



TERMINOLOGY POPULARIZATION IN ENGLISH AND UZBEK SCIENCE WRITING

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ABSTRACT

*The communication of specialized knowledge from the academic sphere to the general public is fundamentally dependent on **Terminology Popularization**. This comparative study analyzes the distinct strategies employed in English and Uzbek science writing. English, an internationally dominant language, frequently relies on the direct borrowing of Latin/Greek neologisms (e.g., *neurone*, *photosynthesis*) or the use of **semantic transparency** (using common words metaphorically). Uzbek, as a developing scientific language, faces the challenge of balancing the integration of international terms with the imperative of **Endogenous Term Creation** to maintain linguistic integrity and accessibility.*

Introduction

Scientific progress is meaningless if its findings remain confined to the specialized journals of its field. The process of making complex, specialized terms accessible to a non-expert audience—Terminology Popularization—is a crucial step in promoting scientific literacy and public engagement. English and Uzbek, due to their vastly different linguistic histories and geopolitical roles, approach this task with fundamentally distinct strategies. English often relies on the internationalization of terms, drawing heavily from classical roots, while Uzbek often seeks to develop descriptive, native-based equivalents. These diverging approaches create unique challenges for communicators. To truly master science communication across linguistic borders, practitioners must engage with materials that demonstrate how linguistic typology dictates term creation and dissemination strategies. "The methods employed for terminology popularization are a direct reflection of a language's status within the global scientific community and its internal language planning policies." [1, 320].

1.0 Terminology in English: Borrowing and Semantic Transparency

1.1 The Dominance of Classical Neologisms

As the current lingua franca of science, English possesses a vast, internationally recognized lexicon rooted in Latin and Greek. The popularization strategy in English frequently involves three main processes:

- ❖ **Direct Borrowing:** Specialized terms (e.g., *algorithm*, *plasma*, *mitochondria*) are often transferred directly from their classical or Romance origins into the public sphere with minimal modification.
- ❖ **Calques and Compounding:** Creating new terms from Latin/Greek roots (e.g., *telephone* from *tele-* far + *phone-* sound).
- ❖ **Loanword Acceptance:** The general public is gradually socialized to accept these terms as everyday words, though their etymology remains opaque to the lay reader.

This approach prioritizes **Precision and International Standardization** over immediate transparency for the non-expert. The popular writer then assumes the responsibility of explaining the term contextually, rather than substituting it with a simpler word.

"The English scientific register thrives on a self-sustaining cycle where technical terms, once established in academic discourse, gradually infiltrate the general lexicon, making contextual explanation the primary tool of popularization." [2, 340].

1.2 Semantic Transparency and Analogy

When specialized terms are replaced for popularization, English often uses highly transparent, common words metaphorically. This is the use of **Semantic Transparency**, where the chosen term's meaning is easily accessible.

Examples include:

1. The Brain's *Hardware* and *Software* (using computer terminology for biological function).
2. The *Genetic Code* (using communication and cryptography terminology).
3. A Black Hole's *Event Horizon* (using spatial and descriptive terminology).

This strategy reduces the cognitive burden by leveraging familiar, often metaphorical, concepts, even if it slightly compromises the scientific precision of the underlying idea.

2.0 Terminology in Uzbek: Endogenous Creation and Language Planning

2.1 The Imperative for Endogenous Term Creation

Uzbek, unlike English, operates within a language planning environment that often mandates or encourages the creation of terms from native Turkic or local linguistic roots. This is driven by a need for:

Linguistic Independence: Reducing dependence on Russian or Western loanwords to maintain cultural identity and promote language prestige.

Public Accessibility: Creating terms that are morphologically transparent and immediately understandable to a native speaker.

This approach prioritizes **Accessibility and Linguistic Purity** over international standardization, leading to a much higher use of descriptive compound words or repurposed native vocabulary.

Examples of popularization through endogenous creation:

- ✓ **International Term:** *Gidrojen* (Hydrogen)
- ✓ **Popularized Uzbek Equivalent:** *Suv-tuzuvchi* (Water-former/constituent) or similar descriptive calques based on function.

"Uzbek science writing often engages in a 'language for all' philosophy, where the linguistic shape of a term is designed to reveal its semantic content to the broadest possible native audience, thereby mitigating the need for extensive contextual definition." [3, 188].

2.2 Translation and the Problem of Competing Terms

A significant challenge in Uzbek popularization is the problem of competing terms. For a single international concept, multiple Uzbek equivalents may exist: a Russian-derived loanword, a direct English transcription, and a newly created native term. The popular science writer must choose which term to use, which often depends on the target audience (e.g., using a loanword for an expert audience vs. a native descriptive term for primary education).

The lack of a single, universally accepted translation for many modern scientific concepts means that the popularizer often has to define and explain the relationship between these competing terms, adding another layer of complexity to the text. This is a common feature of languages undergoing rapid modernization and terminology standardization.

Conclusion

The strategies for terminology popularization in English and Uzbek reveal two distinct linguistic philosophies at play. English capitalizes on its global position by readily adopting opaque, international neologisms and relying on contextual definition and semantic analogy for popularization. Uzbek, motivated by language planning goals, often opts for the creation of morphologically transparent, endogenous terms that prioritize immediate understanding by the native speaker. Both approaches aim to bridge the gap between specialized knowledge and public

comprehension, but they highlight how the sociolinguistic status and structural typology of a language fundamentally shape the rhetorical and lexical choices available to the science writer. Understanding these comparative popularization strategies is essential for the future of multilingual science communication.

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