



## Investigating of extralinguistic and linguistic classification of terminological system in geology (on the materials of English and Uzbek terms in the sphere of geology)

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### ABSTRACT

The article analyzes the peculiarities of terminological system in the sphere of geology. In particular, features related to factors such as extralinguistic and linguistic as the main aspects of terminological area. The article studies the classification of terms taking an account of these two factors to disclose the pivotal components of terminological system in geology.

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## Геология терминосистемасидаги экстралингвистик ва лингвистик таснифлашининг тадқиқи (геология соҳасидаги инглиз ва ўзбек тилларидаги терминлар асосида)

### АННОТАЦИЯ

#### *Калит сўзлар:*

терминлар,  
геология,  
терминологик тизим,  
тасниф,  
экстралингвистик  
ва лингвистик  
омиллар.

Мақолада геология соҳасидаги терминосистеманинг ўзига хос хусусиятлари таҳлил қилинган. Хусусан, экстралингвистика ва лингвистика каби омиллар терминологик майдоннинг асосий жиҳатлари эканлиги баён этилган. Мақолада геология терминосистемасининг муҳим компонентларини очиқ бериш учун айнан шу икки омиллар ҳисобга олинган ҳолда терминларнинг таснифланишини устида тадқиқот олиб борилган.

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# Исследование экстралингвистической и лингвистической классификации терминосистемы в геологии (на основе английских и узбекских терминов)

## АННОТАЦИЯ

### *Ключевые слова:*

термины,  
геология,  
терминологическая  
система,  
классификация,  
экстралингвистические  
и лингвистические  
факторы.

В статье анализируются особенности терминологической системы в области геологии. В частности, особенности, связанные с такими факторами, как экстралингвистические и лингвистические, которые являются основными аспектами терминологической сферы. В статье исследуется классификация терминов с учетом двух факторов, позволяющая выявить основные компоненты терминологической системы в геологии.

## INTRODUCTION

The relevance of the research topic is determined by the increased interest of modern linguistics to the problems of word nomination in the geological sphere, the definition of ways of forming the lexical composition of geological terminology. Both in theoretical and practical importance, the problem of English and Uzbek geological terminology in a comparative aspect has not become an object of special study by linguists. The study of geological terminology is also essential for aspects of linguistics, reflecting the structural, semantic and grammatical features of geological terms, including such sections as lexicology, lexicography, stylistics. Geological terminology is one of the components of the vocabulary due to the peculiarities of the structural, semantic, word-formation and stylistic nature, differs from other terminological systems and occupies a special place in the language system. Terminological issues were applied in linguists' research works such as G.O. Vinokur, A.S. Gerd, V.M. Leychik, D.S. Lotte, K. Kageura, D. Sageder, S. Jacobson, Sh. Abdullaeva, G. Abdurahmonov, S.A. Azizov, X.D. Paluanova, D.X. Kadirbekova, O.S. Akhmedov. Although there is a lot of research done in the field of terminology, there are also some unexplored problems related to the nature of the term, the study and solution of which implies a new approach to modern linguistic trends.

## MATERIALS AND METHODS

V.M. Leychik stated that there are three approaches to the study of terminological systems. The first approach is a logical approach, which allows us to distinguish the terms that define the basic and complex concepts of the system [3]. Through this approach, terms are defined by a theory that is the basis of a system of objects and concepts in a particular field. The second approach is the linguistic approach, which shows how terms are expressed in the system as lexical units as semantics and structures. Terms can have different structures, and only their semantically close proximity to each other ensures that they are integrated into system. The third approach combines the first and second approaches which demonstrates the relationship between the term and the terminological system, indicating its place in the terminological system. According to the formation of terminological system which involves the following components: a) ensuring the existence of a general conceptual system relevant to the sphere, b) showing the connection of a

specific field of knowledge with other specific disciplines or fields, c) having a very clear theory which describes the sphere and classifies the terms; g) the existence of a special language developed in terminography. In our opinion, the problems of terminology and terminological system remain relevant today. There is also much debate among scholars about the meaning of the term and its function and we disclose the peculiarities of geological terms in its terminological system.

## RESULTS AND ITS DISCUSSION

The formation of terminological system based on the classification scheme assist to distinguish term-specific features in the system. The basis of all classifications is the various individual characteristics of the terms - content (composition), formal, functional, linguistic and non-linguistic [2]. The *first classification* of geological terms in English and Uzbek is the content of terms, so the terms are divided into practical or concrete (by observation) and theoretical (abstract) terms. Practical terms are used to name real phenomena and objects: **rocks** (тоғ жинслари), **magma** (магма- оловли суюқ масса), **crystal** (кристалл ёки шаффоф минерал), **lithogenesis** (литогенез- тоғ жинсларини ҳосил қилувчи жараён) and theoretical terms are used to name abstract concepts. Abstracts are concepts that describe the properties of objects and cannot exist independently without these objects: **"Mohs hardness" (diamond)** – "Моос шкаласи бўйича қаттиқлик" (олмос), **"ore" minerals (gold, copper)** – "маъданли" минераллар (олтин, мис).

The *second classification* of terms is carried out by distribution in specific directions, in other words by science or field. This list of industries or industries can be generalized in the following types: *science, engineering, and manufacturing*. In the field of science, a specific group of terms is defined and called scientific terminology. This group is divided into classes related to the fields of science at different stages of scientific and technological development. For example, in geology, terms related to the mathematical sciences: **геометрик градиент** (*geometry*) mainly in the geodesy of geology, terms related to the natural and scientific sciences: **ecliptic plane** – *эклиптика текислиги*, **Earth ellipsoid** or **Earth spheroid** – *Ер эллипсоиди (astronomy)*; **metal halide-** металл галогени, **оксид, сулфидлар** mainly **темир сульфиди FeS** (*chemistry*); **слуида-бир томонлама, пироксен** – *икки томонлама, калцит* – *уч томонлама*, **галенит** – *куб бўйлаб*, **сфалерит-олти томонлама; ромбсимон** (*physics*), terms related to the social sciences: **геосинклинал ўлкалар** [4] – *ҳаракатчанг ҳудуд (geography)* are widely applied.

The *third classification* of terms is based on linguistically specific features that help to distinguish polysemantic terms from monosemantic terms that have two or more meanings within a single terminological system according to their semantic structure [6]. For example, when the word **coal** (*тошқўмир*) is used as a term in the sphere of geology, in the process of translation in *petrography* – **арок** (*тоғ жинси*), in *mining* – **a mineral** (*фойдали қазилма*); Also included in this classification are synonymy and units that represent indicators of elements and measurements. For example, **syngony or symmetry of crystals** – *кристалларнинг сингонияси ёки симметрияси, яъни шакли ёки кўриниши (синонимия)*; **magmatic** – *магматик* ва **metamorphism** – *метаморфизм жараёнлари*, density of rocks and weight of minerals – **g/cm** (*тоғ жинсларнинг зичлик ва маъданли минералларнинг оғирлик ўлчов бирлиги*), light energy unit – **j/sec** (*ёруғлик нур энергиясининг ҳаракат тезлигининг даражаси*), mineral hardness unit **Mohs hardness** –

“Моос шкаласи бўйича қаттиқлик”[1], parameters units of measurement **extension = e** – **кенгайтма**; unit of traction = **pascal (Pa)** – (**тортиш кучи ўлчов бирлиги**), as well as indicators of chemical elements **Au, Fe, C, S** – (**олтин, темир, олмос, олтингугурт**).

In the next *fourth classification*, geological terms are classified according to a very different structure. The defined terms are divided into cognate, derivative, complex, abbreviated structure: **caldera, exogenous, endogenous, endomorphic, endomorphism, brittle-ductile iron, GPS, GNSS**. [5] Sometimes the terms can be found in poly lexeme terms of more than 3 or even 4 words: **plate collusion-induced tectonic** – (**тектоник плиталарнинг тўқнашуви**).

The process of absorption of terms is a complex phenomenon and is closely linked with linguistic and extralinguistic factors such as polysemantic, synonymy, division of terms related to their content and subdivision in specific fields. The following classification schemes of terms facilitate to clarify the components of terminological system in geology.

Geological terms  
Extralinguistic factors  
practical (concrete terms)  
theoretical (abstract terms)  
subdivision of terms in specific fields

*Tab 1. The classification scheme of extralinguistic factors*

Geological terms  
Linguistic factors  
  
polysemantic  
  
synonymy and units of elements and measurements.  
  
structural

*Tab 2. The classification scheme of linguistic factors*

## CONCLUSION

In the process of investigating of English and Uzbek geological terms revealed the following extralinguistic features as existence concepts and description of this field, namely geology and also relation to other disciplines such as geometry, astronomy, geography, chemistry, physics. The findings of modern research on different terminological systems prove that there is no difference between terminology and common language. It is emphasized that the terminology system follows the same rules and laws as language units for general purposes. The investigation defines the process of creating terms should be continuous and terminological system should be ready to introduce linguistic elements. The transparent description, methods of classification based on extra linguistic and linguistic factors assist to expand and improve the process such as developing and clarifying the terminological system and knowledge in general.

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