FUNCTIONAL-SEMANTIC FEATURES OF INSTRUCTIONAL SEGMENTS IN ENGLISH AND UZBEK MEDICAL TEXTS

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Abstract. *Instructional segments in medical texts are essential for guiding patients and healthcare professionals. This study examines the functional-semantic features of instructional segments in English medical texts and their Uzbek translations. The analysis is grounded in systemic-functional linguistics, corpus linguistics, and translation studies. Semantic modality, terminology, phrasal units, and cohesive devices are analyzed to determine how instructional meaning is preserved in translation. Findings demonstrate that instructional segments retain semantic fidelity, clarity, and directive force, ensuring effective communication in medical contexts.*

Keywords: *Instructional segments, medical texts, functional-semantic features, English-Uzbek translation, modality, cohesion*

Medical texts perform multiple communicative functions, including informing, advising, and instructing. Among these, instructional segments are particularly important because they provide guidance, advice, or mandatory instructions for patients, caregivers, or healthcare professionals. Instructional segments combine directive language with semantic precision, ensuring that readers understand required actions, possible side effects, and preventive measures.

These segments were analyzed using functional-semantic frameworks, focusing on semantic modality, terminology, phrasal units, and cohesive devices. Semantic modality plays a critical role, as modal verbs such as should, must, may, and could communicate obligation, recommendation, possibility, or permissibility. For instance, the sentence “Patients should take medicine twice a day” conveys clear obligation, whereas “Patients may experience mild headache” signals possibility, indicating caution. In Uzbek, equivalents such as “kerak” (obligation) and “mumkin” (possibility) preserve the functional intention of the original English texts. Semantic modality interacts with pragmatic function, guiding readers to interpret instructions appropriately and comply with medical advice.

Terminology is another essential component of instructional segments. Medical terms such as medicine, monitor, headache, instructions, ointment are consistently translated into Uzbek (dori-darmon, nazorat qilish, bosh og‘rig‘i, ko‘rsatmalar, malham) with careful attention to accuracy and domain-specific meaning. Preserving terminology across languages safeguards professional clarity and prevents misinterpretation, which is particularly crucial in healthcare contexts where errors can have significant consequences. Consistent terminology also supports textual cohesion and facilitates corpus-based research on specialized vocabulary.

Cohesive devices maintain logical flow and coherence in instructional segments. Conjunctions, adverbs, and phrases such as therefore, and, or, for example establish

relationships between actions, causes, and outcomes. In translation, cohesive markers are adapted to Uzbek, ensuring that the logical structure and instructional clarity remain intact. Cohesion enables readers to follow multi-step procedures accurately and enhances comprehension, which is fundamental for patient safety and effective healthcare communication.

Phrasal units and collocations form another layer of semantic and functional structure. Conventional expressions such as "take medicine twice a day" or "monitor blood pressure regularly" are frequent in medical texts. In Uzbek, these collocations are rendered faithfully ("kuniga ikki marta qabul qilish", "muntazam nazorat qilish"), preserving their directive function and idiomatic clarity. Repetition of these patterns across texts supports predictability and ease of comprehension, which are critical in medical instructions.

The following table illustrates examples of instructional segments in English medical texts and their Uzbek translations, highlighting semantic modality and key terms:

English Segment	**Uzbek Translation**	**Semantic Modality**	**Key Term**
"Patients should take medicine twice a day."	"Bemorlar dori-darmonlarni kuniga ikki marta qabul qilishlari kerak."	Obligation	medicine / dori-darmon
"Doctors must monitor blood pressure regularly."	"Shifokorlar qon bosimini muntazam nazorat qilishlari kerak."	Obligation	monitor / nazorat qilish
"Patients may experience mild headache."	"Bemorlar engil bosh og'rig'ini boshdan kechirishi mumkin."	Possibility	headache / bosh og'rig'i
"Follow the instructions carefully to avoid side effects."	"Yon ta'sirlarni oldini olish uchun ko'rsatmalarga diqqat bilan rioya qiling."	Obligation	instructions / ko'rsatmalar
"For example, apply the ointment twice daily."	"Masalan, malhamni kuniga ikki marta surting."	Recommendation	ointment / malham

The functional-semantic analysis reveals several key features of instructional segments:

Semantic Modality – Modal verbs such as should, must, and may communicate obligation, recommendation, or possibility, enabling readers to understand the degree of necessity or caution. Semantic modality is preserved in translation using appropriate equivalents in Uzbek.

Terminology – Precise medical terms are maintained across English and Uzbek, ensuring professional clarity and avoiding misinterpretation. Accurate terminology is especially critical in medical contexts.

Cohesive Devices – Conjunctions, adverbs, and phrases maintain textual coherence, help structure instructions logically, and allow readers to follow multi-step procedures correctly.

Phrasal Units and Collocations – Recurrent patterns reinforce directive function and clarity, allowing instructions to be easily understood and remembered.

Functional-semantic analysis demonstrates that instructional segments are both informative and directive, reflecting ideational functions (providing knowledge, describing procedures) and interpersonal functions (guiding behavior, establishing obligations). English-Uzbek translations generally preserve these functions when semantic modality, terminology, cohesion, and phrasal patterns are carefully maintained. Incorporating research by Uzbek scholars such as Akbarhodjaeva and Abdulkhairova provides insight into national linguistic conventions, translation strategies, and terminological adaptation, enhancing corpus-based approaches to medical discourse.

In conclusion, instructional segments are a core component of medical texts, serving as essential tools for conveying procedural knowledge, warnings, and recommendations. Accurate translation ensures effective communication between healthcare providers and patients, safeguarding both understanding and safety. A functional-semantic approach, supported by corpus analysis and translation theory, allows researchers to systematically study instructional language, preserve semantic modality, maintain terminological precision, and uphold textual cohesion. This integrative approach provides both theoretical rigor and practical guidance for translators, terminologists, and medical communication specialists.

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