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METAPHORICAL WAY OF FORMING APPLIED GEOMETRY TERMS IN THE MODERN KAZAKH LANGUAGE

The present article is devoted to the presentation of the results of the study of one of the possible ways of appearance of terms in the field of applied geometry, namely metaphorization in the terminology of the Kazakh language. Despite the fact that there are enough works on metaphor, but there are no works on the study of metaphorical nomination in the terminology of applied geometry in the Kazakh language. This determines the novelty of this work.

The purpose of this research is to study productive metaphorical models used in the formation of terms of applied geometry in the Kazakh language. For this purpose, the essence of metaphor and metaphorical transfer is considered, the ways of formation of terms of applied geometry by metaphorization are analyzed. The analysis of the sphere- the source of metaphorical transfer and the definition of the functions of geometric metaphor is carried out.

The study presents the types of metaphor formation, as well as a detailed analysis of their models. The definitions of the studied terms of applied geometry are considered in the article, and the lexical meanings of the source words and their semantic components involved in the transfer of meaning are highlighted. The most common types of metaphors are identified. It has been revealed that anthropomorphic metaphorization is one of the most effective ways of forming terms of applied geometry in Kazakh terminology.

Key words: term-metaphor, scientific metaphor, applied geometry, metaphorization, metaphorical models

MAIN PROVISIONS

The semantics of the term has long been the object of study by linguists. At the same time, we can speak with confidence about the transformation of the understanding of the semantic nature of the term as a whole - from understanding the term as a scientific conceptual unit to an awareness of its linguistic and cognitive nature. In the framework of the cognitive approach to the study of terms, the study of metaphor becomes important not only in linguistic terms, but also in linguocultural terms. It allows us to identify a set of universal and specific factors that actively manifest themselves in different linguistic pictures of the world. Modern terminology effectively uses a cognitive approach in the study of the functional and semantic specificity of the term. The cognitive approach to the study of a term makes it possible to comprehend and interpret fragments of human experience and knowledge that are reflected in the semantics of a terminological unit in the process of its creation. Thus, the study of term semantics and the organization of term systems through the prism of the cognitive approach will complement and deepen the existing research in this area.

Metaphorization as a way of forming terminological units of applied geometry has not yet become the subject of a separate linguistic study in the Kazakh language, which prompted us to address this problem. The article presents the results of the study of one of the possible ways of the emergence of terms in the field of applied geometry, namely metaphorization and the study of terms-metaphors, widely represented in its various fields and firmly rooted in its terminology.

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INTRODUCTION

The relevance of the study is due to the growing interest in the study of terminology in an anthropocentric aspect. The processes of creating terms by specialists in a certain field of knowledge attract linguists who study special linguistic units.

It is known that the foundations of modern research in the general theory of metaphor were laid in the works of major domestic and foreign philologists. Metaphor in terminology and scientific text is described in foreign works by N. Black, M. Johnson, D. Lakoff, A.A. Molnar, Juan C. Sager, S. Markus, P. Rodet, I.O. Kraevskaya, and others. Metaphorical geometric terminology in the Russian language and in comparison with the English language is analyzed in the works of I.V. Pashkova, V.M. Toporova, E.V.Tkachuk, Mishlanova, etc. The analysis of metaphorization of terms in other branches of science is presented in the works of E.A. Sirotina, S.M. Tolmachev, T.G. Stul, Ovsyannikova, V.A. Shalneva and others. Among the domestic researchers of metaphor are S. Aliszhan, A.Zh. Zhaparova, I.S. Muratbayeva, Zh. Esenalieva, A.O. Imasheva and others. The number and variety of works devoted to the study of this linguistic phenomenon in its various aspects is really impressive. Let us briefly review what problems are in the focus of attention of the authors.

Research directions of metaphors in the modern Kazakh language can be differentiated as follows:

• revealing the linguistic nature of modern metaphors, giving a scientific definition corresponding to the modern language.

• defining the types of metaphor;

• demonstration of the cognitive role of metaphor in creating new meaning.

• demonstration of the metaphor's function in recognizing the picture of the world in language.

• the importance of metaphor in the expression of national identity in a literary text.

• studying the conceptual function of metaphor, on the creation of nominative meaning. [1, 198].

In foreign linguistics the actual aspect of research is cognitive analysis of conceptual metaphors with different spheres-sources, the state of cognitive models arising on the basis of metaphorization in scientific discourse is considered.

Despite the fact that there are enough works on metaphor, but there are no works on the study of metaphorical nomination in the terminology of applied geometry in the Kazakh language. This determines the novelty of this work.

The study of metaphor in the field of applied geometry of the Kazakh and English languages provides rich material for research.

The purpose of this study is to investigate productive metaphorical models used in the formation of applied geometry terms in Kazakh language. For this purpose, the essence of metaphor and metaphorical transfer is considered, and the ways of formation of applied geometry terms by metaphorization are analyzed. The sphere-source of metaphorical transfer is analyzed, and the functions of geometric metaphor are defined. The aim is to fulfil the following objectives:

1) to identify terms and names of geometric figures and concepts from thematic dictionaries that have undergone metaphorical transfer in the Kazakh language.

2) to characterize the source sphere of geometric metaphor;

3) to determine the functions of geometric metaphor;

4) to describe the metaphorical patterns in the terminology of the field.

5) to identify a productive way of forming terms of applied geometry;

The object of the study is terminological metaphors of applied geometry in the Kazakh language.

MATERIALS AND METHODS

As we know science represents thinking through research. «Each step of this research is fixed in terms - products of human mental activity» [2, 154].

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Before proceeding to analyze the functions of the term-metaphor, it is necessary to clarify our view of the term as such. The analysis of scientific works has shown the presence of different approaches to the definition of the main concepts of the term. In the broadest sense, a term is a word in a special meaning, behind which stands a certain special concept, i.e. a term is a graphic and semantic expression of a given concept or a group of concepts. In a number of foreign works we find similar interpretations of this concept, for example: «Terms are the linguistic units that designate our conceptualization of objects, processes, states and attributes in a specialized domain. Therefore, they play a key role in understanding, representing, transmitting, and acquiring specialized knowledge» [3,1].

In our research, we adhere to the following definition of the term: terms - words or phrases of a special (scientific, technical, etc.) language created to accurately express special concepts and designate special objects [4, 463].

Despite the different approaches (functional, communicative, cognitive, etc.) to the definition of the concept of term, most scientists share the view that a term is a word or phrase combination that denotes a special concept and carries scientific information. There is no doubt that the term always denotes a concept. The term (concept) helps to establish a continuous connection between thought and language. The status of the term, its role in the functioning of the language of science is that, being the most informative means of natural language, terms fix scientific and technical knowledge, realized in the form of a systematically organized array of concepts [2,154]. Thus, terms are the most important part of scientific speech.

Along with neutral terms, which constitute the main body of the language of science, terms-metaphors as a special type of terms are distinguished. Our research must begin with the definition of the concept of «metaphor» and what features it has. In modern sources we can find a large number of interpretations of this term. The dictionary of linguistic terms gives the following definition of metaphor: «Metaphor (transfer of meaning) in *engl.* metaphor, *fr.* me'taphore, *german* metapher, Übertragung. A trope consisting of the use of words and expressions in a figurative sense on the basis of similarity, analogy, etc. ...» [4, c. 231]. In our opinion, this definition is the most popular in linguistics.

This study is aimed at studying productive metaphorical models used in the formation of terms of applied geometry in the Kazakh language. The material for the study was metaphorical terms selected by a continuous sampling method from an online dictionary of technical terms, as well as scientific works of famous scientists. Namely, books and glossaries on applied and descriptive geometry by famous scientists in this field such as Zh. M. Esmukhanov, K.K. Konakbaev, I.O. Moldekov, J. Zhanabaev, A.K. Baidabekov and others. The following research methods were used in this work:

- continuous sampling method (to identify metaphorical terms from thematic dictionaries in applied geometry);
- comparative method (for comparing types of metaphorical relationships in Kazakh and English languages);
- typological method (to determine the signs of metaphorical transfer in the relations of two languages);
- descriptive method (to describe the features of metaphorical transfer);

To build a classification of productive metaphorical models, a descriptive method, a method of modeling and definitional analysis (method of analysis of dictionary definitions) were used.

RESULTS

It should be noted that the use of metaphor in the language of science has long been considered unacceptable, since scientific speech strives for unambiguity, conciseness and reliability. In other words, metaphor was opposed to a clear scientific style of presentation. In the 20-th century the view of metaphor changed significantly. While the traditional understanding of metaphor was the substitution of one word for another, many scholars today point out that metaphor is actually a

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manifestation of a fundamental cognitive process or cognition. Thus, metaphorization is one of the common ways of term formation in science. Metaphorization in science is possible thanks to a person's ability to relate his own everyday experience and new, unidentified scientific concepts.

The theory of conceptual metaphor (J. Lakoff, M. Johnson, etc.) has been developed within the framework of the cognitive direction, according to which the conceptual system of a person contains schemes according to which he thinks and acts. The process of metaphorization, which is the interaction of two structures of knowledge (the structure of «source» and the structure of «target») is based on complex cognitive processes. Metaphor is seen as a way of understanding one thing in terms of another thing [5 c.62].

Lakoff and Johnson affirm that «our conceptual system is largely metaphorical, the way we think, what we experience, and what we do every day is very much a matter of metaphor». Following this claim, which largely reshuffled the way metaphor was apprehended by researchers, metaphor is now seen as a means to make sense of the unknown. This results from a mapping between two domains (or concepts): a source domain and a target domain. Usually, the source domain corresponds to something familiar or already experienced [6,3].

Methods of transmitting information have always been relevant in scientific discourse. In the framework of the cognitive field many researchers pay attention to metaphorical models. Researcher S.Aliszhan in the article «Cognitive models (metaphorizations) in scientific discourse» notes that with regard to the process of metaphorization in scientific cognition, metaphor is the main mechanism. It lays the foundation of scientific thinking and is the basic principle of scientific activity. The field of science as a whole, as well as individual fields, are metaphorically modeled as virtual fields in nature. Metaphor is a model of formulation and recognition. This is an important factor that directly affects the formation of new concepts. The author in his paper gives a classic example of metaphorical modeling. The scientist represents Akhmet Baitursynuly, who laid the foundations of Kazakh linguistics and literary criticism. In describing aspects of the similarities between architecture and literature, he wisely used the heuristic and information capacity of metaphor. He combined intuitive and rational approaches to understanding the world through the mechanism of metaphorization. Consequently, these examples, taken from A. Baitursynuly in the interpretation of researcher E. Orazalieva, indicate that the role of metaphor in the field of science was strong from the very beginning [7,134]. Consequently, terms are born through metaphor , which are based on words related to a person and the world around him. The change in the world around us also leads to a change in the types of metaphors in terminology.

Science begins with the results that arise in the thinking process of the entire people, and then science comes into contact with language. This results in terms taken from the language of the people. The process of replenishing terminology with new terms at the expense of units of the general literary language is based on metaphorization. The use of common language words in the function of terms is one of the most common ways of forming scientific terminologies. The specificity of terminological metaphorization lies in the representation of the scientific «unknown» through the «known» by using a familiar, mastered lexical unit in a new reinterpreted meaning. Explaining a new process or phenomenon through information already known from experience is an effective means of learning about the scientific world [2,155]. Therefore, the presence of metaphorical terminology in the terminosystems of scientific knowledge is explained by the fact that science develops together with the people and their language. The language of science and the national language are closely interrelated and cannot exclude each other. The scientific picture of the world is a universal system that stores the achievements and knowledge of all peoples of the world. The examples listed above indicate that it is often not enough to know only the basic commonly used meaning of a term. To understand the true meaning of a particular term-metaphor one must have a certain background knowledge of the culture. For all its conventions, a metaphor contains such a volume of information that allows it to perform the functions of a term.

Thanks to the meaning of a common word a specialist manages to create an idea of a new object and in the course of cognitive further activity to develop a scientific concept about it. Metaphor allows the researcher to verbalize new knowledge. Metaphorical transfer is carried out in the direction from

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specific knowledge to generalized abstract knowledge. This is the basis of the cognitive mechanism of metaphor: comprehending abstract phenomena through known and familiar images [8,1]. In professional discourse, metaphor is a unique tool of narrowly focused communication, allowing to build a dialog between specialists due to the dialogicality underlying metaphorical terms [2,156]. Thus, in terminology, the appearance of metaphor is associated with the desire of a professional figure to compactly and most holistically express existing knowledge.

In our study we follow this direction and define the term as follows: it is a dynamic conceptual structure in which special knowledge is realized. Based on this, the *term-metaphor* in our understanding is a dynamic epistemological structure formed on the basis of already known general scientific / general technical knowledge, the main function of which is to express this knowledge in a more compact and accessible form.

The number and variety of works devoted to the study of this linguistic phenomenon in its various aspects is enormous. We have presented only the main aspects in our opinion.

We will consider these statements using examples of term-metaphors in the field of applied geometry. Existing in applied geometry terms-metaphors reflect the mechanism of cognition of people in the past, the way of their thoughts and associations. Basic geometric terms were formed several thousand years ago. At that time, people named new geometric phenomena using primitive similarities to some objects surrounding them in their daily lives.

The study found that the term-metaphor is often formed on the basis of similarity to the human body, everyday objects or its details. Among the sources «feeding» the terminological arsenals of applied geometry we can name, first of all, the lexicon of the commonly used style. It is the neutral lexicon that is a resource base for the generation of terms by means of metaphorical transfer of names based on visual or functional similarity to the «signifier» of the source lexical unit. Words in ordinary language, such as *dome* (*kumbez*), *foot* (*taban*), acquired the status of terms after they «migrated» to the technical sphere and received constant use in the latter to denote specific concepts: *dome* (kumbez) (buildings), *taban* (base of a figure). The versatility of the spatial characteristics of the objective world is reflected in the geometric metaphor. Faced with the necessity of naming new objects and phenomena, we quite often resort to the comparison with various spatial features peculiar to our empirical experience. Many objects and events evoke associations with the shape and basic features of geometric figures. In various situations in the Kazakh language we operate such metaphors as «*point of view*», «*circle of communication*», «*financial pyramid*» and others. We believe that this usage is due to the fact that quite often we use the familiar, understandable sphere of space to conceptualize something new or complex. Such metaphors undoubtedly make speech richer, more expressive and emotional. The lexical systems of different languages are not identical, the concepts of the same objects and phenomena of reality in different languages do not always coincide, which means that in English we will not always be able to find an equivalent to the Kazakh geometric metaphor. For example, native speakers of Kazakh language are familiar with transfer values of such lexical units as *segment, radius, vector, coordinate, scale, section,* but in English they do not have metaphorical transfer. Taking into account the above-mentioned, it can be argued that the projection of reality into the semantics of any language depends, on the one hand, on the anthropocentric factor, on the other hand, on the specifics of a particular culture. The above examples demonstrate the fact that there are many lexemes in the language, used both in common usage and as terms. This state of affairs prompted linguists to talk about terminology as the phenomenon of the transition of a lexical unit from a commonly used status to the status of a term.

Considering the metaphorization of applied geometry terms in our study we turned to the cognitive study of metaphor.

We have identified the following models for the formation of metaphor terms in the Kazakh and English languages:

• *anthropomorphic model*, implying a person with all his biological and psycho-intellectual characteristics and various manifestations of his activity. This model includes professional tools and actions, everyday items, human actions, social status, objects and elements of clothing, etc.;

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• *non-anthropomorphic model*, implying phenomena and objects of the reality surrounding a person: flora and fauna, natural phenomena and water elements, landscape, sound, color, etc.

This study revealed that one of the most frequent models in applied geometry terminology is the anthropomorphic metaphorical model. Here are examples of terms formed according to this model (see Table 1).

Table 1 - *Anthropomorphic metaphorical model in the formation of applied geometry terms*

Name in Kazakh language	Name in English language
beyne (бейне)	image, view
kolenke (көлеңке)	shade
kindik (кіндік)	center
kopzhakty bet (көпжақты бет)	multi-sided
taban (табан)	base
geometriyalyk dene (геометриялық дене)	geometric solid
kabyrga (кабырға)	facet, edge
tobe (төбе)	apex
testi dongalak (тісті доңғалақ)	toothed wheel
tors (торс) (түзу сызықтық бет)	torso (straight linear surface
kyisyk bettin moyuny (қисық беттің мойыны)	neck of the curve

A separate group of anthropomorphic metaphors includes a model with a component - a proper name denoting, as a rule, a well-known person (see Table 2).

Table 2 - *Anthropomorphic metaphorical model with the component of the proper name in the formation of terms of applied geometry*

Name in Kazakh language	Name in English language
Eiler-Venn diagrammalary (Эйлер-Венн диаграммалары)	Euler-Venn diagram
Euclid algorithmi (Евклид алгоритмі)	Euclidean algorithm
Decart geometriyasy (Декарт геометриясы)	Descartes geometry
Monzh tasili (Монж тәсілі(әдісі)	the Monge's method
Archimed spirali (Архимед спиралы)	Archimedean spiral
Decart zhapyragy (Декарт жапырағы)	Cartesian leaf
Desarg teoremasy (Дезарг теоремасы)	Desargues's theorem
Bernulli lemniscaty (Бернулли лемнискаты)	lemniscate of Bernoulli

The anthropocentric picture of the world undoubtedly influenced the metaphorical terminology formation in the presented European languages.

An artifact metaphorical model is closely related to anthropomorphic metaphor. By forming the terms of applied geometry in accordance with this model the names of human household objects are used (see Table 3).

Table 3 - *Artifact model*

Name in Kazakh language	Name in English language
ortogonal tor (ортогонал тор)	orthogonal network
sakina (сақина)	ring
tajdi somyn (тәжді сомын)	castellated nut
kalpakshaly somyn (қалпақшалы сомын)	cap nut
asha (аша)	fork
shpilka (шпилька)	pin
zhumyrtka tərizdi (жұмыртқа тәрізді)	an ovoid shape

It should be noted that geometric terminology is characterized by a high degree of internationalization. Greek and Latin metaphorical terms are often internationalisms. The study

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revealed that international metaphor terms have different degrees of assimilation in the recipient language (see Table 4).

Table 4- *International terms formed by means of metaphorical models*

Languages		
Latin	**English**	**Kazakh**
vector	vector	vector (вектор)
figura	figure	figura (фигура)
centrum	center	centr (центр)
cylindrus	cylinder	cylinder (цилиндр)
perspectiva	perspective	perspectiva (перспектива)
Greek	**English**	**Kazakh**
prisma	prism	prisma (призма)
analysis	analysis	analys (анализ)
systema	system	systema (система)

Such presence of terms-metaphors, formed in the context of anthropomorphic model, indicates that the life and activity of man reflected literally on everything, including the formation of Kazakh terms of applied geometry. This shows the peculiarity of the cognitive-nominative bases for the creation of such terms.

As for the non-anthropomorphic model of term formation, metaphors with images of «**flora**» based on comparison with plants are widely represented: *flower girih* (guldi girikh), *Cartesian leaf* (Decart zhapyragy), *twig* (tarmac), *Möbius strip* (Mebius zhapyragy), *chevron tooth* (shyrsha tis), *root* (tubir); «**natural phenomena**» : *astroid, projecting ray* (projectiyalauschy, keskindeushi), *ray* (saule), *asterisk* (zhuldyzsha), *bunch* (shok), *bunch of straight lines* (tuzuler shogy); «**landscape**»: *horizon line* (kokzhiek syzygy), *surface line* (kokzhiek zhazyktygy), *abstract space* (abstractili kenistik); «**texture**»: *roughness* (kedir - budyr), *thin zigzag line* (zhinishke irek syzyk), *thick dotted line (*juan nukteli үzylme syzyk*);* «**image**»: *symbol* (simvol) , *view* (korinis), *mark* (tanba), *image* (keskin), (beine); «**religion**»: *feature* (qasiet), *inaccuracy* (katelik), *divine proportion* (kudyret proportiyasy, tanirlik proportiyasy)*;* «**law**»: *transformation law* (turlendiru zany), *law of symmetry (*symmetrya zany), *legitimate curved lines (*zandy qisyk syzyktar*), illegal curved lines* (zansyz qisyk syzyk), *legal curved surfaces* (zandy qisyk bet), *illegal curved surfaces* (zansyz qisyk bet), *conventional image* (shartty keskin).

DISCUSSION

As can be seen from the examples, many terms have entered the lexicon of applied geometry of the Kazakh language with preservation of metaphoricity, which is again explained by human cognitive activity. Thus, based on the theory of conceptual metaphor, let us define the source (donor) spheres. They include information about the subject, phenomenon, event, which is used to designate the subject or phenomenon, in another sphere of knowledge - the sphere of the recipient (target). Such donor zones of metaphorical nominations within the framework of the field of «applied geometry» are recognized as follows*: human, living organism, natural environment, space, artefacts*. In the process of researching the semantic content of the formed terminological units of applied geometry, the characteristic types of metaphorically formed terms were determined:1) metaphorical terms, which in the terminology of applied geometry appeared as a result of semantic reinterpretation of a common literary word; 2) borrowed and reinterpreted elements of conceptual spheres of other sciences.

CONCLUSION

The study of metaphors in Kazakh terminology in the field of applied geometry has shown that semantic reinterpretation is an integral part of the process of formation of terms of this subject area.

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The purpose of a metaphor is to transform the meaning of a word. As a result of such changes, words acquire additional meanings, undergo reinterpretation and form a new associative series that complements the internal meanings of terms and concepts. Metaphor has a huge impact on terminology and forms an integral part of modern scientific language.

In the terminology of applied geometry, one of the most productive ways of creating terms is anthropomorphic metaphorization, which is based on the principle «man is the geometric measure of all things». As a result of metaphorization, new terms are formed on the basis of cognitive transfer of lexemes relating to the structure of the human body, its vital activity and life into a specialized field due to external or functional similarity between the objects of the source field and the target field.

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Қазіргі қазақ тілінде қолданбалы геометрия терминдерін қалыптастырудың метафоралық тәсілі

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Мақала қазақ тіліндегі қолданбалы геометрия саласындағы терминдердің пайда болуының ықтимал жолдарының бірін, атап айтқанда қазақ тіліндегі метафоризация зерттеу нәтижелерін ұсынуына арналған. Метафораға қатысты еңбектер жеткілікті болғанымен, қазақ тіліндегі қолданбалы геометрия терминологиясында метафоралық номинацияны зерттейтін еңбектердің жоқтың қасы, сол себептен осы жұмыстың жаңалығын анықтайды.

Зерттеудің мақсаты – қазақ тіліндегі қолданбалы геометрия терминдерін қалыптастыруда қолданылатын өнімді метафоралық модельдерді анықтау. Ол үшін

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метафора мен метафоралық ауыспалы мағыналарының мәні зерттеліп, қолданбалы геометрия терминдерінің метафораландыру арқылы жасалу жолдары талданады. Метафоралық ауыспалы мағыналарының қайнар көзі – сфераны талдау және геометриялық метафораның қызметтерін анықтау жүзеге асырылады.

Зерттеуде метафораның қалыптасу түрлері, сондай-ақ олардың үлгілеріне егжей-тегжейлі талдау берілген. Мақалада қолданбалы геометрия саласындағы зерттелетін терминдерінің анықтамалары қарастырылады, сонымен қатар бастапқы сөздердің лексикалық мағыналары мен мағынаны жеткізуге қатысатын олардың семантикалық компоненттері атап өтіледі. Метафоралардың ең көп таралған түрлері анықталады. Антропоморфты метафоралау қазақ терминологиясында қолданбалы геометрия терминдерін қалыптастырудың ең тиімді тәсілдерінің бірі болып табылатыны анықталды.

Кілт сөздер: термин-метафора, ғылыми метафора, қолданбалы геометрия, метафоралау, метафоралық модель

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Метафорический способ образования терминов прикладной геометрии в современном казахском языке

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Настоящая статья посвящена изложению результатов исследования одного из возможных путей появления терминов в области прикладной геометрии, а именно метафоризации в казахском языке. Несмотря на то, что работ о метафоре достаточно,

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работы по изучению метафорической номинации в терминологии прикладной геометрии на казахском языке отсутствуют. Это обуславливает новизну данной работы.

Целью данного исследования является изучение продуктивных метафорических моделей, используемых при образовании терминов прикладной геометрии в казахском языке. Для этого рассматривается сущность метафоры и метафорического переноса, анализируются способы образования терминов прикладной геометрии путем метафоризации. Проводится анализ сферы- источника метафорического переноса и определение функций геометрической метафоры.

В исследовании представлены типы образования метафор, а также детальный анализ их моделей. В статье рассматриваются дефиниции исследуемых терминов прикладной геометрии, а также выделяются лексические значения слов-источников и их семантических компонентов, участвующих в передаче смысла. Определены наиболее распространенные виды метафор. Выявлено, что антропоморфная метафоризация является одним из наиболее эффективных способов образования терминов прикладной геометрии в казахской терминологии.

*Ключевые слова**:** термин-метафора, научная метафора, прикладная геометрия, метафоризация, метафорические модели.*

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