STANDARDIZATION

OF TERMS IN TERMINOLOGICAL DICTIONARIES

ESTANDARIZACIÓN DE TÉRMINOS EN DICCIONARIOS TERMINOLÓGICOS

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ABSTRACT

Terminological standardization ensures clarity, coherence, and precision in specialized communication, avoiding misunderstandings where conceptual accuracy is critical and collaboration in a globalized world. Despite the existence of international standards and consolidated theoretical and practical models, operational challenges persist: the accelerated proliferation of fields, the lack of user-friendly systems, poor coordination between organizations, and rigid approaches that fail to capture the dynamic nature of terminology. This paper analyzes the process of systematizing specialized lexicons, laying the groundwork for the development of coherent normative dictionaries. It was found that terminological standardization requires a comprehensive, two-phase approach (systematization and logical-material modeling) that guarantees the univocality and internal coherence of the terminological system. This systematic framework requires that standard terms meet rigorous requirements, such as technical precision, adequate adaptation to production processes, functional differentiation, and linguistic economy. Furthermore, the adoption of thesauri and ontological models significantly improves the navigation and contextualization of terms, providing users with clearer conceptual relationships and hierarchical structures. In this constantly evolving landscape, machine learning-based tools and collaborative platforms stand out as promising solutions for streamlining the standardization process, offering innovative approaches that can accelerate standardization while maintaining quality and consistency across specialized domains. These results reinforce the need for an interdisciplinary and dynamic approach to terminology, integrating the continuous updating of standards, the inclusion of non-recommended variants with clear annotations, and the development of collaborative environments to maintain the validity and accessibility of terminology systems in the face of rapid knowledge expansion.

Keywords:

Terminology standardization, Lexical borrowing, Semantic precision, International Interoperability.

RESUMEN

La estandarización terminológica garantiza la claridad, la coherencia y la precisión en la comunicación especializada, evitando malentendidos donde la precisión conceptual es crucial, así como la colaboración en un mundo globalizado. A pesar de la existencia de estándares internacionales y modelos teóricos y prácticos consolidados, persisten desafíos operativos: la proliferación acelerada de campos, la falta de sistemas intuitivos, la deficiente coordinación entre

organizaciones y enfoques rígidos que no captan la naturaleza dinámica de la terminología. Este artículo analiza el proceso de sistematización de léxicos especializados, sentando las bases para el desarrollo de diccionarios normativos coherentes. Se concluye que la estandarización terminológica requiere un enfoque integral en dos fases (sistematización y modelado lógico-material) que garantice la univocidad y la coherencia interna del sistema terminológico. Este marco sistemático exige que los términos estándar cumplan requisitos rigurosos, como la precisión técnica, la adaptación adecuada a los procesos de producción, la diferenciación funcional y la economía lingüística. Además, la adopción de tesauros y modelos ontológicos mejora significativamente la navegación y la contextualización de los términos, proporcionando a los usuarios relaciones conceptuales y estructuras jerárquicas más claras. En este panorama en constante evolución, las herramientas basadas en aprendizaje automático y las plataformas colaborativas se destacan como soluciones prometedoras para agilizar el proceso de estandarización, ofreciendo enfoques innovadores que pueden acelerar la estandarización, manteniendo la calidad y la consistencia en dominios especializados. Estos resultados refuerzan la necesidad de un enfoque interdisciplinario y dinámico de la terminología, que integre la actualización continua de estándares, la inclusión de variantes no recomendadas con anotaciones claras y el desarrollo de entornos colaborativos para mantener la validez y la accesibilidad de los sistemas terminológicos ante la rápida expansión del conocimiento.

Palabras clave: Estandarización terminológica, Préstamo léxico, Precisión semántica, Interoperabilidad internacional.

INTRODUCTION

Terminological standardization has its roots in the General Theory of Terminology (GTT) advocated by Wüster (1985). Its central postulate is the primacy of the concept over the term. In an ideal system, concepts are systematically organized within a specialized domain, precisely and uniquely defined, and designated by a single preferred term per concept in a given context. Standardization, in this framework, is the process of selecting, among existing or proposed designations, the term that best meets criteria of precision, systematicity (coherence with the conceptual system), economy, and linguistic adequacy (Trojar, 2017). This standardization process ensures that terms have consistent meanings across different contexts and languages, which is highly significant in a globalized world where professionals from diverse backgrounds often collaborate. It has been understood that matters cannot be regulated if

key concepts are undefined—that is, if they are open to different interpretations or misunderstandings (Blind, 2024). Therefore, terminology standardization emerged as a distinct type of standardization. This consistency is especially important in technical fields, where precision is critical for safety and effectiveness. Consequently, terminology is essential for accurate communication in disciplines such as medicine, law, engineering, and information technology, where misunderstandings can have significant consequences (Beal et al., 2023; Fennelly et al., 2021; Sun & Chen, 2024).

In this context, terminology dictionaries are key tools, as they compile terms from a specific field, often organized into structured ontologies that reflect the relationships between concepts. These dictionaries serve as references for professionals, educators, and students, facilitating the learning and application of specialized vocabulary. Furthermore, they support interoperability between systems. The standardization of terms in terminology dictionaries is a fundamental process that ensures clarity, consistency, and precision in communication within specialized fields (Andrianova & Makarova, 2016). A properly expressed concept is unambiguously defined; therefore, providing two definitions for the same concept often leads to inaccuracy. This underscores the importance of precise definitions to avoid ambiguity, a central principle of terminology standardization.

The standardization process encompasses the drafting and approval of normative documents, but is not limited to selecting the correct variant of a borrowed term, it also includes the registration of non-standard variants, translation into major languages, and consideration of symbolic and literal connotations, reflecting a comprehensive approach. This process makes extensive use of the materials collected in the early stages of terminology standardization and unification. Furthermore, some borrowed terms are classified as international, grouped according to internationalization criteria. The fundamental concepts of field-specific terminology are often uniformly accepted across multiple languages and, in certain cases, are adopted as international standards. For example, terms such as "gram," "meter," "Angstrom," "Rontgen," "Coulomb," "radian," "Farad," "Stilb," "Kelvin," and "ampere" are used consistently throughout the world, with minimal adaptations in phonemes and graphemes to conform to linguistic systems. The process of defining a concept is central to terminology, as it establishes the boundaries of meaning that a term must adhere to. As Cabré (1999) emphasizes, terminology is not merely a matter of linguistic variation but a social and professional practice that seeks to ensure consistency in specialized communication. This

perspective aligns with the functionalist approach to terminology, which views terms as tools that serve specific communicative functions within a given field. In this framework, definitions must be both accurate and context-sensitive, ensuring that they reflect the epistemological and pragmatic dimensions of the concept they describe. Recent studies, such as those by Faber and León-Araúz (2014), further highlight the cognitive aspects of terminology, arguing that definitions must align with the mental models of experts in a given field to be effective.

The relationship between terms, concepts, and definitions is further complicated by the existence of synonyms, duplicates, and variants, which pose significant challenges to terminological standardization. For this reason, modern terminological dictionaries not only offer definitions, but also provide this additional information about the terms, which enriches their usefulness for users. While synonyms refer to different terms that convey the same concept, duplicates are redundant entries that may arise from linguistic variation or historical shifts in terminology. Variants, on the other hand, encompass different forms of a term that may be influenced by regional or disciplinary differences. The distinction between these categories is crucial in standardization efforts, as it determines whether a term should be retained, eliminated, or adapted to ensure consistency. However, it has also been pointed out that rigid application of such distinctions can sometimes overlook the dynamic nature of terminology, where multiple terms may coexist due to evolving conceptual frameworks or interdisciplinary influences (Steurs, 2023).

The theoretical framework of terminology also intersects with broader linguistic and epistemological debates, particularly regarding the nature of meaning and the extent to which language can be standardized without compromising its expressive potential. While some scholars advocate a rigid approach to terminology, emphasizing the necessity of fixed definitions and standardized usage, others argue for a more flexible perspective that accommodates variation and evolution (Pérez-Paredes & Curry, 2024). The tension between these viewpoints highlights the complexity of terminological standardization, as it must navigate the dual imperatives of precision and adaptability. However, both perspectives undoubtedly accept that the process of terminology standardization is complex and involves several stages and actors. But in general, this process generally includes the following steps:

1. **Term identification:** Determining which terms within a specific field require standardization.

2. **Definition development:** Creating precise definitions for these terms, often in consultation with experts.

3. **Consensus building:** Achieving agreement among stakeholders on the definitions and use of terms.

4. **Documentation:** Recording standardized terms in glossaries or terminology dictionaries.

5. **Dissemination:** Making standardized terms accessible to the relevant community.

Therefore, international organizations such as the International Organization for Standardization (ISO) play a crucial role. Technical committee ISO/TC 37 is dedicated to the standardization of principles, methods, and applications related to terminology and language resources (EUATC, 2024). This committee has developed standards such as ISO 704 (principles and methods for terminology) and ISO ISO 12616-1:2021[1], which guide the standardization process. The ISO 1087 standard[2] also provides guidelines for distinguishing between categories, emphasizing the need for terminological harmonization to prevent unnecessary proliferation of terms. However, the also process faces challenges. For example, standardization is difficult, lacks personalized training, is time-consuming, unrewarding, lacks user-friendly systems, and is poorly coordinated. To address these problems scientist have developed from web-based cooperative terminology work to modern machine learning algorithms (Noll et al., 2023). These innovations aim to improve the efficiency and accessibility of the process.

DEVELOPMENT

In the process of standardizing the formation of borrowed terms, the normative-technical document of standardization is divided into two categories: a) state standard – SS; b) sector standard - SST. Each standard document must have a unique number. For example, DST 2134-95, SST 1412-94, etc. The first part of these numbers identifies the field to which the standard belongs and its thematic focus. The second part shows the last two digits of the year in which the standard was prepared. Additionally, the standard document should note the year it was adopted and the duration it will remain in effect. When standardizing borrowed and international terms, if a term is confirmed as standard in a newly prepared standard document, the number of the previous standard document should be written in the definition column of the table. If there are any changes to the previously accepted standard of a

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1   ISO 12616-1:2021 - Terminology work in support of multilingual communication — Part 1: Fundamentals of translation-oriented terminography

2   ISO 1087:2019 - Terminology work and terminology science — Vocabulary

term, these must be reflected in the definition or annotation section.

A certain number of borrowed terms assimilate the grammatical and word-forming mechanisms of the language, facilitating the creation of new terms. The standardization of such loan terms initially follows the principles based on the original borrowed term. Subsequently, the standardization of derivative borrowings is carried out. Standards for borrowed elements or borrowed term-elements are also adopted. The semantics and linguistic characteristics of term-elements such as macro, micro, auto, nano, audio, and video are precisely defined. When preparing standards, the inclusion of the aforementioned types of term-elements must necessarily consider the established rules of the language's orthography. The examination of the standard variants of a series of terms formed with the element "micro" is provided below:

- Mikroəmr - Mikroproqramın əmri- The command of the microprogram. In English, the standard version of this term is "microinstruction" (Khudiyev, 1989, p.56). The term in English also consists of two components: 1) micro; 2) instruction. Instruction - 1. Teaching, educating; 2. Instruction, issuance of directives; 3. Education, knowledge, literacy; 4. Instructions, directive, decree.

As can be observed, the meanings of the second and fourth entries include the notion of "decree." In these contexts, the semantic value of "decree" closely aligns with that of "order." In the Russian language, the term exists as "микрокоманда." In Azerbaijani, this term is used in computer science and programming as an equivalent to "micro-order." Previously, the term "micro-command" was used in the Azerbaijani terminology for computer science and programming. The latest explanatory dictionary on computer science has adopted "micro-order" as a variant. In the Turkish language, the term "micro-command" is used. Authors of the new explanatory dictionary on computer science have based their adaptations on the Turkish variant. Both "micro-order" and "micro-command" are terms composed of borrowed elements. The "order" component of the "micro-order" term is borrowed from Arabic and has been long utilized in Azerbaijani. It is an interdisciplinary homonym used across various field terminologies. Structurally, adherence to the principle of similarity is observed in Azerbaijani, Russian, and English, whereas structural differences exist in Turkish, where components of the term are separated by a hyphen.

"Microcomputer" is an international term. It is used in the same sense in English, Russian, and Azerbaijani with some graphical variations. In Turkish, the second component is a word unique to the Turkish language: Mikrobilgisayar. In Azerbaijani, an unconventional variant of the term is "micro EHM," which was derived via transliteration and calque from the Russian term "micro GVM." The term "microcomputer" has been used without reference in the dictionary entry (See: micro GVM). The dictionary entry provides an explanation of the term. Micro EHM (microcomputer) is a small-sized computer system based on a microprocessor. There are several types: personal, embedded, desktop, portable, professional, and domestic. It is clear from the last sentence that terms such as individual microcomputer, integrated microcomputer, desktop microcomputer, portable microcomputer, professional microcomputer, and household microcomputer exist. These terms represent the types of the genus. It is not clear which of these terms are standard and which are non-standard variants. In the dictionary entry for "micro machine," the term is used without reference. Therefore, the term "micro machine" used in the Azerbaijani language is a non-standard term and is a duplicate of the term "microcomputer." In Russian, the term is "микромашина" and in Turkish, it is "mikro makine," indicating that the term entered Azerbaijani through Russian. Unlike Azerbaijani and these languages, English uses only one term, "microcomputer," indicating that there is no non-standard variant of the term in English.

Meta-language (Meta dil) - A more extensively featured language used to describe other languages (Khudiyev, 1989, p. 100). Meta-language (Meta dil) - A language in itself that discusses another language (the object-language); a language whose object is the content and expression of another language. From these two definitions, the first is given in the field of informatics, and the second in the terminology of linguistics. Essentially, they express the same concept. However, both definitions contain relative notions. In explaining the linguistic term, the first sentence is relative and the second sentence is a repetition of the first. In the informatics terminology, the phrase "more extensive in features" is superfluous. The explanation of the borrowed term in informatics terminology involves this phrase because it implies programming languages as the object languages. The essence of a meta-language is not solely connected to the explanation of a language object. The meta-language function of language is utilized during the explanation of any field's concepts. For example, in mathematics, the explanatory language used during the proof of any theorem is a meta-language.

Metalinguistic variable – A variable defined by the meta-language that denotes objects determined by the meta-language itself. Metasymbol – A symbol available on a keyboard that, in certain cases, conveys a special meaning. Metasyntax language – A language used to describe the syntax of another language (Khudiyev, 1989, p.

98). In the examples provided, the term-element "meta" participates. This component is used in the same way structurally in English, Russian, Azerbaijani, and Turkish languages. Interestingly, the term "metaphor" is also employed in the field of computer science.

"Metaphor - A compatibility between the logical components of a programming language or an interactive system and the concepts familiar to humans". "Metaphor - The use of a word, phrase, object, or event in a figurative sense based on their similarity or resemblance in any aspect" (Khudiyev, 1989, p. 78). In linguistics, there are several term-phrase combinations that include the term metaphor: language metaphor, object metaphor, gesture metaphor, lexical metaphor, complex metaphor, speech metaphor, simple metaphor, reverse metaphor.

In order to present terms in a dictionary in a format closely aligned with standards, alphabetic nesting or the use of a thesaurus is employed. In this approach, the primary terminological concept along with its derivatives, as well as term-word combinations arising from its inclusion, and composite terms, are presented in close proximity. Systematicity is intentional within the term structure, and this system should express the relationship of the term concept with other concepts. When the alphabetical principle is the basis in a dictionary, systematicity is not fully preserved. This means that the alphabetical principle does not allow for the consecutive placement of terms forming certain sub-systems in the dictionary. Consecutiveness often arises as a result of the same component being present in the terms. For example, "magnetic head, magnetic track, magnetic recording, magnetic memory, magnetic disk; matrix, matrix operation, matrix memory, matrix variable, matrix structure, matrix printing device; morphology, morphological analysis; interactive, interactive user, interactive terminal, interactive mode, interactive language," etc. The noted term-word combinations base their systematicity on the first component. Systematicity is also related to the second component of the term. For example, operator, unconditional transition operator, variant operator, entry operator, exit operator, call operator, termination operator, address operator, data declaration operator, data description operator, constant defining operator, memory defining operator, program halting operator, reflection operator, transition operator, assignment operator, procedure operator, conditional transition operator, conditional operator, loop operator, computer operator, etc. (Almammedova, 2015).

Examples were previously given regarding the presence of systematicity at the level of term-elements. In some cases, systematicity is generated through affixal morphemes. However, systematicity at the semantic level is not present here. That is, the systematicity at the level of concept understanding among terms does not emerge. Systematicity carries a structural characteristic. For instance, gastritis, duodenitis, appendicitis, bronchitis, etc. The suffix "-itis" in these terms indicates structural similarity in their construction. From the examples, it is clear that there is a certain similarity between the systematicity in terms and their aspects of forming a terminological nest. It is considered a positive characteristic for a standardized term to fall into the same category with the names of concepts closely related to the concept it represents.

In constructing standard terminologies, it is important to consider whether a term constitutes a terminological set (genus) or is included within such a set (species). Terms that denote a species within a category of objects are more comprehensible. The concepts of genus and species arise from a term representing a more general concept. The term "operator" signifies a genus. An operator is a language construct that indicates either a step in a sequence of operations or a collection of descriptions (Khudiyev, 1989, p. 43). Species within the operator genus can be arranged alphabetically. In this case, the terminological list would be as follows: Operator, termination operator, call operator, exit operator, loop operator, computer operator, reflection operator, input operator, constant defining operator, address operator, program halt operator, conditional transition operator, conditional operator, unconditional transition operator, transition operator, assignment operator, procedure operator, variant operator, data declaration operator, data description operator, memory allocation operator.

During the standardization of borrowed terms, optimization also extends to the length of the term. It is considered a flaw for a standard term to be overly long. However, in many fields, there exist terms that are phrases or compound terms with multiple words. During the standardization of such terms, it is preferable to replace them with shorter versions. By considering this factor, it is possible to explore the opportunities to abbreviate certain term phrases that include the borrowed term "operator." The analysis of this can be followed through the following examples:

- The data declaration operator. The function of this operator is to indicate which data should be inputted for a program issue.

- In English, the term comprises two words: "Declaration statement." (Almammedova. 2016, p.567).

- A similar structure is maintained in Turkish: "deklarasyon operatörü."

- In Russian, however, the word "declaration" is replaced with the phrase "объявление данных" (announcement of data).

- "Declaration n. - 1. Declaration (document); 2. Manifesto; 3. Announcement; declaration; to declare; 4. To confess love; to declare; 5. In law, a claim petition; 6. In law, the reasoning part of a court decision; 7. Customs declaration" (Almammedova, 2015).

As it appears, this term does not directly provide information about what, including the declaration of data, is being disclosed. However, in programming, it is specified which data will be used during the compilation of a program. At this point, the 'declaration' operator is written, followed by opening a curly brace, within which the data and their types are specified. In Russian, for clearer explanation of the operation, the term 'data declaration' is used. During the transliteration to Azerbaijani, the term 'elan etmə' can also be used for the translation of 'объявления', because the Azerbaijani understanding of the word 'elan' is somewhat different. However, the alteration in meaning during the process of terminologization should be taken into account. In this case, it is possible to use the term 'elan operatoru' in Azerbaijani. It is clear that the adopted term can be abbreviated in this manner (Almammedova, 2019, p. 56).

Similar analysis involving the term "description operator" suggests the introduction of this term-phrase combination. In this instance, during programming, the operator facilitates the execution of the data description operation. Therefore, it can be referred to more succinctly. In English, this term is expressed by the previous term: "Declaration statement." That is, the operator performs two functions: it both provides a list of data and describes the data in the list. Introducing the same concept as a term into the terminological system under such conditions is somewhat unclear. Similarly, resolving this issue should be conducted with the expertise and opinion of specialists. Indeed, in the dictionary of computing terms, both "data declaration operator" and "data description operator" are presented as entries under the term "declarative operator." Familiarity with this dictionary article reveals that in English computing terminology, the terms "declarative statement" and "declaration statement" exist and are synonymous. The declarative operator is defined as: "Declarative operator - An operator designated for describing the objects of a program" (Khudiyev, 1989, p. 44).

The situation of adopting several terms that express the same concept is observed. Dictionary compilers have included all three terms in the dictionary to draw attention to the observed variability in computing terminology. During the standardization of synonymous terms, the basis for selecting which term will be standardized is provided. Synonymous terms are separated by semicolons; following the last term, a colon is placed and thereafter, the definition of the concept is given. In the standard document, the internationally accepted standard of the term, as well as its name in international languages, is provided.

Alongside the standard term, its non-standard variants are noted. The use of non-standard variants is prohibited in official, technical, and many other documents. However, it is essential to include non-standard terms in the standard list as one of the mandatory conditions. Undoubtedly, the process of standard compilation should eliminate any ambiguities. During this process, attention is paid to the division of the concept into types and categories. The classification of terms into types and categories follows various criteria. For example, based on function; material; purpose; form; production method; structural details; composition; by genre, division, department, etc.; by distinctive features within a type; grouping of types by category; origin; naming, etc. The principles of classification depend on the characteristics of the field to which the borrowed terms belong.

The thesaurus method is increasingly employed in the process of systematizing terminological lexicons. This method is based on the construction of a dictionary divided into subjects—a lexicon-thesaurus. The thesaurus serves an informative purpose and allows determining the position of a particular term within the system. A specific coding system simplifies the process of finding the complete series of genus-species, singular-plural, and hierarchical relationships of a term included in the thesaurus. Unlike explanatory dictionaries, a thesaurus does not provide definitions explicitly. Instead, general information about the definition of a concept is obtained based on relationships of genus-species, singular-plural, and hierarchical connections. Two aspects are evident in the compilation of a thesaurus: 1) the thesaurus performs the function of a descriptive dictionary, ensuring the recording of all word-forms and word combinations in which any term participates, and providing synonyms; 2) a strict hierarchical relationship is established between the proposed primary variants of terms in the thesaurus.

It is known that it is possible to classify borrowed terms based on certain characteristics. The classification is based on the changes that the term undergoes during its transition from the source language to the target language. The types of these changes should guide the grouping of borrowings. The formation of different groups gives preference to the following distinguishing characteristics: 1) terms borrowed as they are from the source language; 2) borrowed terms that have undergone phonetic

transformation; 3) hybrid borrowings, involving elements from both the target and source languages; 4) terms that are borrowings in the source language itself, or indirect borrowings; 5) borrowings with a morphological structure; 6) borrowings with a syntactic structure.

Borrowed terms can be categorized according to their participation in the term creation process. For instance: a) derivatives with borrowings; b) borrowings without derivatives. As a result of the standardization process of terms, several forms of compiled lists are applied in practice. The distinction between these forms depends both on the information included in them and on the arrangement of this information in the list. The following information can be included in the standard lists of terms: 1) sequential number of the term; 2) the term itself; 3) the alphabetic symbol of the term; 4) the symbolic representation of the term; 5) the definition of the term; 6) non-standard variants of the term; 7) explanatory diagram, graph, or formula; 8) equivalents in major foreign languages; 9) notes.

The sequence number of a term corresponds to the number of the standard. It is essential to assign a standard number to standardized terms. In addition to facilitating references to the relevant standard, this numbering also enables the identification and translation of terms based on their equivalents in other languages. For this purpose, at the end of each list of standards, alphabetical lists of terms are provided. Similar lists should also be compiled based on materials in major foreign languages. Technical specifications in a standard document should explain any abbreviations used beforehand. For example, if the equivalents of a term in English and Russian are shown, and the abbreviations E (English) and R (Russian) are adopted, a note regarding this should be included.

During the standardization of field terminology, sometimes a number of other features are also considered. Terms that are named based on characteristics such as size, quantity, and specific properties also create a certain abundance. The scientific foundations of terminology must guide the standardization process of terms. To ensure the principle of a unified classification at the basis of standardization, issues regarding the classification of terminology and terms according to certain characteristics must be clarified, and primary features must be selected in order to define the units belonging to the relevant category. Features that distinguish concepts should be chosen such that, once the standard is approved, the resulting terms can be incorporated into the system according to these characteristics. A standard term, in addition to meeting linguistic requirements, should also be useful for solving logical issues. If linguistic requirements involve the participation of the standard term in the term-creation

process, its conciseness, compliance with the norms of the language, the relevance to the language's own words, and several other issues, then other requirements include term-concept compatibility, unambiguity, precision, internationality, unity, etc. (Almammedova, 2021, p. 98).

The simplest form of noting standards is a list that includes the standard number of the term, the term itself, the definition of the term, and information about non-standard variants of the term. This list should be formatted as a table. In standardization, primarily, the standardized term is written at the beginning of the line in the standard document, and prior to this, the number of the standard is noted. The standardized term is presented in italics. It has been accepted to give the name of the standard in the document in bold with initial capital letters as a form of emphasis. Non-standard terms are listed after the standard term. Their non-standard nature is noted. Terms whose use is prohibited are listed after the non-standard terms, and their improper usage is indicated. Special notations are adopted for such annotations. For example, NST stands for non-standard term; PT for prohibited term, etc.

When compiling a list of standard terms, the hierarchical arrangement of concepts must be considered. The hierarchical structure prevents the inclusion of undefined concepts in definitions, as this arrangement ensures concepts are defined sequentially. It should be noted that standardization is carried out incrementally. As the field develops, new concepts emerge, necessitating the standardization of terms representing these concepts, and new lists are compiled. This does not always require a re-evaluation of the initial concepts. In such cases, there is no restriction on using previously accepted standard terms.

In the preparation of standards, the form similarity of certain features in standard terms' lexical-grammatical indicators is significant. Depending on the type of feature, these indicators can vary. The category to which a concept belongs also plays a certain role. For instance, concepts belonging to the category of objects are usually denominated with nouns. The names of primary or base concepts are generally denominated with simple nouns. New terms that are formed based on or involving these primary or base concepts also have their own meanings. Each elementary meaning expresses a specific feature. When naming a concept, the features and corresponding meanings are considered. Naming terms that contain more than one elementary terminological meaning requires clarifying the characteristics of the features that generate these meanings, and this aspect becomes more prominent in the standardization process.

7

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In the document reflecting standardization, the definition of the term must also be articulated. This explanation and commentary are absolutely essential. Sadigova considers it crucial to take into account several factors for the definitive standardization of terms: 1. The linguistic meaning coincides with the conceptual meaning. This implies that the essential and sufficient characteristics of the non-linguistic object are directly reflected in the semantic structure of the term. Standardization takes the form of optimization of the terminological system, i.e., ensuring that the concept's sufficient and essential characteristics are formed within the semantic structure of the term. In this case, defining the term is not required. 2. There is no linguistic meaning. The concept's necessary and sufficient characteristics are expressed in the definition. This category includes borrowed terms that play the role of symbols. 3. There is no conceptual meaning. 4. The conceptual meaning coincides with the linguistic meaning (Sadiqova, 2015, p. 78).

The term can be an appendix to the standard document. The appendix lists alphabetized standardized terms. If certain notations have been accepted in the standard document, explanations of these notations are provided. This aspect also relates to abbreviations. The appendices of the standardization document include:

1. The classification scheme adopted in the standard;

2. Terminology and definitions of general technical concepts necessary for understanding the text of the standard;

3. Sources used for selecting foreign equivalents of the terms;

4. Illustrative material;

5. Explanations of terms determined by the given standard and examples of their usage;

6. Physical units used;

7. Rules and models for the formation of terms.

These additional terms should be placed after the alphabetical index list. In the systematization of concepts, the primary general categories distinguished are as follows: 1) the category of objects, which includes machines, devices, materials, chemical compounds, tools, etc. For instance, screws, diodes, transmitters, filters, etc.; 2) the category of processes, which encompasses concepts related to natural processes, activities, movements, displacements, etc. Examples include dancing, combustion, wear, excavation; 3) the category of properties, which covers concepts expressing the properties of objects. For example, hardness, elasticity, plasticity, water resistance, etc.; 4) the category of quantities, such as power, speed, resistance, capacity, etc. When determining the category of a concept, the possibility of it belonging to various categories is considered. For example, conductivity can be categorized both as a property and as a quantity.

During the classification process, which holds a central place in the systematization of concepts, all possible criteria are defined. Within the framework of these criteria, it is possible to establish groups of concepts and individual concepts. In constructing the classification, existing classifications are used as informational material. For instance, the technical-economic information classifier (UDC).

To establish connections between concepts, their system is elucidated and incorporated into a systematically organized dictionary. The dictionary is structured according to the following principle: Entry number - Term - Note. In the "Note" section, those working with the standard provide well-founded reasons for preferring one term over another. When necessary, they document the established sequence of terms, the connections between concepts, etc. During the systematization of concepts, if a term that expresses one or several concepts is absent, a descriptive expression of the concept is identified. Occasionally, in some sources, a concept included in the system may not be found. At times, concepts that need to be created are incorporated into the systematized system.

In multilingual dictionaries, this process must be approached from a different perspective. In this respect, during the preparation of the first draft of the terminology standard, the equivalents of the standardized term in English, French, and German are included. We believe that it is also appropriate for the terminology standard projects developed in Azerbaijan to include the Russian and Turkish equivalents of the standardized term. The selection of foreign terms is done from international standards or normative dictionaries considered equivalent to them. The search for foreign standardized terminologies should not be limited to merely identifying the corresponding terminological standards. A broad range of standards related to the subject matter should be analyzed. Simultaneously with the presentation of the standardization project of terminology, a conclusion regarding its conformity with analogous foreign standards should also be prepared.

The concept of definition is a logical method that allows for differentiation, searching, and formulation. In this process, the specific field in which the definition is formed is always considered. The definition is also the result of a logical process and is recorded in the standard. At this time, the term 'definition' is used. In the definition, the term being defined is called the definiendum (Dfd), and the means of defining is referred to as the definiens (Dfn). In

terminological practice, the definiens is called the definition, while the definiendum is termed the term.

The standardization of terminology allows for the adoption of foreign standards in the national language. The methodological basis of terminology standardization is the systemic principle of organization. This principle involves the analysis and evaluation of each element of the terminological system—the term itself—as well as each of the interconnected terminological systems.

It is a well-known fact that the creation of terminology depends on the development of science. A new term pertaining to a specific field is initially used in the scientific research works related to that field. The necessity to create terminology is directly linked to the formation of a new concept. Subsequently, the process of the term's acceptance takes place. The acceptance of a term clarifies two issues. Firstly, although the term does not depend on the context, it is initially generated within a context. Secondly, the acceptance of the term in the relevant scientific field is characterized by its usage by various experts. As the scope of a term's usage expands, it becomes established in the field's terminology and is incorporated into terminological dictionaries. Thus, it is possible to distinguish two areas of usage for a term. Terminology is observed in two areas (within the framework of scientific language, in texts realized through specific genre forms): the area of registration (lexicographic genres: specialized dictionaries, proposed collections of terms, terminological standards) and the area of use (specialized literature: articles, monographs, and in some cases, scientific-popular literature).

Finally, in explanatory dictionaries, terms that do not meet the established criteria are not included. However, in standard bilingual terminological dictionaries and lists, terms and term variants that are not accepted or do not meet the criteria can still be noted. This is because such dictionaries aim to encompass all terms encountered within the working domains of the terminology. The primary condition for a term's inclusion in the relevant field's terminology is its incorporation into the documented scope.

CONCLUSIONS

In every language, there are specific lexical units—whether common words or technical terms—that respond to the rules specific to each language, but are not isolated from interactions with other languages. Lexical borrowing occurs widely, and in the field of terminology, we explicitly speak of "borrowing terms" as opposed to "borrowing words" in common usage. In terminology, these borrowed elements (terms or their constituents) must adapt not only to the conventions of the target language, but also to the demands of conceptual precision and uniqueness inherent in specialized systems. Added to this dynamic of external adoption is the rapid expansion of fields of knowledge: according to estimations, the number of specialized fields doubles every 25 years, which proportionally multiplies the terminological load. This proliferation makes the task of organizing terminology a priority, where linguistic standards serve as a pillar to guarantee coherence and communicative effectiveness in professional and scientific contexts.

To address this challenge, the creation of terms is not a spontaneous phenomenon, but rather a process overseen by terminologists and linguists. This process must be structured in several stages—conceptual identification, precise definition, expert consensus, registration in terminographic instruments, and dissemination—always following criteria that ensure the univocality of the term, its insertion into clear conceptual hierarchies (generic-specific), and linguistic economy, avoiding unnecessarily long or ambiguous forms. Regarding regulations, it should be emphasized that terminological rules cannot contradict those of standard literary language; on the contrary, they must be harmoniously integrated. Additionally, terms must meet specific requirements: they must be unique for each concept, understandable in the target context, concise when possible, and have international equivalents when relevant. This dual level of requirements—general linguistic and terminology-specific—demands the application of international standards (e.g., ISO) and the use of thesauri or other logical-material tools that facilitate systematization.

We can affirm that the incorporation of terminological borrowings reflects the inevitability of linguistic innovation in an interconnected world, but it also highlights the need for rigorous regulations that harmonize conceptual precision with idiomatic appropriateness. The fact that specialized fields are doubling every quarter of a century underscores the urgency of agile and sustainable standardization processes based on interdisciplinary collaboration. Finally, maintaining up-to-date dictionaries and glossaries—including non-recommended terms and variants—as well as the ongoing training of terminology professionals and the development of cooperative platforms, are key measures to ensure that the terminological system remains coherent, accessible, and capable of adapting to future advances.

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