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Classification of English and Russian Concepts on Construction Industry

Clasificación de términos en inglés y ruso en la industria de la construcción

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ABSTRACT

This research reveals specific details in classifying and systematizing english and russian construction industry terms in a comparative aspect which help to identify aspects of this thesaurus: physical characteristics, style, materials, elements, equipment, and activities. The given classifications of construction industry can't be made without its careful analysis. The sublanguage of modern construction industry has universal properties characteristic of a common language and differential properties that are not found in that type of language. Classes of terms unify the largest groups of terms in hierarchical relationships in construction terminology and reflect the conceptual categories of independent sections of the industry.

Keywords: Approach, classification, communication, construction, language.

RESUMEN

Esta investigación revela detalles específicos en la clasificación y sistematización de los términos de la industria de la construcción en inglés y ruso en un aspecto comparativo, que ayuda a identificar aspectos de este tesoro: características físicas, estilo, materiales, elementos, equipos, y actividades. Las clasificaciones dadas de la industria de la construcción no se pueden hacer sin un análisis cuidadoso. El sublenguaje de la industria de la construcción moderna tiene propiedades universales características de un lenguaje común y propiedades diferenciales que no se encuentran en ese tipo de lenguaje. Las clases de términos unen las agrupaciones de otros términos mayores en relaciones jerárquicas en la terminología de la construcción y reflejan las categorías conceptuales de secciones independientes de la industria.

Palabras clave: Clasificación, comunicación, construcción, enfoque, idioma.

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INTRODUCTION

The development of architectural vocabulary begins with the Renaissance which was caused by innovations in the use of construction techniques and materials (Sakaeva et al.: 2019, pp.31-42). The changes in the architectural vocabulary of the Russian language became the basis for the development of construction terminology. Borrowings from the French language, names from the Dutch, German languages played a significant role (Kornienko: 2008, pp.151-155), (Cowan & Smith: 2005, p.405), (Davies & Jokiniemi: 2008, p.737). Consideration of the architectural thesaurus contributed to the identification of aspects of the architectural thesaurus: activities, physical characteristics, style and era, materials, agents, elements and equipment (Cowan & Smith: 2005, p.405). The beginning of the history of construction includes the development of human society, the process of human struggle with natural conditions for protection (Gainutdinova: 2012, p.442), (Kacher: 2002), (Bekmurodov: 2002). The purpose of architecture is to create the necessary living environment for humanity. The term architecture is used as a complex phenomenon, being the bearer of history, not only restores the past with the help of an architectural idea, but also reflects everything that is characteristic of today (Minakova: 1985), (Minasyan: 2003). The study of the concept of architecture helped to identify the difference between architecture and construction (Kacher: 2002): architecture is understood as “architectural design”, and construction is the embodiment of the idea in construction. Architectural vocabulary denotes linguistic units that nominate the concepts of architecture and construction, its elements (Mirimanova: 2002).

Reviewing construction terminology helped to identify the classification of architectural vocabulary (Sakaeva et al.: 2019, pp.433–447), (Makayev et al.: 2019). Based on the material on architecture, the following groups were identified: types of buildings, building structures, parts of buildings, basic construction concepts, engineering support of buildings (Kacher: 2002; Villalobos et al.: 2018; Ramírez et al.: 2019). The questions of the foreign presentation of the architectural project contributed to the identification of such classifications as the name of the lines and distinguished parts of the drawing, the names of points, the name of the units of measurement of physical quantities, the name of symbols, constructions with participles; classifications based on hierarchical relationships; classifications characterizing specific functional types of buildings, residential buildings by building material, names of subject concepts, borrowed terms which underwent significant overview during assimilation (Makayev et al.: 2018, pp.711-718), (Sakaeva et al.: 2019, pp.242-250). Based on these classifications, it is advisable to emphasize that the classification of architectural vocabulary is impossible without analysis, identification of information transmitted in a manner (Sakaeva et al.: 2019, pp.1938-1943). Architectural vocabulary is 90% formed by internationally contemporary vocabulary (Minasyan: 2003). The alternative to the formation of architectural vocabulary is still classical vocabulary (Davies & Jokiniemi: 2008, p.737). The basis for the formation of construction glossary was common terminology of construction (Kenzhetayeva et al.: 2016, p.4048).

The feature of common terminology is that for many centuries it has been considered one of the uncertain labor processes in the construction of housing, construction was only one of the types of labor activity. Construction vocabulary has started to be formed with the development of building craft. Dictionaries of building crafts, architectural vocabulary of the time reflected a certain stage in the development of construction (Sakaeva et al.: 2019, pp.31-42), (Bekmurodov: 2002). The structure of construction vocabulary defines the names of buildings, building materials, specialties in the construction industry as well as descriptions of various buildings, the construction process, tools. According to D.Z. Gainutdinova architectural and construction language includes common vocabulary which serves as a connecting component of special units during the construction of professional communication, and a special one consisting of lexical units that reflect scientific concepts (Makayev et al.: 2019). The currently growing interest in studying terminology is explained by a number of reasons, both non-linguistic (interstate relations) and intralingual (interaction and mutual influence of languages, searches of linguistic tools that are optimal for information exchange) (Sakaeva et al.: 2019).

METHODS

The aim and objectives of the research determine the application of appropriate methods: component analysis of the lexical meaning, the method of comparison (Kornienko: 2008, pp.151-155), (Makayev et al.: 2019), [12]. Methodological basis of the research contains works of domestic and foreign linguists. Problems of a systematic description of both Russian and English vocabularies have been successfully developed by many linguists (O.S. Akhmanova, V.G. Gak, A.S. Gerd, B.N. Golovin, S.V. Grinev, Yu.N. Karaulov, Yu.N. Marchuk, L.L. Nelyubin, L.A. Telegin, A.A. Ufimtseva, N.M. Shansky, D.N. Shmelev, L.V. Shcherba and a number of other scientists) (Sakaeva et al.: 2019, pp.1938-1943).

RESULTS

The construction industry sublanguage has universal properties characteristic of a common language and differential properties that are not found in a common language. The parts "Architecture", "Building Design" allowed O.P. Kornienko to identify terms related to various areas of architectural activity and forming the lexical system of the sublanguage of architecture and construction. Based on material, O.P. Kornienko gives the following classification of architectural vocabulary: parts of the building, basic building, engineering support of buildings, types of buildings, building structures, structural elements of buildings (Sakaeva et al.: 2019, pp.31-42). Complex systemic relationships are revealed between its constituent components in the terminology of the construction industry, which can be the reflection of hierarchical relations between the concepts accepted in this branch of science. The following classes of construction terminology are distinguished: the class of terms used in the industry of technology and organization of construction production; the class of terms that call the concepts associated with the designation of building structures and their functional types. Classes of terms unite the largest groupings of terms in hierarchical relationships in construction terminology and reflect the conceptual categories of independent sections of the construction industry: "building structures - technology and organization of construction work." The first class of terminology denotes the concepts of types of building structures, their functional parts. The second class combines terms related to the organization of construction work and construction technology (Mead & Doecke: 2020).

DISCUSSION

O.P. Kornienko singles out a foreign-language presentation of an architectural project, the implementation of which, is possible only with knowledge of foreign-language elements of the project which are part of the sublanguage of architecture and construction:

1. Names of lines and selected parts of the drawing (horizontal axis, object line, dashed line, dotted line, straight line etc.). For example, "the horizontal axis wind turbine is the most efficient design for taking advantage of wind power" (Minasyan: 2003).
2. Names of points (diagonal point, distance point, vertex): the vertex of an arch (Minasyan: 2003).
3. Names of units of measurement of physical quantities (meter, hectar, square meter): a coin meter (Minasyan: 2003).
4. Names of plans and layouts (floor plan, tight fit, loose fit, roof plan): the design of a roof plan is considered only in the design process of a structure (Minasyan: 2003).
5. Symbol names (star, splat, slash, dot, full point): 7/2 can be read as "seven slash two" (Minasyan: 2003).
6. Participle constructions (curved arch, arcaded space, applied load, imposed load, raising plate, fixed device, raised structure, depressed surface, arched frames).

7. Derivatives of the main words (board: wall board, layer board, bargeboard; beam: hammer beam, dragon beam, bundled tube, tube in tube structure).

8. Verbs denoting architectural and construction processes (resist, define, penetrate, flex, transfer, stand, lay, nail, disperse, extend, swing, screen, stiffen) (Sakaeva et al.: 2019, pp.31-42).

The language in the professional field of architectural language should not be ambiguous, it shows the principles and structures of the construction vocabulary. Classification of vocabulary cannot be without analysis and identification of information transmitted in a manner. Using images, the architect distinguishes between building elements (wall, roof) to which it gives the name (Ganiev: 1997, p.718).

We can give the classification of S. Kacher, J. K. Bignon, G. Khalin, who divide the architectural vocabulary into four classes:

1. Constructive function, which includes parts of architectural structures that have a basic and specific function.

2. A material that includes wood and other building elements.

3. Product includes a component used to protect and decorate wooden elements.

4. The type of buildings includes the name of the buildings - school, one-room apartment [7, p. 232].

CONCLUSION

Construction terminology reflects the state of construction of a given period, the terms of the basic concepts of construction work actively. These terms are best represented in the names of subject concepts.

The main groups:

1. Terms denoting construction tools: burav, naugol'nik, pila, sverlo. This group also consists of phrases. Improvement of various construction tools is expressed by adaptation to changes for special works.

2. Terms denoting construction processes: moshchenie, vrubka, okraska, zatirka and others. This group of terms is represented by terms-phrases that reflect the generic relations of the corresponding construction concepts. For example, bulyzhnayakladka, Names of building materials and parts: bulyzhnik, vozdušnayaizvest', izvestkovyjraštvor. The functioning of these words in scientific articles helps to stabilize their position in the system of construction terminology. With the advent of new architectural terms, the development of construction terminology, more complete classifications of certain phenomena appear. In construction lexicology, the term phrase has been identified, which is a structural type of term: oblicovochnykirpich, pustotelykirpich, lekalykirpich. Each term has a main word (element), in the composition of which other terms can be noted. For example, the word gvozd' is a key element in which several compound terms are noted. This term is divided into bruskovyegvozdi, krovel'nyegvozdi, navesnyegvozdi (Gazizova: 1997).

3. Terms designating building structures, their parts. The terms of this group are closely related to common vocabulary. This group includes single-word terms and phrases with a single-word term. This period is characterized by the functioning of structural varieties of parts of buildings, traditional single-word terms. The formation of terms and phrases based on borrowed language units reflects the further development of construction concepts: the main forms of roofs are odnoskatnayaidvuskatnayakryshi, kirpichnayaishifernayakryshi.

4. The next group is borrowed from dialect vocabulary: malka, v'yushka, zabivkachastokom, napilok, kladka pod lopatku [6, p. 38].

The classification of construction vocabulary is unique. The sublanguage of architecture and construction differs from the common language in its differential properties. In the study of the classification of construction industry terms the following groups were defined: the type of the building, part of the building, structural elements; there were also identified classifications based on hierarchical relationships; classifications

characterizing specific functional types of buildings, residential buildings by building material, names of subject concepts, borrowed terms, which underwent significant overview during assimilation (Koroleva et al.:2020).

On the whole, the construction industry language should not be ambiguous; the language in this professional field shows the principles and structures of the construction vocabulary. Classification of vocabulary cannot be without analysis and identification of information transmitted in a manner [20]. Using images, the architect distinguishes between building elements (wall, roof) to which he gives the name. M.M. Bekmurodov in his dissertation combines terms that include the word "building" based on lexical-thematic relations, reflecting the categorical relationship between the concepts and realities of the construction industry. The author described the terms in the following relationships:

1. Terms designating the classification features of the building for its intended purpose;
2. Terms denoting the quality and design features of buildings [7, p. 30].

The author identifies a group of terms that characterize specific functional types of buildings:

1. Terms designating types of civil buildings: block house, dining room, mess-room, building.
2. Terms that describe the types of industrial and agricultural buildings: hotbed, greenhouse, dairy farm, plant, factory, factory [7, p. 30].

The study of construction vocabulary borrowed from the French language which has undergone significant overviewing during assimilation allows us to propose the following classification:

1. Words acquiring additional meaning in the Russian language. Examples of this group can be attributed to the assimilated system of the Russian language since the acquired terms were subject to lexical assimilation. There were not so many terms that could be included in this group: impost, kazemat, salon. Kazematis understood as a long-term construction in fortresses designed to protect against bombs and shells. Salon is front living room or hall for receiving guests. The completion of a pillar, column or end of the wall, serving as a support for the arch is called impost.

2. Words with a wider palette of meanings in French. This group of words is the most extensive and includes terms such as *avenyu*, *al'kov*, *fasad*, *fronton*, *shato*, *gobelenzhalyuzi*, *zhirandol'*, *kuluaryand* others. The language is a borrower and has the ability to use a lexeme of foreign origin only as a term. The main source of terminology are words and phrases. The word and its phonetic, morphemic, derivational structure, when it becomes a term, does not undergo any major changes. The term *zhalyuzi* is understood to mean a sun protection device in the form of horizontally located planes installed in a window opening. *Kuliar* is a room in the theater, parliament, adjacent to the lobby and halls. The main front part of the building is called the facade.

3. Terms whose meanings are the same in terminological and non-terminological dictionaries. The author refers to this group terms that have the same amount of semantic content in explanatory and terminological dictionaries. These units include the following terms: *arhitrav*, *merlon*, *appartement*, *vitrina*, *gorel'ef*, *pinakoteka*, *kollonada*. For a complete study of these terms, we consider in more detail the meaning of words. *Pinakoteka* is a collection of paintings; in Italian and German architecture, the *pinacotheca* denotes museums. *Dungeon* is meant a tower that stood in a medieval castle, which served as a refuge when an enemy attacked. *Merlon* is a tooth of a fortress wall located between two embrasures. The apartment is called a large luxurious room, consisting of several rooms. One type of sculptural image on a plane is called a *bas-relief*. By *embrasure* is meant a hole in a defensive structure intended for firing from guns.

4. Homogeneous words. Individual words that are borrowed from other languages but coincide with words of Russian origin and in sound, i.e. homonymy is the result of the coincidence of the sound of borrowed words. This group includes such words as *blok*, *lozha*, *markiza*, *panno*, *parket*, *parter*, *tambur*, *friz* [9, p. 144]. *Blok* is a complex part used as a finished part of a structure or mechanism. *Lozha* is the place in the auditorium for several persons separated from the rest of the hall. The surface on the wall, ceiling, framed by an ornament, smooth or picturesque, is called a panel by sculptural images. *Parquet* is a material in the form of thin planks of hard wood, for flooring in the form of any pattern. *Parter* is seats in the auditorium located in rows parallel

to the stage, stage, screen. Under the tamburit is understood the drum of the dome. There are two more meanings. 1. An extension at the front door, protecting the main room from the cold. 2. Closed area of a passenger railroad car at the entrance door.

5. Words acquiring additional terminological meaning. This group includes terms that have semantic content in the terminological dictionary and are not fixed in the French dictionary, i.e. terminological semantic overviewing of the Russian language. This group includes terms such as ampir, anfilada, buduar, markiza. Ampir is the style of architecture and decorative art that arose in France in the early 19th century based on imitation of antique patterns. Anfilada is a series of rooms communicating with each other with doorways located on the same axis. Markiza is an external canopy above the window or over the entrance to the house for protection from the sun (Sakaeva et al.: 2019).

The construction of any building or structure is incomprehensible without calculating its strength. From the first quarter of the 19th century, the Institute of Engineers has been studying construction issues about retaining walls, masonry, foundations, etc. Anticipating architecture, engineering science is developing in the first half of the 19th century. The first attempts are being made to create the production of artificial stones, interest in construction equipment is growing.

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