THE FUNCTIONING OF TERMINOLOGY IN ACADEMIC AND SCIENTIFIC TEXTS

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Abstract: The internationalization of education brings specific changes to the learning process at universities, the greatest of which is the increased use of the Ukrainian language in professional discourse. Since the students must use both their native and foreign languages, there is a significant problem of terminological interference. The aim is to analyze the use of the terminological system of scientific and academic texts to solve the problem and promote professional communication and integration of students in the global dimension. The second part of the research quantitatively evaluated the influence of the terminological system of Ukrainian scientific texts on the formation of a coherent system of word-formation processes perception in conditions of intensive integration of scientific knowledge and their dissemination among foreign students. It was found that for 30 years of an independent approach to terminological system development in Ukrainian science, the attitude to terms borrowing and formation of own linguistic field of scientific reproduction perception of science and education development has been diametrically changed.

Keywords: Internationalization of higher education; professional discourse; terminology; communicative competence; information thesaurus..

1 Introduction

Internationalization is an important part of higher education today. It is recognized as a process of integrating an international, intercultural and global dimension into the purpose, function, or delivery of higher education at the institutional and national levels. The process targets both national and international students.

In the case of national students, internationalization is facilitated by the lack of educational opportunities in their countries, while attracting international students is a way to invest additional money or obtain high-level human resources.

The process takes two forms: internationalization at home and internationalization abroad. Internationalization at home can help students gain in-depth knowledge and acquire the necessary intercultural communication skills. Internationalization abroad takes the form of education through the openness of educational resources and mobility. Statistics show that by 2021, 2.7 million students were studying outside their country of origin. In many cases, internationalization means increasing the use of the Ukrainian language at universities for international students. Many universities now offer courses or full programs in Ukrainian for international students. Courses are offered either through content and language integrated instruction or in the form of parallel language courses. In such courses, students can attend lectures in their native language (L1) and then do reading assignments in a foreign language (L2). It is reasonable to combine them with additional language training.

There is one feature that most programs have in common, especially in the science and linguistics fields. It is the use of specialized discourse and terminology. During the course, students face a double burden: they must learn terminology in their L1 and learn the same terminology with their L2. Moreover, learning terminology is different from learning general vocabulary because students must learn both the term and the concepts denoted by that term, establishing a structure of knowledge. Learning the correct terms is especially important because they contribute to knowledge acquisition and knowledge transfer in a specialized context. Terminology learning methods are of great interest today, especially in the field of Ukrainian for specific purposes, but in some aspects during the process of learning, the terminology is not given enough attention. One of them is terminological interference when learning terms in two languages simultaneously. Nowadays, new terms appear so quickly and come from so many sources that an enormous amount of polysemy and synonymy is inevitable when translated into other languages. One term may acquire different interpretations and equivalents, which makes the situation even worse. This process is not standardized or regulated, which introduces certain terminological chaos, interfering with communication and the perception of the integrity of the understanding of its essence, use, and origin.

This article *aims* to determine the role of terminology in scientific and academic texts of specialized discourse for students of humanitarian universities, as well as to identify and observe the most important difficulties associated with the study of terminology and the ways to overcome them.

Hypothesis: let us assume that studying the scientific Ukrainian terminological system and understanding the origin of terms and borrowings will form a unique idea of the linguistic picture of the world, its many-sidedness, and uniqueness. The research reveals deep and semi-conscious roots of "inferiority" and lack of a national terminological system; we should provide for a reassessment of attitude to the origin of terms and their use.

2 Literature review

The history of the formation of Ukrainian terminology is part of the history of the whole lexical language system development. The first attempts to collect and arrange the Ukrainian scientific terminology were undertaken in the second half of the XIX century.

Levchenko (1862) proposes to use Ukrainian words as a basis for scientific terminology and ignore foreign borrowings, especially those that proved difficult for the people's speech. In response came an opinion written by Yefimenko (1870). It also considers the principles of the approach to the creation of Ukrainian terms. The author suggests that terms should be formed from the bases of words available in the native language. In addition, Yefimenko (1872) notes that the ending of terms, which received foreign-language origin, should correspond to the forms of the national language. The main opinion expressed in the article concerns the necessity of creating a Russian-Ukrainian scientific terminological dictionary.

Only a few professional terms of foreign origin were taken into this dictionary. In addition, they were translated into Ukrainian neologisms, which were not always successful and capable of replacing words of international use. The German-Russian dictionary by Patrician (2006), which was published shortly before in Lviv, had a significant influence on this edition. The words of foreign origin in this dictionary were transferred to Ukrainian words. Almost all neologisms have not survived in our language, but some of them have remained, although not with a narrow terminological meaning.
The idea of creating a dictionary, but now a terminological one, was supported by I. G. Vergratsky (1870) in Western Ukraine, who published "Beginnings to the Teaching of Nomenclature and Terminology of Nature" in six editions during 1864–1879. This scholar is the founder of Ukrainian scientific terminology. Now his works are of great interest.

The Lviv Scientific Society named after T. H. Shevchenko began to carry out terminological work systematically since the 90s. Its aim was the creation of science through the Ukrainian language, which implied the formation of national scientific terminology. The materials related to Ukrainian scientific terminology began to appear regularly in the notes of this society. In addition, the authors of these articles were specialists in technical and natural spheres, as there were no philologists among them.

The next period of the Ukrainian scientific terminology research was connected with the creation of scientific societies in the East of Ukraine (1913 – Kyiv, 1918 – Luhansk). After 1905, the statutes concerning the prohibition of the Ukrainian language were limited in the Russian Empire. Everywhere began to arise societies, which aimed at creation of national terminology (at the Kyiv Polytechnic Institute, the society named after H. Kvitka-Osnovyanenko in Kharkiv; Luhansk Scientific Society).

The Kyiv Ukrainian Scientific Society was also engaged in terminology research. In May 1911, it published its first book, the "Collection of Natural and Technical Section". It included articles by Ukrainian scientists and engineers from different spheres of technology and natural science. The Dictionary of technical expressions, despite other tasks, was the evidence that the digest's authors pursued the goal of creating a Ukrainian scientific, in particular technical terminology. It belonged at the end of each digest.

After the proclamation of the Ukrainian People's Republic in 1917, Ukrainian became the official language of legislation, administration, and the army. The demand for Ukrainian textbooks and dictionaries increased dramatically. At that time, the "explosion of terminology formation in the Ukrainian language" was noticed. Terminological dictionaries were created by societies, sections, and individual authors. In 1918–1919, more than 20 terminological dictionaries of different branches (medicine, physics, chemistry, mathematics, geography, justice, and others) were published in Eastern Ukraine.

The Terminological Commission was created by the Kyiv scientific society in August 1918. The commission aimed to unite all the disparate societies, commissions, and individuals who were engaged in working with terminology. The Orthographic-Terminological Commission was also created by the Academy of Sciences. Its scope of work was not limited to the compilation and publication of dictionaries. A lot of work was done in different directions: compiling, drafting, and developing the theory of the term. The 20s of the XX century became a new stage in the development of Ukrainian scientific terminology. These years were a fruitful period of national terminology creation due to the appearance of multidisciplinary terminological dictionaries. It was the result of the cooperation of Eastern and Western Ukrainian schools. The two terminological commissions of the Kyiv Scientific Society and the Academy of Sciences united and, in 1921, created a common one called the Institute of Ukrainian Scientific Language. That was an institution of the Academy of Sciences, which consisted of six departments and 84 divisions. The main purpose of each section was to create a corresponding dictionary. Each section collected living material among the people from ancient books and ancient manuscripts to achieve this goal, with the help of its many reporters. Highly qualified experts in the natural and technical sciences and philologists rallied around this institution. They concluded and published more than 40 terminological dictionaries from various fields of science and technology.

The theoretical foundations of term creation have been given in the IUSL Dictionary Compilation Guide (2008). The need to use the lexical material of a particular language and literary sources deserves special attention; the need to create a new term in linguistic dissonance visions. In case if it is necessary to conduct a foreign term, the borrowings must be created by the terminological material of another foreign language, in which, perhaps, this fiefdom is independently and fully developed.

Tendencies of Ukrainian scientific linguistics of the 20–30-s of XX century were a logical continuation of the research conception of the end of the XIX century. All work of the Institute was based on researches of Ukrainian linguists, writers, scientists, united around Shevchenko Scientific Society.

The task to develop the Ukrainian scientific language was suspended in 1933. The struggle against "national harm on the linguistic front" began. After the liquidation of the authoritative scientific center that coordinated the terminological work all over Ukraine, the Institute of Ukrainian Scientific Language, in 1930, the real war was started against the Ukrainian scientific and technical terminology.

New "purified" Institute of Linguistics published terminological dictionaries - "Terminological Bulletins" (1934–1936), which "fixed" 14.5 thousand lexical terms of Ukrainian terminology and which made from 50 to 80 % of original Ukrainian terms.

Unfortunately, after the liquidation of the most authoritative scientific center (Institute of Ukrainian Scientific Language), which coordinated terminological work throughout Ukraine, the development, further study, and standardization of the Ukrainian scientific terminology stopped in 1930. The publication of scientific journals and monographs in the Ukrainian language was prohibited. As a result of this totalitarian action, the Ukrainian terminology began to abound in the language of hybrids, incorrect translations, and inappropriate borrowings; the new generation of scientists (even those whose native language was Ukrainian) did not have sufficient knowledge of the scientific Ukrainian language.

It was a difficult period in the development of Ukrainian scientific terminology because the results of many years of research and creativity of Ukrainian scientists have been forgotten, dictionaries and Ukrainian-language textbooks have not been published. This period is characterized by complete stagnation in the development of Ukrainian terminology.

Even though the science was developing, the Ukrainian terminology was not used in this field because there was no need for either textbooks or dictionaries in the Ukrainian language. For more than 40 years, only a few works (monographs, textbooks) were published in Ukrainian. Even the "Khrushchev Thaw" did not shake the fundamental principle of terminological policy in the USSR dictated by the Resolution of the SPA of 1934: "...the Ukrainian terminology can only be spoken only from the time of Soviet power in Ukraine".

A Dictionary Commission was created by the Ukrainian SSR Academy of Sciences in 1957. It was headed by Academician I. Shtokalo, whose main task was to publish 18 Russian-Ukrainian and Russian-Russian dictionaries. Nevertheless, the result of its work was the edition of 16 Russian-Ukrainian dictionaries. None of the Ukrainian-Russian dictionaries was published.

The special "Recommendations of the All-Union Conference on the Development of Terminology in the Literary Language of the USSR" were adopted which promoted the policy of "unification of nations" and "fraternity of peoples" in the linguistic question in 1961.

In the 70s, all specialized scientific journals of the Academy of Sciences of the USSR on natural and technical sciences were translated into Russian, which led to further Ukrainian scientific and technical terminology russification. The conference participants stated in their speeches that the main source of development and replenishment of Ukrainian terminology is the Russian language. As a result of this regulation, some of the Ukrainian terms were simply replaced by Russian ones. Almost all borrowings that were not presented in Russian were removed.

Such terminological policy of the Soviet Union entailed the loss of individual features of Ukrainian terminology, latter almost turned into a copy of Russian terminology and lost its linguistic richness and individuality. For several decades Ukrainian

scientists were in the conceptual field of the related Russian language. This language penetrated the consciousness of Ukrainians so strongly that sometimes only an expert can distinguish between the Ukrainian and Russian forms. The Ukrainian language has adopted those terms of the Russian language that are used with inappropriate meanings. Borrowed translations were constructed with deviations from the norms of Ukrainian word-formation.

New possibilities of terminological problems have appeared since Ukraine declared independence in 1991. New branch terminological dictionaries have been issued for translation. However, not all areas of science and technology have a thorough Ukrainian terminology. The creation and unification of the required terminology is a priority for terminologists.

For the first time in Ukraine began to create its state standards of terms and definitions. To achieve this goal at the National University "Lviv Polytechnic" in 1992 by the State Standard of Ukraine and the Ministry of Education of Ukraine, the Technical Committee of Standardization of Scientific and Technical Terminology was created. Thanks to the selfless work of specialists and the participation of scientists-philologists, scientists became possible, despite world experience, in "Terms and definitions" during the period from 1992–1996. more than 600 State Standards of Ukraine (SSU) were developed.

An important achievement of terminology development is the organization of various terminological conferences, in particular, Russian terminology and modernity (1996, 1997, 1998, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2011). The results of the conferences showed a lack of ordering of terminology, which complicates the prepared and professional communication between scientific and scientific-technical workers. It also causes errors in the preparation of technical documentation. Therefore, the primary task of linguists is to standardize the existing terminology.

The modern stage of terminological development, as linguists note, is to a certain extent similar to the period of the twentieth century. The similarity consists in the ways search of combining the best achievements of terminology of the past, oriented not only on foreign sources but also on internal resources of the Ukrainian language, with the modern practice of common use of international terms.

These studies allow us to trace the history of the development of terminological systems, the process of nomination of special concepts that passes through several stages (the period of the initial concepts' denotation, the stage of adding the common words to the terminology); to reveal the framework moments of system organization of terms at the level of nomination and paradigmatics; to reveal linguistic and non-linguistic factors affecting the construction of terms, development, and formation of terminological systems; to facilitate its process of standardization and codification, and its possible prediction in the future.

3 Materials and methods

The materials of new dictionaries on forestry, information systems, linguistic dictionaries of comparable speech, research methods – comparative-comparative, historical and ethnographic were used. To achieve the goal, we used a comprehensive methodology, which allowed us to carry out a holistic study of the factual material. General scientific (generalization, induction, deduction) and empirical-theoretical methods (analysis, synthesis, method of comparison, and classification) were used in our work. The process of selection of terms was carried out by the method of continuous sampling. The descriptive method, the method of dictionary definitions, and the method of semantic-component analysis were used for the inventory and distribution of the studied terms into thematic groups, establishing their definitions, determining the semantic structure of the studied language units, and revealing semantic changes in the scientific terminological system concerning synonymic. The structural and

word-formation methodology is reflected in the analysis of word-formation models of terms. The method of quantitative analysis consists in determining the frequency of the studied terms and their thematic groups in Ukrainian scientific opinion.

4 Results

The importance of specialized communication is noted in some of the international certification standards established for higher education. One of the most important standards is the European Network for Accreditation of Humanitarian Education (ENAEE). This standard emphasizes the development of such qualities as global and critical thinking, effective communication (both written and oral), and knowledge system building. One of the methods that contribute to the effective development of such competencies is terminological training. The cognitive component of the term is represented by the ability to conceptualize and construct a system of thinking. At the same time, the communicative side takes into account the transfer of knowledge and its assimilation.

A term can play several roles related to its communicative and cognitive sides; the roles may include knowledge fixation, discovery, and transfer. Each of the roles can serve a different function. Within the role of knowledge fixation, there is an instrumental function (the ability to use a concept when an image becomes an object of thought) and a function of knowledge fixation. The latter function is related to the development of knowledge by changing the conceptual paradigm.

According to existing theory, the development of knowledge occurs when old concepts, expressed by terms, begin to improve or revise. As a result of this process, there is a need to introduce new concepts, which, in turn, gives impetus to the transition to a new level of scientific knowledge.

The transfer of knowledge is represented by the training and information functions. The performance of the latter function terms in technical and scientific texts creates a special system of concepts, which allows obtaining information from texts.

One of the most important functions of terms belongs to the development of knowledge. Heuristic functions allow us to consistently organize knowledge, organize and create a unique view of the world and form the perception of its integrity. It also includes the classifying function and the analogical (modeling) function. The first function allows the specification of existing concepts; the second provides the new concepts' creation by analogy with already existing ones. The classifying function should be divided into clarifying and differentiating functions of terms synonyms, including foreign terminology.

Thus, knowledge and proper use of terminology will allow students to obtain world-class abilities in information analysis, the conceptualization of representations, and engineering problem-solving.

To use terminology appropriately in university courses, several problems must be solved. The terms used must have an unambiguous correspondence to the concept (absence of polysemy and synonymy). Its meaning must correspond to the concept expressed by the term. It must be clear, concise and have the derivational ability and linguistic precision. In contrast to the increase in polysemy and synonymy, polysemy in meaning is indicative of the critical state of terminology.

Terminological standards have become less binding, and the creation process of terminological units is characterized by chaotic development and perception due to the uncontrolled spread of foreign-language information on the Internet and the intensive process of borrowing foreign words. The situation is complicated by the lack of special training and knowledge of specialists who create new terms, which leads to the variability of terms when one concept corresponds to several terms

simultaneously, and their use is not fixed in standard dictionaries.

Variation can manifest itself on different levels and sides of language. First of all, there are many graphical variants of the same term, which appeared as a result of the reflection in the written speech of the same concept through various graphic means. In addition to graphic modifications of terms, there are also phonetic variants: phonemic and accentual. Phonemic modifications differ in pronunciation. They may be associated with the soft or hard pronunciation of consonants before vowels. For example: f[r'e]ym – f[r'e]ym [fr J 'ejm] – [fr 'e jm] (frame) 'part of the data transmitted over the network', K[mie]n – K[mie]n [dom J' en] – [dom 'en] (domain) 'part of the name hierarchy on the Internet'. Accent modifications are associated with a change in the place of accentuation. Here in the examples, the marked syllable is indicated by capital letters. For example: backbOn – bEkbon [be kb' on] – [b 'e kbon] (backbone) 'the main data route or the main route of the Internet', DomEn – Domain [dom J ' en] – [d 'om en] (domain). In these pairs of percussive variants, the normative variant occupies the first place, and the colloquial variant used in vernacular takes the second place.

All these problems demonstrate the need to work on terminology standardization for their unambiguous understanding and the elimination of terminological barriers. It is necessary to unify and internationalize terminology to ensure the effective communication of professional engineers at the international level. It will greatly facilitate the internationalization and integration of scientific research. As a result of the terminological material analysis, we found that the systematics of nominative units in the system of forestry terminology is expressed in the functioning of four classes of nominative units, such as terms, the terminologized common-use lexical units, professionalisms, and nomenclature (taxonomic) names. Let us consider each group in more detail.

Among the analyzed forestry terminological units, we distinguish general scientific terms, interdisciplinary terms, and specific terms according to the degree of specialization of their meaning.

Forestry terminology contains the following general scientific terms: adaptation, structure, system, potential, method, species, norm, optimization, plan, forecasting (prediction), productivity, resources, genus, development, structure, type, etc.

The vast majority of such names clarify the meaning of terminological phrases, for example, adaptation to global climate change, the structure of the stand (planting structure), root system, landscape potential, forest accounting methods, forest management methods, type of forest crops (forest species), recreational load norm, landscape optimization, ecological optimization, afforestation plan, increment forecasting, forestry forecasting, stand productivity, forest resources, a system of forestry measures, the forest age structure, forest type, mulch tree type (stand type), and so on.

The functioning of forestry terminology is associated with the use of such interdisciplinary terms:

- biological (climate, mesorelief, phytomass, flora, plants' formation);
- botanical (monocenosis, zoocenosis, breeds (forest tree species), associated species, photosynthesis, phytoclimate);
- zoological (zoophages, eagle, deer, forest fauna);
- ecological (abiotic factors, ecosystem, natural environment, waste, resources, greening);
- chemical (nucleic acids, phosphorus, calcium, sulfur);
- physical (radiation dryness index, natural radioactivity, solar radiation, irradiation of wood);
- geographic (landscape, agricultural landscapes, buffer zone, topography);
- economic (non-wood forest products, hunting products);

- farming (low-wood farming (undergrowth), forest seed farming (seed production), accounting (birds' inventory), animal accounting (animal inventory), natural resource accounting (natural resource inventory), balance (forest heat balance), revision);
- medical (cycle (cycle of substances), biological cycle, veins);
- technical (machines, threshing machine, chopping machine, forestry tractor, wood threshing machine, technology);
- architectural (mosaic);
- geodesic (leveling tool, geodesic point (geodesic station);
- military (tablet, map-board).

It should be noted that some of these terms retain a common lexical meaning within the forestry term system, for example, taxa (fixed rate, tax) – "an officially determined stable price for goods or a certain amount of payment for a certain type of labor and services". Bilodid (1979) and Gensiruk (2007) determined tax (fixed rate) as "cash charges by loggers when a forest goes to the roots".

Only a small number of terms indicate a narrowing of their meaning (compare: taxation (inventory) – "1. Determination of a tax, a price for anything. 2. Material valuation of a forest (determining the stock and quality of timber). 3. Determination of quantity and quality of something", Bilodid (1979) and forest inventory (forest area estimation) – "determination of the stock, the yield of intermediate assortments and tax value of wood in stands" Gensiruk (2007), forest inventory selective (shifting sampling of the site) – "the detection of quantitative and qualitative characteristics of the object"; association (association) – "1. Voluntary association of persons or organizations to achieve a common economic, political and cultural goal, cooperation, association 2. Connection of something as a whole 3. Relationship between an individual neuropsychological asset..." and association – "naturally formed within a certain habitat with similar conditions of existence, vegetation, homogeneous in species composition...".

We can record the change of meaning of a small number of terms within the forestry term system (compare: sketch (outline) – "1. The contour of an object; contour... // Contour drawing. 2. General characteristic of a phenomenon, person, review of events, etc." and sketch (outline) – "man-made schematic plan of a land plot with marking of land contours, local objects, results of measurements on it..."; updating (update) – "regular changes in the information funds...; a set of operations to maintain the information base in a state reflecting all changes of an object at present" and actualization (updating) – "bringing together forest fund data of different ages to the same date; one of the comparative-historical methods of studying the history of forest development"; taxator (forest cruiser) – "1. 2. Fiscal agent" and taxator (forest cruiser) – "forestry specialist, forestry engineer, who performs the whole range of field and service logging".

Terms in pure forest represent the core of the analyzed terminology and denote the names of industry specialists (logger, forest surveyor, forester, woodsman, woodcutter, ranger); forest science (forest taxation (forest inventory, silviculture), silvicultural science); forest pyrology (forest fire science); forest ecology, forest signs (woodland, a forest plantation, stand, matched stand); tree species groups (wood species dominant, associated species, wood species with high wood strength, shade-tolerant species, sun-tolerant species; plant litter types (soft humus, silt, moraine); processes (afforestation, silvicultural operations (felling), voluntary and selective felling (selection), even-aged felling, clear-cutting, sanitary felling, stump removal); equipment (wood threshing machine, windrowing machine (windrower), grapple skidding, forwarder, etc.

The terminologized, commonly used lexical units constitute a significant group in the forestry terminology system. Such terms are understandable to an ordinary speaker of the language, who

actively uses them in his speech. However, these lexemes are an obligatory component of the terminological system because, without them, their integrity would be violated. The use of pronunciation words to denote the names of specific concepts is the basis of this process because, more often, there is an expansion or narrowing of their meaning. "The movement from the sphere of commonly used vocabulary to terminology occurs along two lines: through the development of secondary terminological meanings in common lexical units and the use of commonly used words in compound terms".

Common names, which originally were used in oral professional speech, later began to be applied to specific concepts in scientific publications, and as a result, such names established themselves as general scientific terms.

In the forestry terminology system, such processes are the names of forest areas (meadows, thickets, woodlands, glades, tracts, forest massifs); forest types (birch forests, beech forests, alder woods (alder forests), hornbeam woods (hornbeams), oak woods); tree species (young, growth); additional species, tree parts (top (apex), branch (twig), leaf); wood defects (overgrowth, curl, stigma, veins, cracks, wormhole); plant names (birch, alder, lily of the valley, camomile, oak, pine tree, spruce (fir); birds (stork, swallow, quail, owl); animals (wolf, fox, bear); names of processes (peeling, lighting (first clearing), sawing (pruning), thinning, sprouting); plant diseases (cancer, burn), and so on.

A distinctive feature of some forestry terms is the identity of their meanings with the meaning of the common word. For example, such lexemes as a tree (wood), forest oak, snowball tree, maple, rootstock, undergrowth, dryness (stagheadedness), pole-stage forest, layerage (storey structure) are recorded in the Ukrainian dictionary as common words, for example: "tree (wood). 1. A perennial plant with a hard trunk and branches forming a crown. 2. The wood of this plant, going for construction and various products"; "Dibrova (oak forest). Deciduous forests on fertile soils, where oaks predominate"; "Kalyna (snowball tree). 1. A shrubby plant, 2. The berries of this plant"; "Podship (rhizome) ".

Some special dictionaries present the mentioned lexemes as terms: Tree – "a perennial plant with a characteristic above-ground trunk, crown, and roots"; oak forests – "forest ecosystems", with the dominance of one of the oak species in the rootstock" Gensiruk (2007); rootstock – "a plant to which a shoot or bud of another plant is transplanted" Gensiruk (1999); snowball tree (Kalyna) – "genus of shrubs of the honeysuckle family" Gensiruk; young growth is "the young generation of woody plants under the crown of a forest or on logs" Vintoniv and Grijuk (2009); layerage is "the vertical division of a stand into layers" Tunica, Boguslaev (2014); dryness is "the dying off of the tops and upper branches or the tree crowns" Krinitsky (2006); stands – "a group of trees forming a more or less homogeneous forest area" Vintoniv and Grijuk (2009).

Commonly used words can often flesh out the meaning by typing the term signs, thereby providing a requirement for unambiguous terms, compare, e. g.: fit (additional species) – "1. The action of meaning to fit. 2. Shrubby wood blown up to accelerate the growth of slow-growing species. 3. An additional sprout of cereals, formed later from the main stem" and fitting (additional species) - "in forestry, these are secondary tree species created with favorable conditions for the growth of the main tree species"; seedling (seed tree) - "1. A plant, the fruit of a plant, and grains, tubers, are left as seeds. 2. An area designated for growing plants for seed with those plants. 3. A seed specialist" and seedlings, "trees that are left on the root during clear-cutting for subsequent log sowing for natural regeneration"; illumination (first clearing), "1. The meaning of the action to illuminate. 2. Light from any source. 3. Technical equipment which is a source of light" and lighting (first clearance) – "the care of young stock up to 10 years of growth, kept in all plantations".

Commonly used lexical units are also used as components of terminological word combinations, for example, direction (logging direction, logging destination); seed (seed control), seeding material); forest (forest exploitability, forest canory, recreational forests, forest outliers); age (forest plantation age, stands' age, logging age); oak forest (oak forest, oak-derived silkworm (procession moth), oak green leaf miner, oak crested moth (oak moth), oak flea, beetle, moth, brown oak bronze moth, oak bark beetle), etc.

Professionalism is a word or phrase peculiar to a certain professional group language. Such names are used "as colloquial synonyms-equivalents to stylistically individual professional nomenclature or words-terms, and often beyond the literary norm." Rusanovsky, Taranenko (2004).

The use of professionalism is due to the specific activities of specialists in the forestry field and is associated with the use of a significant number of dialectal names in the terminological system under consideration.

In the field of forestry, professionalisms are a nationally specific reality. Some of them have no English equivalents, and some are dialectal names. Forestry professionalisms serve to denote names of persons, depending on the type of activity (haievyi / haiovyi = forester); types of weapons (horyzontalka = barrel rifle with a horizontal arrangement of barrels; dvostvolka – bore shotgun with two barrels; Triinyk = combined shotgun with smooth – bore and threaded barrels; Shtutser = disposable rifle carbine; boltovyk = threaded carbine with hand overloading chub and smooth – bore rifles with vertical placement of barrels); production facilities in the forest (upper stock) = forest's log depot; lower stock (nyzhnii) = depot industrial log; Volok = skidding road, jack ladder = planting, school (shkolka) = seedling house, ovary (matochnyk) = forest seed garden, plantation types = elite trees, dry out = snag; density of plantings and crowns = groups of rushes or tods, contributing to a better microclimate for major species at a young age by uniform shading; windows = gaps between tree crowns; oak in a coat = lighting the top of oak seedlings; plantation tier = layer, parts of wood and its defects; smelnyak = resin stump; obrizka (trimming) = waste wood, hornblende (rohovytsa) = hardened wood, rascheh = crack in the wood along the trunk; method of cutting knots (per lance = cutting knots to the surface of the log); tools (klupa = lathe carriage, lantset = Kolesov's planting iron, visniak = cutting tool for stripping the bark, rompak = cutter); different types of processes (stacking wood = stacking round wood; stamping = marking trees, prydelka (attaching) = grafting of seedlings, pidsochka = process of getting birch or maple syrop), beetles (drukar) = eight – toothed cutter); animals (kosyi = rabbit, rohach = moose, elk (sokhatyi) = moose, sakach = wild boar, sulphur (sirak) = wolf); layers of wood (act (apas) = layer of wood, determining the age of the tree, decrease (nyzka) = layer on the tree, located directly under the bark), and so on.

Such names "enable users interested in the development of Ukrainian technical knowledge to experiment and improve terminology on their language, more boldly introduce new equivalents, look for a reasonable dialectic between borrowed and their own".

Summarizing the problem of the relationship between terminology and professional vocabulary, Pavlova (2008) identifies three views. According to the first opinion, these two concepts are identical. The second opinion points to the difference between professional vocabulary and terminology due to a certain historical feature. The third opinion suggests that terms and professionalisms have both common and distinctive features. Pavlova (2008) focuses on attributes that help distinguish between professionalisms and terms. We have presented them in table 1.

The distinctive features shown in Table 1 are also typical for forestry professionalism. We will try to describe them more specifically.

Table 1: Distinctive features of terms and professionalisms by Doroshenko and Lysenko (2018).

Professionalism	Terms
Do not belong to the normative special terminology	They are a normative part of the scientific language's special vocabulary
General and special dictionaries are less common; they exist mainly in the field of functioning	They are fixed in dictionaries and function simultaneously in two spheres (fixation and functioning)
Used mainly in oral or spoken language	Written speech is the dominant area of functioning
They have a slightly wider scope of special use	May be known to people who are not related to the defined professional field
Characterized by the desire for expressiveness, imagery, expression	Deprived of connotations, i. e., expressive color
Systemic connections are less pronounced within a particular industry	Systemic connections are expressed to a large extent within a particular industry
Appear during professional communication as secondary forms of expression and are often used as professional colloquial doublets of official terms	Appear in the process of scientific research and function in scientific communication
They are characterized by a lower degree of specialization of word-forming means in comparison with terms	Characterized by the highest degree of specialization of word-forming means
Belong to the periphery of the terminology	Belong to the center of the terminology

5 Discussion

First, forest professionalisms do not belong to the normative special vocabulary; they are used mainly in oral communication and colloquial language because, as noted above, they have parallel dialectal names (e. g., yew – gew, thesina; nongni-tree – nekhnii-tree; ash – elm, holly, jasenina). Therefore, such names are not recorded in special dictionaries.

Secondly, these terms are used in professional communication as doublets of official terms (e. g., side, vertykalka = the barrel of a rifle with a vertical arrangement of barrels; school (shkilka) = nursery (nursery farm).

One suitable form for this purpose would be a bilingual or multilingual information thesaurus for a particular subject branch. A thesaurus is a type of dictionary that regulates specialized vocabulary within a particular information system. A thesaurus has some advantages over terminological standards: it can be continuously updated and reviewed at certain periods. This work is usually done by the same specialists, which gives it a continuous character. Modern information technology will allow the thesaurus to be placed online and openly accessible to users. The thesaurus can include many languages, and there is no need to republish it since all the work is done digitally.

Creating a thesaurus includes the following stages:

- delimitation of the subject domain;
- selection of words reflecting the topics of the subject domain and making a list of words;
- creation of classification schemes of representations in the subject domain;
- alignment of the list of words and classification schemes with their mutual updating;
- construction of the alphabet and other parts of the thesaurus;

- experimental testing and modification; creating rules for updating thesaurus.

Such a thesaurus with unified terminology of a particular subject branch can become the basis for the formation of the professional communicative competence of future technical specialists.

Modern international educational standards impose strict requirements on graduates of technical universities. These requirements require professional thinking and communication as one of the main components of a future engineer. It should be manifested both at the national and international levels. The basis for the development of such competencies can be terminological training, but the need for unification and normalization of terminology.

The internationalization of higher education brings some changes in the learning process at universities. In particular, when learning specialized vocabulary, students are introduced to concepts in both their native and foreign languages. Only knowing the exact equivalents in both languages will make professional communication effective. However, the growth of polysemy and synonymy in terms seriously impedes this process. What is needed is work of standardization, which can be done in the form of an information thesaurus. Frequent examples of English borrowings include: department, brand, business, default, dealer, business lunch, inflation, license, voucher, privatization, holding, flash mob, emission, margin, teenager, speaker, provider, inauguration, coalition, PR, image, extradition, separatist.

Oral borrowing occurred predominantly in early times, while in more recent times, written borrowing has become more important. Words borrowed orally tend to undergo significant changes in the act of perception. On the contrary, written borrowings, in general, retain their spelling and some features of the phonetic structure. Their assimilation is a time-consuming process.

We can say that most borrowings come to the Ukrainian language through mass media, entertainment, music, and culture in general. In particular, the mass media is the main channel through which most of the borrowings and neologisms enter our language. Every day, there are articles in newspapers that contain a large number of lexical units that are not peculiar to our native language. To a certain extent, this can be seen as positive progress, but on the other hand, excessive borrowing can cause serious damage to our language, crowding out the native Ukrainian vocabulary. Interestingly, translators trying to convey foreign sources often choose not to translate but rather borrow a foreign word. It explains why words such as trader, intension, underground, message, and others, can often be found in modern newspapers. According to the authors, it is better to use Ukrainian words when there are correspondences in the language. For example:

1. Trader – merchant;
2. Intention – intent, plan;
3. Message – information.

The choice of media discourse analysis necessitates a terminological critique. The next chapter analyzes different perspectives on the scope and essence of the concept itself.

The systemic functional approach allows us to distinguish the main functions of borrowings and neologisms. In addition, it allows us to analyze the mechanisms of value realization in the process of term production or translation, including its functioning in discourse, interpretation of perception, and axiological identification.

Since the source of analysis is limited, it is necessary to emphasize media discourse as a field of full-fledged functioning of neologisms and borrowings. It is necessary to analyze the main features of borrowings to determine the value of

borrowings as their immanent property. The value itself is seen as an immanent property of media discourse, which determines the characteristics and specifics of the functioning of discursive points.

Borrowings and neologisms constitute perhaps the greatest challenge to the professional translator. Technology gives birth to new objects and processes, and new ideas, concepts, and nuances derive from the media. Social science terms, slang, dialects entering the linguistic mainstream, and transmitted words make up the rest. A few years ago, 300 new words were counted in four consecutive issues of the French weekly Express. It is noted that each language acquires 3,000 new words a year. Neologisms can be defined as newly lexical units or existing lexical units that acquire new meaning (Doroshenko, Lysenko, 2018). Neologisms cannot be quantified because so many hang between acceptance and oblivion, and many of them are short-lived individual coins. Their number is increasing rapidly, as we become more linguistic as well as self-conscious. Articles, books, and dictionaries devoted to them are appearing with increasing frequency. Because they usually first arise in response to a particular need, most neologisms have a single meaning and can therefore be translated out of context, but many of them soon acquire new (while sometimes losing old) meanings in the target language.

According to the Dictionary of Historical and Comparative Linguistics, lexical borrowing is the transfer of a word from one language to another as a result of some contact between speakers of two languages.

Language as a social concept and the continuous evolution of vocabulary is a process, which is reflecting the development of society. The reasons for the introduction of neologisms and borrowings into the language are manifold:

- the need to define or describe a new concept;
- to find the most precise and expressive definition;
- to find the shortest answer (language economy);
- to create an image, to escape tautology;
- to evaluate and characterize.

One of the primary functions of neologisms and borrowings is the realization of meaning: the evaluation of the object defined by the neologism or borrowing itself, the meaning of the concept, and the situation. This process is determined by the needs of society. Lexical borrowing is not just the result of the need to name a new reality or concept but also the expression of the subtle tones of individual moods, feelings and to evaluate a certain idea of reality.

6 Conclusion

Thus, the formation of Ukrainian scientific and technical terminology is a long and multi-stage historical process, which became especially active after Ukraine gained independence in 1991. The development of selective thematic terminology was carried out by constantly increasing the number of scientific and technical subjects selected from the national language. The influence of internal and extralinguistic factors has led to a significant number of borrowings from English, German, French and other languages in the Ukrainian scientific and technical terminology.

In the conditions of integration changes, it is necessary to pay not only declarative attention to restoration of scientific approaches to the formation of the Ukrainian scientific terms but also to develop own layers and foundations of scientific definitions which are necessary for designation of the maintenance and essence of the development of a terminological system.

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