

Functional Features of Astronomical Terms in English and Uzbek Languages

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Abstract: This article explores the functional features of astronomical terms in English and Uzbek languages, emphasizing how these terms serve specific linguistic and scientific purposes. Functional features are understood as the inherent characteristics that relate to the roles, tasks, and objectives that terms fulfill in communication. The study investigates how astronomical terms are used to convey precise scientific information, ensure clarity in communication, and facilitate international scientific collaboration. It examines the translation and adaptation processes of astronomical terms between English and Uzbek, highlighting both direct translations and transliterations. Furthermore, the article analyzes the diverse functions of astronomical terms, including their role in naming, describing, and conveying scientific information, as well as their use in educational and popularization contexts.

Key words: Astronomical terms, discourse, Functional Features, translations and transliterations



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Introduction

Functional features refer to the distinctive characteristics of something, an object, or a phenomenon, which are related to its specific functions, tasks, and its purpose. This term, when used as a technical term, often explains how a system,

language, or phenomenon operates, or how it performs specific tasks. The Uzbek explanatory dictionary defines the term “functional” as follows: “FUNCTIONAL 1. Related to function; associated with a task; task-oriented. Source: Functional connection, Functional analysis, Functional scope of language, Functional styles. — Each functional style serves a specific area of social activity. 'ULTRA.' 2. Related not to the structure but to the activity, service, or purpose of something. Source: Functional division of labor, Functional heart disease.”

Functional features express the characteristics that directly influence the system's purpose or operation process. For example, the functional features of language include:

- a) **Communication:** Language has the function of facilitating communication, expressing thoughts, and exchanging information.
- b) **Information Transmission:** The purpose of language is to transmit information and communicate thoughts and knowledge to others.
- c) **Expressive Capabilities of Language:** The ability of language to express specific information related to time, space, individuals, and actions.

LITERATURE REVIEW

One of the founders of the Prague School of Linguistics, L. Drozd, created the Prague linguistic school based on a functional approach. This approach particularly focuses on the structural and functional features of specialized languages, as well as the study of professional styles. The school views terminology as an essential component of the functional-professional style. The functional features of astronomical terms are related to how these terms perform their tasks when used, serving scientific purposes, and conveying specific information important for a particular field of study, such as astronomy. The functional features of astronomical terms include their use in scientific fields, their ability to convey information clearly and understandably, and their role in establishing international scientific communication.

METHODS

Astronomical terms in various languages, particularly in English and Uzbek, may share similarities or differences in form. Uzbek astronomical terms are often translated from English or other languages. During the translation process, the specific lexical and phonetic characteristics of the terms are considered. Some terms are directly translated, while others are transliterated or adapted. There are mainly two approaches:

a) **Translation (Word-for-word translation):** Some astronomical terms can be directly translated. For example, the English term "black hole" is translated into Uzbek as "Qora tuynuk" or "star" as "yulduz."

b) **Transliteration:** In some cases, terms are transcribed into Uzbek, preserving the pronunciation of the word, but using the Uzbek alphabet for writing. For instance, the English term "satellite" is written as "satelit" in Uzbek.

RESULTS

Astronomical terms serve various functional purposes in language because astronomy encompasses numerous specialized concepts, terms, and practical functions. These terms are important not only for the scientific field but also for providing understandable information to the general public, shaping concepts, and developing scientific thinking and communication. Astronomical terms perform several primary functions, which can be expanded as follows:

1. **Naming Function:** Plays a crucial role in naming astronomical objects, phenomena, or concepts. For instance, terms like "planet" (planeta, sayyora), "comet" (kometa), "galaxy" (galaktika) are used to classify and name objects in space.
2. **Descriptive Function:** Used to provide specific information about astronomical phenomena or objects. For example, terms like "supernova" (supernova) or "eclipse" (tutilish) are used to describe astronomical events.
3. **Function as a Means of Communication:** In scientific journals, articles, and presentations, astronomical terms serve as tools for understanding among authors. The precision and consistency of these terms influence the quality of scientific work.
4. **Function of Conveying Scientific and Technical Information:** Astronomical terms are necessary for conveying scientific and technical information accurately and fluently. Even when translated from English, the precise and correct use of astronomical terms in scientific sources is of great importance. Scientific works, treatises, and textbooks demand accurate terminology. For instance, terms like "gravitatsiya" (gravity), "yadro reaktor" (nuclear reactor), "yulduz to'da" (star cluster) are used in scientific research and technical descriptions.
5. **Educational and Popularization Function:**
 - a) **In Popularization:** Astronomical terms are often used to explain and teach the general public. For example, some scientific terms are simplified and translated in an understandable way for broader audiences. This is often done in popular media, encyclopedias, and to simplify astronomical events and phenomena for the public.
 - b) **In Educational Processes:** Scientific terms must be

understandable for students and the general public, so these terms are often adapted to the specific lexical characteristics of the Uzbek language. For example, terms like "qorong'u materiya" (dark matter) or "yulduz sistemasi" (stellar system) are commonly used in educational contexts. Astronomical terms also serve as a primary tool in scientific education, helping students grasp fundamental concepts in astronomy.

6. **Use in Cultural and Mass Communication:** Astronomical terms are also widely used in mass media, popular science books, articles, and television programs. These terms are used to inform the public about changing astronomical phenomena or discoveries. For example, "the discovery of new star types" or "the discovery of an exoplanet" are events often discussed in popular culture.
7. **Expression in Philosophical and Cosmic Thinking:** Astronomical terms also play an important role in philosophical thinking. Terms like "Cosmos" ("kosmos," "koinot") and "Alien" ("O'zga sayyoralik") influence humanity's relationship with the universe and the development of scientific, religious, and philosophical concepts. For instance, in popular culture, extraterrestrials are often depicted as highly intelligent beings with advanced technology, sometimes even attempting to invade Earth.

Thus, astronomical terms are not just tools for transmitting scientific information but also play a crucial role in humanity's understanding of its place in the cosmos, the integration of scientific research, and the pursuit of cosmic exploration.

The functional features of terms are also linked to their stylistic expression. The stylistic features of terms are primarily related to their use in scientific, technical, and specialized fields, and they manifest different stylistic characteristics in various contexts. Terms play a vital role not only in expressing scientific and technical information but also in performing communicative tasks. The stylistic features of astronomical terms in English and Uzbek vary based on how they are used in scientific articles or everyday communication:

A) **Formal and Scientific Style:** Astronomical terms are used in a precise and formal style in scientific contexts. For example, terms like "gravitational wave" (gravitatsion to'lqin) are used in scientific journals.

B) **Publicistic and Sometimes Conversational Style:** Astronomical terms are sometimes used in a popular language for mass communication purposes. For example, the term "natural satellite" can be replaced by the word "Moon" for better understanding by a wider audience.

DISCUSSION

Some terms may have multiple meanings in different contexts, which further enriches their stylistic features. For example, the word "yulduz" (star) may refer to an astronomical object, but in literature or art, it can also symbolize "fame" or "attention." In the Uzbek explanatory dictionary, it is defined as a polysemantic word, with one meaning referring to a famous or well-known person: "Yulduz 3. metaphorically refers to a famous person."

In analyzing the English word "star," the primary meaning is related to astronomy, but it can also be used in a broader sense to mean "important or famous." Moreover, this word can be used as a noun, verb, and adjective. However, it can only be used as a noun in the context of an astronomical term.

CONCLUSIONS

In conclusion, there are several key aspects highlighting the functional features of astronomical terms in both English and Uzbek, particularly in terms of their roles in communication, scientific research, and description. Both languages play a crucial role in accurately and precisely expressing astronomical terms, yet they also demonstrate differences in how they convey information and facilitate understanding, as well as in the process of creating new terms. The functional features of astronomical terms in Uzbek hold an important place in linguistics and scientific terminology. These terms serve various functions in the Uzbek language, with their functional characteristics defining how they are used, for what purposes, and within which systems they are classified. The functional features of astronomical terms in Uzbek are closely linked to their scientific and cultural aspects. These terms not only play a key role in the scientific field but also contribute significantly to education and popularization. They support the development of the language, the adoption of new terms, and enhance the effectiveness of scientific communication.

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