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Different ways of term formation in modern English and Azerbaijani languages

Różne sposoby tworzenia terminów w nowoczesnym języku angielskim i azerskim

Abstract

The article examines term formation in English and Azerbaijani, highlighting how rapid scientific and technological progress drives the creation of new terminology. As each discipline develops, specific terms emerge, enriching the scientific lexicon and shaping the style of academic discourse. Terminological vocabulary reflects concepts from diverse areas such as technology, production, agriculture, economy, literature, and art. Continuous societal and scientific advances foster the renewal of this lexical layer, with specialized vocabulary expanding faster than general vocabulary. A comparative analysis shows that enrichment of terminology in both English and Azerbaijani follows similar sources and methods, ensuring parallel growth of their terminological systems.

Keywords: terms, scientific style, concept, science, linguistic units, enrichment, layer

Streszczenie

Artykuł analizuje proces tworzenia terminów w języku angielskim i azerskim, wskazując, że szybki rozwój nauki i technologii sprzyja powstawaniu nowej terminologii. Wraz z rozwojem poszczególnych dyscyplin pojawiają się specyficzne terminy, które wzbogacają leksykę naukową i kształtują styl dyskursu akademickiego. Słownictwo terminologiczne odzwierciedla pojęcia z różnych dziedzin, takich jak technologia, produkcja, rolnictwo, gospodarka, literatura czy sztuka. Ciągły postęp społeczny i naukowy sprzyja odnawianiu tej warstwy leksykalnej, przy czym słownictwo specjalistyczne rozwija się szybciej niż ogólne. Analiza porównawcza

pokazuje, że wzbogacanie terminologii w języku angielskim i azerskim opiera się na podobnych źródłach i metodach, co zapewnia równoległy rozwój ich systemów terminologicznych.

Słowa kluczowe: terminy, styl naukowy, koncepcja, nauka, jednostki językowe, wzbogacenie, warstwa

Introduction

Terms and professional vocabulary used by people working in the same profession stand out for their socially limited use. Terms and professional words are given in explanatory dictionaries with the “special” sign, and sometimes it is indicated which field the word belongs to: physical, economic, mathematical, etc. Each field of knowledge has its own terminological system.

Recently, research has been carried out in the field of terminology, and terms existing in the languages of different countries occupy a special place in these studies. It should also be noted that in terminological studies, different explanations and definitions of the boundaries of some terms in this field are given. Certain misunderstandings and disagreements between researchers are evident in the written academic works. One of the main reasons for the emergence of these problems is that each language has its own terminological dictionary. This is natural, as different languages have different terminological rules and these rules depend on the development of the thinking of the people to whom they belong, and the course of their social life.

The word “term” that is more commonly encountered in terminology is derived from the Latin word “terminus” (boundary, limit, extent). The meaning of this word is explained in various ways. For example, in the *Explanatory Dictionary of the Azerbaijani Language*, it has two meanings: 1. a word (or phrase) that represents; a term. 2. In logic: a constituent element of a judgment (subject and predicate). Each scientific field has its own specific terms. For example, in mathematics (also in geometry): equation, cosine, tangent, cube, fraction, denominator, speed, integral, differential, percentage, angle, triangle, square, etc.; in physics: atom, electric current, acceleration, force, optics, etc.; in chemistry: nitrogen, iodine, sulfur, etc.; in history: feudalism, capitalism, revolution, absolutism, etc.; in literature: drama, genre, lyric, poem, short story, essay, novel, play, epithet, novella, folklore, etc.; in geography: continent, landmass, delta, ocean, bay, etc.; in economics: audit, bank, market, exchange, bonus, business, budget, capital, inflation, devaluation, etc.; in linguistics: vowel, consonant, noun, lexicon, subject, verb, syntax, adverb, particle, archaism, intonation, dialect, inversion, address, modal words, etc.

A number of linguists have conducted research to find answers to questions such as what is a term? What do terminological combinations mean? What are a terms’ functions? And what place does a term occupy in the lexical and stylistic system? (Viktor Vinogradov, Grigorij Vinokur, Aleksandr Reformatsky, Olga Akhmanova, Fedot Filin, Vladimir Leychik, Vladimir Danilenko, Boris Golovin, Aleksandr Gerd, Aleksey Moiseev, Vladimir Tatarinov, Pavel Denisov, Tatyana Kandelaki, Aleksandra Superanskaya, Sergey Grinev, Mammad Gasimov, Hasrat Hasanov, Sayali Sadygova, Irina Kobozeva, Mehriban Huseynova, Gunel Yunusova, Lyudmila Buyanova, Natavan Huseynova, Svetlana Kazarina, etc.).

The issue of revealing the main features of a number of terms existing in the language necessitates research in both the terminological and linguistic fields, making this process one of the most urgent tasks of linguistics.

Findings

In the Azerbaijani language terms are enriched both at the expense of the internal capabilities of the language and with words borrowed from other languages. In the Azerbaijani language, terms are created by the following methods:

1. Semantic method.
2. Morphological method.
3. Syntactic method.
4. Method of abbreviation and shortening of words (abbreviation).

Huseynova & Yunusova point out that terms in English can be formed by means of common word stock, by means of semantic change as well as by means of special affixes, e.g. ultra-violet, transplant, antidote (Huseynova, Yunusova, 2019: 53).

The enrichment of the vocabulary of a language through the semantic method is associated with changes in the meaning of words used in the language. There are two types of changes in the meaning of words: 1) a complete change in the meaning of a word; 2) the acquisition of a new meaning while maintaining the basic meaning of a particular word.

Word creation by semantic method is realized due to qualitative changes in the language. Thus, one word plays a major role in enriching the vocabulary of the language by expressing different meanings. Term creation by semantic method is widespread in the field terminologies of many languages, including Azerbaijani and English. At the same time, term creation is noticeable in different forms at different stages of the development of the terminological system. According to the changes occurring in the meaning of common words, the most active period of their transformation into terms coincides with the period of the formation of a new terminological system. That is, terms are created based on existing words, and these words acquire new meanings in addition to their own.

For example, in the terminology of the English and Azerbaijani languages, benefit-fayda (profit, income), abundance-bolluq, work-iş, farm-ferma, fashion-moda, hire-muzd, fee-qonarar, labour-əmək, market-bazar and many other words. The given words are terms related to the field of economics. Thus, they were taken from common words that existed in the language at the beginning of science of economic and turned into terms by gaining additional terminological meaning.

We see that the emergence of new terms by changing words from a semantic point of view is not without reason. Often, new words are not created to name new concepts that have emerged due to the development of scientific and technological progress, but the meaning of the existing word in the language is changed and used to express this or that concept. If one of the common words in a language becomes a scientific-technical term, it carries a certain meaning in the system of terms, or to put it more simply, that word acquires a new meaning in addition to its previous meaning.

Terms belonging to a certain field of science can change their semantics and enter the scientific and technical system of another field based on external similarity or functional similarity. For example: Act-1) work, action, event; 2) decree, decision, verdict; 3) a document confirming an event; 4) a scene of a theatrical performance; 5) a solemn meeting in schools.

In order to name newly emerging concepts in the modern Azerbaijani and English languages, new shades of meaning are added to the words and expressions used in the active lexical layer of the language throughout our history. This is an undeniable factor that other term formation methods in the language are not enough to express a large number of newly emerging concepts, and therefore using the polysemy of words existing in the language is considered an effective and simpler way. For example, there are some words that are already available in the language, which are used in military terminology to express separate military concepts: in English, *division*, *section*, *key*, *nest*, *eye*, *comb*, etc. in Azerbaijani *ağız*, *bölmə*, *yuva*, *daraq və s.* To understand the content expressed by such terms more clearly, it is enough to pay attention to the explanation of some of them. The general meaning of the word ‘ağız’ is given in the *Explanatory Dictionary of the Azerbaijani Language* as located on the lower side of the faces of humans and animals, between the lower and upper jaws, permitting the human/animal to eat and drink and to produce sound. This explanation refers to the original meaning of the word ‘ağız – mouth’. One of the other new meanings derived from this basic meaning is explained as the military term “the side on the front of firearms where the bullet comes out” (Azərbaycan dilinin izahlı lüğəti, 2006: 12). This was one of the basic examples of expressing a certain concept by changing the semantics of an already existing word without creating a new word.

Discussion and results

Term creation by the morphological method is one of the main methods in term creation in English and Azerbaijani languages. Both Azerbaijani and foreign scholars have discussed the productivity of term creation in this way in their academic works. The main essence of term creation by morphological method is the creation of a new meaningful word by adding word-forming (lexical) suffixes to the root of the word existing in the language. For example: *balıç-çı*, *çeçme-çı*, *ğaq-ış*, *ğat-ığ*, *art-ığ*, *tez-lik*, etc.

İkram Ziyad oğlu Qasimov writes about the morphological method in term creation stating that “there are wide opportunities for the creation of terms by morphological method in the modern Azerbaijani literary language. Currently, up to fifty suffixes are used when creating terms in the Azerbaijani language” (Qasimov, 2017: 54).

The process of creating new terms by morphological method in the modern Azerbaijani language has always been productive. For example: through the use of the suffix *-çı*. Suffixes are considered one of the most productive in the process of term creation. Suffixes participate in the creation of new terms by being added not only to national words, but also to words borrowed from other languages. By means of the mentioned suffixes, a sufficient number of terms have been created in the Azerbaijani language, expressing

both individual professions or specialties, as well as a certain position held by any individual in society: *döyüşçü, siyasətçi, çörəkçi*, etc.

The four-variant suffix *-lıq*, due to its characteristic semantic features, plays an important role in the formation of new terms by closely participating in the word creation process in the Azerbaijani language by joining separate parts of speech. These suffixes participate in the creation of terms belonging to many meaning groups: *məhsuldarlıq, suverenliq*, etc.

Another productive suffix *-ma* is also one of the productive suffixes. This suffix is added to verbs, creating terms that denote names. Some researchers call the words formed using this suffix nouns formed from verbs. According to its origin, the suffix *-ma* is derived from the infinitive suffixes *-maq, -mek*.

In the modern Azerbaijani language, the main part of the term creation through word formation is covered by terms formed from verbs. These terms are formed by adding various word formation suffixes to the end of the simple root consisting of a verb. Since words denoting action are distinguished by their semantic richness and activity in word formation, such word formation terms also complete a very large part of the terminological lexicon of the language in terms of quantity. Even Natavan Hüseynova noted that there are 22 suffixes that form nouns from verbs based on this. Example: *böl-ük, vur-üg, çap-ıg, dara-g, yürü-sh, bak-ış, sat-ış, at-ım, uç-ush, sil-gec, suz-gec, sina-g, qosh-ma, döy-ush*, etc.

In the Azerbaijani language, terminological-lexical units are also created through borrowed suffixes, and they are quantitatively few. We can give the following examples of such suffixes: *-gah (nişgah), -il-vi (nizami, sırası), -dar (havadar), -anti (anti-raket)*, etc.

Regardless of the language in which they are used, all terms formed by morphological methods in Azerbaijani are structurally formed by the “root + lexical suffix” scheme. Hüseynova notes about word-forming suffixes: “Since their main role is to create a new word from one word, they are of great importance in the language. These suffixes are considered one of the main factors in the development of the language, that is, in the increase and enrichment of the vocabulary due to newly formed words. Most of the newly formed words in the vocabulary of the modern Azerbaijani literary language were formed only due to these suffixes” (Hüseynova, 2008: 26).

In addition to the Azerbaijani language, the creation of new terms in this way is often found in English. The lexical suffixes *-er/-or* in English are among the most actively used in morphological term formation. The main external form of such terms consists of this structure: the root – 1) verb; 2) noun + suffix *-er /or*”. For example: *baker, mountaineer, carrier, waiter*, etc.

In the term formation of the English language, there is also the suffix *-ist*, which is synonymous with the suffix *-er/-or*, which expresses the concept of “executor of action”, which can be found in several terms. For example: *excursionist, absolutist, abolitionist, tourist*.

The *-ing* lexical suffix used in English has two meanings: 1) to name processes: *boarding, booking, caravanning, outing*; 2) to name the results of processes: *hiking, touring*.

The suffix *-tion*, which forms a noun from a verb, is also used as a synonym for the *-ing* suffix. For example: *animation, accommodation, transportation, reservation, allocation*.

The facts show that terms belonging to different categories are created through each of the synonymous lexical suffixes used in the term creation of the English language. For example, if we look at the examples we have shown above, we will see that while the suffix *-ing* creates terms that reflect the continuity of the action and the completeness of the process, the suffix *-er/-or* creates terms that indicate the performer of the action.

In the morphological term creation of the English language, along with productive suffixes, there are also unproductive suffixes: *-al* (*arrival*), *-ure* (*departure*), *-ity* (*hospitality*), etc. Thus, from the conducted studies, it can be concluded that morphological term creation is widely used in most languages and enriches the language.

According to Irina Arnold, the methods of creation of terms in the English language are:

1) Terms created by clipping, ellipsis, blending, abbreviation: *translator receiver* → *transistor* → *trannie*, *cybernetic space* → *cyberspace*, *education entertainment* → *edutainment*, *television text* → *teletext*, *ecological architecture* → *ecotecture*, *extremely low frequency* → *ELF*, *biological electronic* → *bionic*.

2) From the combination of words borrowed from Latin and Greek: *aerodrome*, *aerodynamics*, *cyclotron*, *microfilm*, *telegenic*, *telegraph*, *thermonuclear*, *telematics*, *supersonic*.

3) Loanwords taken from other terminological systems within the same language. For example, terms taken from linguistics: metaphor, metonymy, synecdoche and others (Arnold, 1986).

As we know, all existing terms have their own sources, so the sources of the formation of terms in the Azerbaijani language can be divided into the following groups:

1) Terms that arose due to the internal capabilities of the language.

2) Terms of Arabic and Persian origin (e.g. *həndəsə*, *cəbr*, *qanun*, etc.).

3) Terms taken from various European languages (*balance*, *embargo*, etc.).

There are numerous loanwords in the Azerbaijani language. If at the beginning of the 19th century the number of words that passed from Russian or through Russian to Azerbaijani was small, this process has gradually intensified. It should be noted that the source languages of these words were mainly European languages. All this is related to the social and economic changes that occurred with historical events. Nadir Məmmədli writes about this: "Terms have mainly passed into Russian from Greek, Latin, French, Italian, Dutch, German, English, Spanish" (Məmmədli, 2017: 48).

From here it becomes clear that the loanwords in the modern Azerbaijani language have been taken from the following sources. 1) from Arabic; 2) from Persian; 3) from Russian; 4) from other languages (Greek, English, Latin, Italian, French, German, etc.) through Russian.

Although most of the terms used in the Azerbaijani language are of loanword origin, there are also terms of national origin. Terms of national origin are more related to humanitarian fields such as linguistics, literary studies, history: adjective, definition, angle, etc. Most of the terms borrowed from European languages have both international characteristics and are used as in the source language: bank, dividend, etc.

Currently, a rapid increase in the number of loanwords from European languages is observed. Nowadays a large number of words borrowed from Latin are used in international relations, interstate relations, diplomatic documents and correspondence in English.

Diplomatic terms are directly borrowed from the source language, that is, from Latin. For example: *de facto*, *status quo*, *verbatim*, etc.

In English, words of Greek origin can be found in many fields of modern science, for example, medicine, economics, and especially linguistics, for example: *antonym*, *archaism*, *dialect*, *etymology*, *euphemism*, *homonym*, *homophone*, *hyperbole*, *idiom*, *lexicology*, *metaphor*, *metonymy*, *neologism*, *synecdoche*, *synonym*, etc.

One of the widely used methods in term creation is the syntactic method. Term creation by the syntactic method has a special place in the word creation system of the Azerbaijani language. The syntactic method, which is one of the oldest processes in word creation, is widely used in the modern Azerbaijani literary lexicon. Like other methods used in term creation, this method is of great importance in the process of enriching the language.

When we say a term created by the syntactic method, we mean complex words and word combinations. Because the terms created in this way are formed from the combination of two or more words and are related to each other both semantically and grammatically. In term creation by the syntactic method, more word combinations are used than complex words. The reason is that since the formation of complex words is a historical process, their stabilization in the language requires a lot of time. In addition, it should be noted that complex words are built on the basis of word combinations according to the form of their components, grammatical features and combination properties.

Most researchers, when discussing word formation by the syntactic method, take the formation of complex words as a basis and write about their formation from the combination of two or more words and their pronunciation under one stress. If only complex terms are expressed when we say term formation by the syntactic method, of course, it would be impossible to object to this. However, if we take into account that in many newly formed terminological sections such as military, information, diplomacy, communication, etc., the terms formed in this way have not yet completely transformed into a complex form and are used as word combinations, we will see the importance of including word formation by the syntactic method in addition to complex words and word combinations. Some researchers, confirming that most of the concepts expressed are in the form of word combinations, emphasize the importance of systematizing terms formed by the syntactic method in the form of complex words and word combinations and try to show both their different and similar aspects. This issue is explained by the researcher Sayalı Sadiqova, who specifically studies the terminological units of the field of physics and mathematics in the Azerbaijani language, who says that “A significant part of physics and mathematics terms are formed by syntactically. This is due to the fact that they are a form of expression of complex processes and events” (Sadiqova, 1997: 36).

Abbreviation is a widespread and productive method of term formation. During abbreviation, a term is formed from the first part of words, the naming of the first letters and sounds. First, a complex, multi-word term is created, and then an abbreviation is formed. Abbreviations have long existed in word formation as an economical method. However, the rapid development of this process begins in the 20th century. In the 21st century, abbreviation is characterized by its high productivity as a word formation method. It is also considered a means of expressive speech in the language.

The following examples of terms formed through abbreviation can be attributed: IP – protocol (Internet protocol), CD-disk (compact disk), IT – technologies (information technology), LCD-display (liquid crystal display), SPF-factor (sun prevention factor), SIM (service interface module)-card, PIN (personal identification number)-code, POS (point-of-sale)-terminal, IP-address, ABC-American Broadcasting Company, BC-Before Christ, BR-British Rail, GPS-Global Positioning System, NBC-National Broadcasting Company, etc. In the Azerbaijani language: AMEA (Azərbaycan Milli Elmlər Akademiyası), DİN (Daxili İşlər Nazirliyi), MDB (Müstəqil Dövlətlər Birliyi) və s.

Conclusion

Terms constitute the vast majority of lexical units of every modern language that serves the requirements of advanced science and technology. In general, terms are lexical units that are easily created and quickly accepted by everyone. Terms are unambiguous and belong to a certain field of science. In particular, they are used in a scientific style. In the process of term creation in Azerbaijani and English, semantic, morphological, tracing paper method, syntactic methods are used.

The scope of use of terms is very limited. They are used only within one or another narrow framework of science. The following are characteristic features of terms: accuracy, concreteness, brevity, single meaning, naming, systematicity, comprehensibility, few components, single variant, non-synonymity, limitation of use, conscious determination, etc. The development and improvement of terminology plays an unparalleled role in the general cultural rise of the people and the enrichment of their language. Terminology refers not only to names and words related to individual fields of science and technology, but also to new words created in the language to express concepts that arise in a broader sense. A term is a word that arises on the basis of the development of science and technology.

Due to the complexity and multi-stage nature of the modern development of society, newly emerging terms and term-word combinations are also distinguished by their complexity and multi-component nature. In many cases, term-word combinations bring a certain weight to the language when pronounced. However, despite this, this method is very convenient in terms of naming concepts more accurately and therefore is of great importance in the terminological layer of the language in terms of content and semantics.

Nuclear words play a special role in the formation of term word combinations and the abundance of terms formed by syntactically. Complex terms and term word combinations formed on the basis of one nuclear word express new concepts in accordance with the semantics of that nuclear word. Thus, other words attached to the core word are influenced by the semantic meaning expressed by the core word, and a new term is formed that is related to this meaning. The meaning of term word combinations formed on the basis of the core word depends on the core word, that is, the main semantic load of this newly formed term falls on the core word. Other words attached to the core, regardless of their quantity, carry the function of the determiner of that word, and thus the concept of the resulting term is expressed more fully and accurately.

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