización: descendente (codificación institucional), ascendente (adopción comunitaria y de corpus) e híbrido (extracción de corpus seguida de validación institucional). Los hallazgos indican que cada modelo presenta fortalezas y debilidades distintivas: las estrategias descendentes priorizan la coherencia y la interoperabilidad, pero corren el riesgo de una adopción deficiente; los procedimientos ascendentes mejoran la legitimidad y la velocidad, pero pueden proliferar variantes incompatibles. Los modelos híbridos ofrecen la mejor alternativa, siempre que implementen criterios de selección transparentes. El análisis documenta además la influencia heredada de las lenguas intermedias (en particular, el ruso) en la práctica ortográfica azerbaiyana y destaca la necesidad analítica de distinguir los préstamos de los términos internacionales al seleccionar las formas estándar. Se concluye con recomendaciones operativas: adoptar flujos de trabajo híbridos, formalizar los criterios de evaluación (verificaciones fonológicas, morfológicas y derivativas) y coordinar los recursos del corpus con organismos institucionales para producir referencias terminológicas monolingües y bilingües actualizadas y fiables. Estas medidas mejorarán la claridad terminológica y promoverán una comunicación técnica coherente entre las lenguas.

Palabras clave: Términos, Forma escrita, Lengua, Unificación, Sistematización.

INTRODUCTION

In language studies, the process of standardizing borrowed terms involves both regulation and unification as an integrated approach. Unification takes place after the initial establishment of a specialized terminological system, specifically following the regulation process (Faber & L'Homme, 2022). The term unification originates from the Latin words *unio* (equality) and *facere* (to make, to create). It encompasses the formation of specialized terminologies based on uniform principles at all necessary levels. The primary focus in defining this concept is on the meaning of the word unification itself, which is generally understood as registering and organizing terms into a single, standardized form. M.Sh. Gasimov defines unification

as follows: “Unification of terminology is the process of defining a single exemplary terminology for use as a means of communication in science, technology, economy, and culture” (Gasimov, 1973, p. 125). However, this definition does not fully clarify what unification entails. The term “single exemplary terminology” used in the definition is ambiguous, implying the possible existence of non-exemplary terminology as well. However, it is evident that the unification of specialized terms allows for the development of rules and criteria that enable the construction of a coherent and standardized terminological corpus based on unified principles.

Terminology operates within the domain of corpus planning—that is, the design and codification of the language “body” for specialized needs—while language planning also incorporates dimensions of status planning (raising or modifying the prestige of particular forms). When discussing technical borrowings, both dimensions intersect: deciding on the “official” form of a borrowing may require codification actions (spelling, inflection), educational dissemination (teaching the form), and institutional promotion (use in regulations and documentation) (Hjørland, 2023). Three main approaches can be distinguished, each with technical variants:

1. **Top-down approach**, headed by authorities and institutions (academies, committees, etc.), is based on rigorous concept definition, designation selection, and formal codification. Its main advantages include the presence of an agent in charge of terminology control and the coherence and uniformity it ensures across technical documents and industries, which promotes international interoperability (Hiel & Zenner, 2023). However, it has some serious drawbacks, such as the potential to become divorced from real usage, enforcing terminologies that are not acceptable in society or the workplace while ignoring legitimate variations (Trentanovi et al., 2023). Furthermore, its bureaucratic procedures may be slow in the face of rapid linguistic innovation, especially in technology domains. A paradigmatic example of this approach is the ISO 704 standard, which establishes principles for standardizing concepts and facilitating human communication.
2. The **bottom-up approach** emerges from empirical observation of actual usage in professional communities (linguistic corpora, social networks, specialized literature), where organically disseminated terms are proposed as standards. Promoted by associations, translators, or scientific journals, it stands out for its legitimacy through reflecting social acceptance, its rapid adaptation to dynamic fields (such as ICT), and its democratic nature, which reduces institutional asymmetries (Montagni et al., 2018). Nevertheless, it faces challenges including the potential proliferation

of variants that compromise interoperability, the lack of coordination mechanisms to consolidate preferred forms, and the risk of biased representation by prioritizing digitally active communities over broader professional groups or less connected regions.

3. **Hybrid approach**, which combines empirical methods (extraction of candidate terminology from specialized corpora) with institutional validation through a typical process that includes: identification of terms in use, discussion in mixed committees (professionals, linguists, and technicians), document piloting, and official publication. Supported by technologies such as corpus managers and collaborative platforms (e.g., national portals or Infoterm initiatives), it excels at balancing legitimacy of use with normative coherence while offering methodological flexibility and participatory transparency. However, it faces challenges such as organizational complexity (requiring intensive coordination between diverse actors and significant resources) and the risk of bureaucratization if protocols replicate the delays of the top-down model (Williams & Richardson, 2025).

Overall, the standardization of loanwords is situated at the intersection of terminology, language planning, and contemporary technological practices. It is not simply a matter of deciding on spellings or translations: standardizing loanwords requires coordinating conceptual criteria (what concept does the loanword designate?), formal criteria (spelling, morphology), functional criteria (use in technical and educational texts), and administrative criteria (which institutions adopt and disseminate the standardized form) (Kumar et al., 2012). Within the framework of technical terminology, standardization serves to ensure clarity and communicative reproducibility among specialists, as well as interoperability in documentation, regulations, metadata, and information systems (ISO 704, 2022). Based on this general objective, the standardization of loanwords raises specific questions: When is it appropriate to adapt a loanword phonetically versus transcribing it orthographically? What role should academic and standardization bodies play in response to the spontaneous adoption of forms by communities of practice? How can we integrate criteria for creating or selecting equivalent neologisms (calques, translations) while preserving the original term?

DEVELOPMENT

In a given linguistic environment, the dominance of one language influences other languages presents in that space. This often raises the issue of harmonizing terminology across languages. Y. D. Desheriyev, analyzing the unification of terminology in Soviet republics where Russian was the dominant language, wrote: "The main challenge in unifying, universalizing, and internationalizing terminology

in a multinational and multilingual state is related to the socio-political, socio-economic, ethno-linguistic, and cultural-historical conditions in which numerous languages operate. This issue is not dependent on linguistic tools or techniques" (Desheriev, 1966, p. 47). Here, the idea of standardizing terms across multiple languages is being emphasized. For this reason, Desheriyev used the expressions "universalizing terms" and "internationalizing terms." However, unification conducted solely within the Russian linguistic environment could not be considered true internationalization—instead, it represented regional standardization at best.

A. A. Reformatzky, when discussing unification, emphasized the creation of terms and identified two forms of unification: unification through foreign languages and unification based on the internal resources of the language. He noted that in external unification, variants that comply with the norms of the target language and accurately convey the concept's meaning are selected (Reformatzky, 1955, p. 210). Essentially, this process encompasses both the borrowing of terms and their creation using the internal linguistic resources of the language.

M. Adilov, although not explicitly defining the concept of unification, discussed how inconsistencies within the terminological system can be resolved through the unification process. He argued that if the term probing is accepted within the terminological system, then compound terms such as active method of remote probing and satellite probing of the atmosphere should also consistently incorporate the term probing (Adilov, 1986, p. 31). The author's explanation is accurate, as it emphasizes the importance of consistency and systematic application in terminology formation, ensuring that newly created terms follow a unified principle.

In Russian linguistics, definitions of unification are more commonly found. Danilenko and Skvortsov describe unification as: "A multifaceted activity that involves the formation of specialized terminologies at all necessary levels—semantic, logical, and linguistic—based on uniform principles" (Danilenko & Skvortsov, 1981, p. 9). Similarly, G.V. Stepanov defines unification as: "The formation of scientific and technical concepts in the national languages of multinational states based on a unified system and principles" (Stepanov, 1965, p. 13). It is also worth noting that Stepanov's views align closely with those of Y. D. Desheriyev. Their perspective focuses on the standardization of terminology in the national languages of former Soviet states, ensuring that terms are developed and structured according to a common set of principles (Desheriev, 1966, p. 151).

In recent literature and various official documents, the definition of unification has been provided in multiple contexts (Arvidsson et al., 2024; Björklund et al., 2024; Ng et al., 2023; Ragaert et al., 2023). Several sources maintain the same definition of unification while also outlining the sequential process involved in its implementation. The following steps are required to carry out unification: 1) analysis of all terms referring to a given concept, including synonyms and duplicate terms; 2) elimination of outdated terms that are no longer used in the field; 3) removal of terms that do not conform to linguistic norms from the terminological system; 4) verification that the selected term meets linguistic and normative standards; 5) adoption of the final term that satisfies all established criteria and mandating its usage. This defines unification as a multifaceted activity that ensures the standardization of terminology by harmonizing the names of concepts across various hierarchical levels of normative acts, ensuring clarity and consistency in terminology. Additionally, the dictionary of certification and standardization terminology provides the following definition of unification: "Unification is the optimization of the measurements and types of products, processes, and services to meet necessary requirements. Unification generally eliminates excessive variety. The term unification refers to the standardization of the technical characteristics of a product, document, or term" (Danilenko & Skvortsov, 1981, p. 20).

Latyshev (1988, p. 234) defines unification as follows: "Unification is one of the key aspects of terminology normalization. It is related to the regulation of term meanings." In practice, unification is carried out through the following steps: 1) analysis of terms specific to a particular field; 2) selection of the most appropriately motivated term from among polysemous (multiple-meaning) terms; 3) clarification of meaning if a term has an ambiguous or vague definition; 4) reclassification of a term at a higher level if its meaning is too broad within the given terminological system. In addition, as a result of interlingual unification, the number of translation variants for a term in dictionaries should be significantly reduced, ensuring a one-to-one and unambiguous correspondence between the term and its concept within a specific field of knowledge. Various researchers in Russian linguistics have also examined the problem of unification, exploring its theoretical and practical implications (Reformatsky, 1967, p. 32; Yakhontov, 1990, pp. 39–47; Yartseva, 1960, p. 102).

Research on the problem of unification has also been conducted in Azerbaijani linguistic studies. After M. Gasimov, Azerbaijani terminologists began to focus more on this issue, particularly in the late 1980s. Scholars such as M. Gasimov, V. Aslanov, M. Yusifov, S. Khalilova, M.

Ismayilova, S. Sadiqova, and others have contributed to the study of unification. Currently, research dedicated to specialized terminologies also addresses issues of regulation and unification to varying degrees, ensuring that terminology remains systematic, consistent, and aligned with linguistic norms in different fields. If we take into account the chronological sequence and the complex approach to the issue, S. Sadiqova's research on unification in Azerbaijani terminology is more extensive. In S. Sadiqova's monograph, the forms of unification and standardization of terminology are determined. In particular, the factors that create parallelism, the process of their unification, and the issues of their identification in terminological dictionaries are comprehensively investigated (Sadiqova, 2011, p. 181).

The author brought various issues related to unification to the fore and classified the types of unification. However, the author limited herself to mentioning the definitions given to unification by other researchers in her research and did not provide her own definition of unification. S. Sadiqova defined unification as follows: "The unification of field terminology means eliminating diversity, finding an unambiguous expression of a specific concept, and determining methods and models of term creation" (Sadiqova, 2011, p. 182). Thus, both in Russian linguistics and in Azerbaijani linguistics, the unification of terms is explained as a complex process of bringing field terms into a single form. Having provided a brief explanation and analysis of the main ideas related to this problem in the works of various authors above, it can be concluded that unification is the process of bringing field terms into a single form using logical and linguistic methods based on the system of concepts of this field.

A comparative study of terms recorded in various dictionaries plays an important role in opening the general picture of field terminology. V.P. Danilenko shows that terminologists work with terminological dictionaries; they study the units included in the dictionary by field specialists. In his opinion, this is not enough. Definition plays an important role in naming the concept. The characteristics of the field and the requirements imposed on terms require resorting to the methods of definitive analysis, identification, genus-species comparison, thesaurus, semantic networks, and nested analysis. In definitive analysis, the concept and the term denoting it are compared. Let us look at specific examples to explain this.

"Helpline - A line on the display screen that shows possible commands of an interactive system and their meaning" (Karimov, 2003, p. 325). The word "line" is used in the definition. Visual information is also provided on the display screen in the form of a line. This information appears on

the screen to help the user. From a logical point of view, the term “helpline” is considered to be justified. The term was formed in other languages—English and Turkish—according to the same system. In English, the terms “help line” are used, and in Turkish, the terms “yardımçı satır” are used. There are certain nuances in the semantics of the words “yardım” and “kömək” in Azerbaijani. However, for the purpose of commonality and unification in the relevant field terminologies of Azerbaijani and Turkish, it would be possible to use the word “yardımçı” in Azerbaijani or to adopt the word “köməkçi” during unification in Turkish. That is, in the process of unification of terminology, the work of adapting the constituent units of the terminological combination to a certain language system or language group, in this case, to the Turkic language group, can be carried out. This issue can be attributed to the subgroup of interlingual unification of the unification of terminologies of related languages.

“Line expression - An expression consisting of a string-type constant, variable, and their combination (concatenation)” (Karimov, 2003, pp. 16–20). The word “line” is used both in the definition and in the terminological combination itself. Due to its visual appearance and essence, it encompasses the concept of “line expression.” It was formed by combining the same words in English and Turkish. However, in Azerbaijani, the terminological combination is in the form of a type II defining word combination. In Turkish, it is formed in the type I defining word combination: “line expression.” Since there is no possessive case in English, the structural structure is the same: “line expression.” Unification implies integration into a single system, and in this case, it is important to take into account the similarity with the structure of terms in other languages. It follows from this that the term could also be formed in Azerbaijani as a type of “line expression.”

Unification should not include the consolidation of terms into a single form only at the language level. It is true that in earlier periods, that is, in the first period of the formation of field terminologies in the Azerbaijani language—from the 1920s to the 1950s—two languages, Russian and Azerbaijani, were taken as the basis. However, at present, terminology in the Azerbaijani language and at the international level has advanced sufficiently. It can be said that work is being carried out to regulate, unify, and standardize most field terminologies in many languages. For now, standardization in this direction is somewhat lagging behind. However, great work is being done in the direction of standardization in international languages, including Russian.

In terms of unification of Azerbaijani terminology, taking into account a number of languages, the two-volume

dictionary of computer science terms prepared under the leadership and authorship of S. Karimov can be considered the first fundamental work in this field in Azerbaijan. The involvement of Turkish language and computer science specialists in the compilation of the dictionary indicates serious scientific research by the authors and confirms the prior consideration of a number of principles of unification. S. Karimov noted that the following principles were taken into account in determining the Azerbaijani equivalents of terms: “1) terms that are identical in English and Russian are preserved in the Azerbaijani language where possible (for example: pixel, printer, service, etc.); 2) when creating a term, its literal meaning, but not its implied meaning, is taken into account (for example: videolennyi fayl - marked file); 3) new terms that have not been used in Azerbaijani technical literature so far have been adopted on the basis of the general opinion of experts (for example: struyniy printer - inkjet printer, prokrutka изображения - image twisting); 4) terms whose translations in technical literature in Azerbaijani were incorrect have been revised and Azerbaijani versions of the terms were corrected” (Karimov, 2003, pp. 16–20).

Linguistic issues of unification arise more in the process of unification of borrowed terms. The unification of borrowed terms is a process closely related to the phenomenon of assimilation of borrowed terms. That is, when unifying borrowed terms, their regularities and norms of assimilation in the language should be taken into account. It is no coincidence that many researchers, when discussing unification, also raise the issue of assimilation of borrowed terms. For example, in the study of S. Sadiqova, the unification and assimilation of borrowed terms in terminology are considered together (Sadiqova, 2011, pp. 213–225). Some researchers, when discussing unification, examine precisely the issues of assimilation (Yartseva, 1960, p. 57).

Undoubtedly, in the process of unification, borrowed terms should be considered separately and their specifics should be determined. This is because at this time, the issues of whether the term has a counterpart in the target language, the assimilation of the borrowing, internationalization during unification, and commonality with terms of related languages are also resolved. In order to carry out these works, it is necessary to determine whether the term is borrowed, determine its origin, and clarify how it is used in international terminology, as well as in the terminology of related languages. The problem of borrowing and borrowed words has been widely studied in linguistics. A similar aspect is also evident in terminology. In research works on field terminologies, as well as theoretical issues of terminology, the problem of borrowing terms and, in general, the problem of borrowed terms is always the object

of research. However, the assimilation of borrowings has been studied by researchers in various aspects. In terminology, they also create many problems. In Russian and Azerbaijani linguistics, various aspects of this issue have been the focus of attention in separate research works. It is clear that one of the most important tasks in acquisition is to determine to what extent the acquisition meets the requirements of the target language.

Sadiqova S. shows that the complete and partial unification of terminology contributes to a better understanding of the lexical-semantic content of terms. However, the objective structure of languages with different systems, internal development patterns, and differences between the intralinguistic features of languages prevent this process from being carried out both naturally and artificially. D.S. Lotte puts forward three criteria for determining the degree of assimilation of borrowed terms: 1) the correspondence of the sound composition of the word; 2) the correspondence of the morphological structure of the word; 3) derivation (Lotte, 1961, p. 10). The borrowed term should be checked in the process of unification according to all three criteria.

In terminology, the presence of derivatives of the borrowed term is also considered as the use of this term in other terms. In this case, the term participates in the formation of other terms of the field. For example, in computer science, "terminal" is used both as a separate term and in the term-word combinations "terminal object," "terminal processor," and "terminal frame." In each of these terms, the composition of the word corresponds to the units of the phoneme system of the Azerbaijani language, and the morphological structure is consistent. "Terminal" is also used in other fields, for example, in aviation and customs terminology. This is an inter-field homonym term. The above-mentioned features indicate that the term has been adopted in Azerbaijani terminology. The borrowed word "crystal" in chemical terminology is used in the terms "crystal," "crystallizer," "crystallization," and "crystal hydrates." In one of the new terms (crystallizer) in which the same term is involved, the subsequent components are also borrowed. However, in the term "crystallization," the term has adopted word-formation tools specific to the Azerbaijani language. During the unification of field terms, attention is paid to the fulfillment of such conditions by borrowings. However, there may be cases when a term is not used as a homonym term in other fields and does not participate in the creation of term-word combinations. There is a need for such terms in the language.

It should be borne in mind that the term adopted in the process of unification must be linguistically correct. Reformatsky (1955, p. 187) puts forward 11 criteria for

the linguistic correctness of a term: 1) internationality; 2) comprehensibility; 3) specialization; 4) accuracy; 5) unambiguousness; 6) unity; 7) system-internal coherence; 8) nesting property; 9) laconicism; 10) progressiveness; 11) substantiveness. Some of the mentioned criteria are related to linguistic norms, while others arise from the requirements imposed on the term. For example, accuracy, uniformity, system-internal coherence, and unambiguousness arise from the requirements imposed on the term. Specialization and nesting are not requirements imposed on the term. These are features related to the field. It is clear that the criteria proposed by A. Reformatsky can be used for the evaluation of the term. Normative criteria for the evaluation of terminology imply the conditions of the emergence and use of terms in the main areas of their development, that is, in scientific language and in the speech of specialists in this or that scientific field. The principles of relevance, expediency and similarity have been adopted for the specific professional realization of the language system and structure.

V. Danilenko and L. Skvortsov note that the principle of expediency arises from the need for optimal expression of the concept. "Optimality is manifested in the use of extremely economical and, at the same time, semantically extensive terminological methods (abbreviations, term-word combinations, specific models of compositionally complex words, word combinations, etc.)" (Danilenko & Skvortsov, 1981, p. 24). Let us consider several examples of the use of the optimality condition in the unification of terms adopted in field terminology.

The same term "regeneration" is used in all three of the term-word combinations: data regeneration, image regeneration, and memory regeneration. On the one hand, this complies with the principle of optimality. That is, it meets the requirement by being used in the creation of large-scale terms. On the other hand, the principle of economy is violated. In English, these three terms are as follows: refresh, screen refresh, and memory regeneration. In Turkish: tazeleme, görüntünü tazeleme, and belleği tazeleme. When comparing the terms in the three languages, it is striking that the first term in English consists of one word. In Azerbaijani and Turkish, as well as in Russian, this term consists of two words. Therefore, the structural similarity is violated. Refresh (Eng.) – verileri tazeleme (Turk.) – verilənlərin regenerasiyası (Azer.). "Regeneration" means to create again or anew. It means to form. From this point of view, the word *təzələmə*, which is the Azerbaijani equivalent or phonetic variant of the term in Turkish, could completely replace the term. That is, "refresh" means to create again, to renew what was before. The principle of economy is taken into account in the English terminology

of computer science. Here, the term expresses the single meaning of renewal. The term “regeneration of data” was formed in Azerbaijani based on the Russian word “regerasiya dannix.” The word “data” was also included based on the definition of the concept in Turkish (Refresh - Reading and rewriting of data for storage in a dynamic memory device). In our opinion, during unification, it would be more appropriate to take the term from English through a calque instead of a half calque from Russian. Of course, it is important to learn the opinion of experts in order to accept this term as “regeneration.” In any case, the absence of a separate term “regeneration” in the dictionary, in our opinion, allows this (Karimov, 2003).

The principle of similarity arises from the requirement that terms included in a certain system or species-genus relationship be created on the basis of the same principles. For example: laser, maser, grazer; bit, etc. (Guliyeva, 2007, p. 25). In selecting the equivalent of new terms, preference is given to terms used internationally or in an international language. This often happens when there is no corresponding term in the language or when an international term is adopted. Adopting an international term is not a matter of optimization or consideration of the similarity condition. Examples include: computer, printer, pixel, service, dialog, scanner, register, display, monitor, monitoring, president, referendum, business, excise, investment, manager, moderator, leasing, etc. Internationally used systems, research software packages, and editors (MS-DOS, Windows, Word, Excel, FoxPro), symbol and sign names (integral), unit names (Ohm, Joule, Watt, Volt, etc.) are accepted to be kept as is and rendered with the graphemes of the target language.

Homonymous terms that have different meanings in different fields of technology should be defined according to the characteristics of the subject area. For example, the fact that the term “terminal” is an inter-field homonym is the result of this definition. In order to prevent the emergence of a homonym term within the field, it is important to adopt a new term. For example, in computer science, the term “продукция” in Russian, which originated from the Latin word production, has an equivalent in the Azerbaijani computer science terminology as “product.” However, while “product” is sometimes used in computer science (e.g., software product), the term “production” is used in expert systems in order to avoid the emergence of an intra-field homonym.

The formation of a newly created term according to similar principles in the process of copying is also of particular importance. Sometimes in copying we are faced with the naming of the same concept in different variants. For example: quantization/quantization, segmentation/

segmentation, probing/probing, etc. S. Almammadova, noting the importance of eliminating such defects during unification, writes that if we accept the term “zondirovanie” as “probing,” then it is not correct to give the complex term “aktivniy metod distanuionnogo zondirovaniye” as “active method of remote sensing,” and the term combination “zondirovanie atmosferi sputnikovoe” should be used not as “probing of the atmosphere from a satellite,” but as “satellite probing of the atmosphere” (Almammadova, 2016, p. 31). Indeed, during unification it is more correct to maintain the traditional variant accepted within the field. It should also be noted that such defects appear more often in the process of creating term-word combinations. Researchers use different types of defining word combinations and forget the main meaning arising from the definition of the term. As a result, inconsistencies are revealed in the terms formed by different types of defining word combinations. Kh. Gasimova also draws attention to this issue and shows that “most of the inconsistencies and internal contradictions relate to the formal features of word combinations: minor gamma/major gamma, beta-rays/beta rays, alpha-rays/alpha rays, positivist view/anarchist view, optimistic philosophy/imperialist war, etc.” (Gasimova, 2009, pp. 218–219).

The process of unification of borrowed terms, as mentioned, is directly related to their assimilation. In general, there are certain similarities and differences between the unification of borrowed words in a language and the assimilation of terms. In the process of normalizing the language, developing and adopting its spelling and orthoepy rules, various aspects of the assimilation of borrowed words are taken into account. Since this process does not concern terminology, but the language in general, it is as if a unification of borrowed words is being carried out. It is important to assimilate borrowings at different levels in the language. Assimilation covers graphic, phonetic, lexical, and grammatical levels. During the unification of terms, assimilation at these levels is taken into account. Graphic and phonetic assimilation combines both the spelling of borrowings and the pronunciation rules. The accepted spelling and orthoepy rules of the Azerbaijani language are also considered mandatory rules for borrowed terms.

In the Azerbaijani language, there is an almost one-to-one phoneme-grapheme correspondence. That is, each grapheme corresponds to one phoneme. Exceptions in the composition of words and word-forms are regulated by the rules of orthoepy. From this point of view, the graphic and phonetic assimilation of borrowed terms is mainly resolved by the rules of their spelling. The process of graphic and phonetic assimilation of borrowed terms according to the latest spelling rules of the Azerbaijani language also

affects the unification process. It should be taken into account that borrowed terms can pass into the language indirectly and directly. For many years, words and terms of European origin have passed into the Azerbaijani language through the Russian language. Therefore, the features of the Russian language were taken into account when developing the spelling rules. The rules regarding the spelling of vowels in the orthography of the Azerbaijani language are explained in terms of the Russian version of the borrowing. To explain this idea, let us consider some rules of spelling.

Words with the vowel “o” are written with “o,” regardless of whether they are pronounced with “a” or “o”: automaton, bicycle, encyclopedia, motor, soloist, etc. Here, of course, we are talking about the pronunciation of the mentioned words in Russian. The term “automaton” [ɔ: ˈtəmətɒn], which passed into Russian through English, should be pronounced as [o: təmətɒn] according to its orthoepy in the source language. However, the word passed into Russian as “автомат.” The term “автомат” also entered Azerbaijani through Russian. The grapheme “o” inside the word is also written as “o,” regardless of its pronunciation in Russian. The word passed into the terminologies of Kyrgyz, Turkmen, and Uzbek languages in the same way. The term “soloist”, which is included in musical terminology, passed from Italian to English. In English, the term is in the form of “soloist [soulouist]”. As can be seen from the transcription, the pronunciation in English is completely different. Therefore, orthographic and orthoepic standardization in the Azerbaijani language was based on the Russian language.

The fourth article of the spelling rules of the Azerbaijani language states: “The following borrowed words ending in ‘a’ are written without ‘a’: questionnaire, pharmacy, armature, atmosphere, showcase, newspaper, idiom, cabin, cassette, office, candy, ribbon, machine, perspective, play, planet, advertisement, system, quote, metaphor”. The expression regarding borrowed words ending in ‘a’ in this article is flawed. The spelling rules of the Azerbaijani language are not created exclusively for linguists and speakers of the Russian language. In addition to being a normative document, the spelling rules are intended for all speakers of the language and, in general, for all users of this language. These rules should be both learned and applied. The rules should be written quite simply and clearly. From the expression “borrowed words ending in ‘a’” in the given rule, it follows that the user possesses information about all such words. These words ending in ‘a’ are words used in the Russian language. The rule relates to the spelling of words borrowed from or through

the Russian language. Here, the spelling of a number of borrowed words is clarified.

However, the spelling rules are not intended only to standardize common words. Terms are also standardized based on these rules and included in dictionaries. There are quite a few terms ending in ‘a’ in the field terminologies of the Azerbaijani language. For example: diagram - diagram, radiogram - radiogram, telefonogram - telefonogram, grapheme - grapheme, gramme - gramme, morpheme - morpheme, temperature - temperature, etc. The above rule does not address the spelling of any of these terms. As a result, the rule causes the spelling of such terms to remain ambiguous. Furthermore, other units, both those listed in the spelling rules and those given as examples, are terms. For example: “anket” - clerical work, “aptek” - medicine, “armatur” - construction, “atmosfera” - geography, “vitryn” - trade/construction, “gazet” - media, “idiom” - linguistics, “kayut” - seafaring, “kaset” - electronics. All of the above-mentioned terms are also borrowed terms in Russian. They were adopted into Russian and took the appropriate form. During their adoption into Azerbaijani, the phoneme “a” at the end is dropped.

L.B. Ivina, examining the elementary terminological semantics that are combined in terms denoting concepts belonging to the process category, notes the existence of two main types: 1) distinguishing features that exist before the emergence of the named concept; 2) distinguishing features that arise in the naming process (Ivina, 2003, pp. 39–40). These ideas of the author, on the one hand, concern the processing of components in terms; on the other hand, the word combination or composition contains inconsistencies in terms. The level at which identification is carried out is sometimes controversial. Initial experience shows that this should be done at the level of the main term.

In the spelling dictionary of the Azerbaijani language, in the section on the spelling of complex words, Article 18 notes that “words containing the particles anti, audio, auto, avia, bio, electro, faqo, foto, infra, hidro, makro, mikro, mono, nano, neyro, paleo, poli, psevido, stereo, super, trans, ultra, vibro, video, zoo are written adjacently” (Aliyeva, 1994, p. 15). Here, too, the orthographic standardization was based on the Russian language, and the unification of term-elements in the Russian language was introduced into the Azerbaijani language.

In general, violations of the principle of similarity and the emergence of inconsistencies are observed in all field terminologies. In our opinion, linguistic terminology is no exception in this regard. M. Adilov writes regarding the unification of linguistic terms:

From the very beginning of the science of language, its own terminological system has been formed, and after a certain period of evolution, it has become established and stabilized. However, of course, at first linguistic terms arose unsystematically and spontaneously. As in individual fields of science, many centuries had to pass before the issues of collecting, improving, and unifying terms in linguistics could be resolved. (Adilov, 1986, p. 104).

The author refers to the period that has passed since the formation and development of linguistic terminology. However, there is still a need for the systematization and unification of linguistic terminology at present. This process will allow both the reconsideration and acceptance of newly created terms and the correction of existing terms.

When terms are borrowed from other languages and used as they are, the same terms are used in different languages. Naming terms in the same form across different languages facilitates the use of scientific literature in another language by speakers of different languages and helps disseminate information in the field. Therefore, when discussing unification, special attention is paid to the issue of borrowed and international terms.

Another issue related to unification is the use of abbreviations in terminology. There are many abbreviations in a number of field terminologies. In some fields, new abbreviations are introduced into the terminological system to eliminate the excessive length of terms. As the number of terminological combinations with complex composition increases, the number of abbreviation variants replacing them also increases. Sadiqova S.A., focusing on the use of multi-component terminological combinations in terminology, shows that:

the number of terms created through abbreviations is also increasing in connection with ever-developing scientific and technical progress. Polylexemic names have revealed the necessity of such a method, because there is a great need to replace long-form names with short words. (Sadiqova, 2011, p. 345).

Thus, the adoption of abbreviations or the language from which they are taken is decided in the process of standardizing terms. The unification takes into account the full coverage of the meaning of the term and its similarity to terms in other languages. In unification, the form and system of writing terms are determined. Writing is based on the principle of external similarity. This aspect is often considered important for the writing of nomenclatures.

CONCLUSIONS

The specialized terminology of the Azerbaijani language is predominantly made up of borrowed languages. However, terminological unification goes beyond the mere incorporation of foreign terms or the integration of international terms into the language's terminological system. This complexity is intensified because the terms originate from languages that differ significantly in their structural and typological characteristics, origin, and scope of the social functions they perform. To address these challenges, it is essential to establish robust criteria that allow these terms to be adapted to the grammatical and phonological rules specific to Azerbaijani. This need has given rise to the concept of unifying the external form of terms worldwide, although this process of formal adaptation is not always feasible in practice.

In the unification process, it is imperative to distinguish two fundamental categories of terms: loanwords and international terms. As Sadiqova rightly points out, this distinction constitutes one of the most urgent issues in terminology. The researcher explains that "although under both names the term passes from foreign languages to the language, and perhaps for this reason researchers identify them without differentiating them, when we pay attention to their scientific aspects, distinctive characteristics emerge that make it scientifically necessary to analyze them separately". Thus, international terms require the adoption of a form already accepted in multiple languages, and it is essential that they maintain similarity in both their sound and graphic form across different languages.

During the regulation and unification process, the multivariate nature of terms must be eliminated. In this context, the problem arises of determining which variant to select from the multiple available options, a decision that must be based on established scientific and usage criteria. Ultimately, the successful completion of the terminology unification process significantly facilitates the development of monolingual, bilingual, and multilingual dictionaries, achieving considerably more effective results. Historically, the compilation of dictionaries, especially bilingual translation dictionaries, was carried out without sufficient regulation and unification of specialized terminologies. Considering the current level of terminological development in the Azerbaijani language, the need to develop new dictionaries following the regulation and unification processes is confirmed. These dictionaries will constitute more precise and reliable tools for specialized use of the language.

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