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Developing Bilingual Terminological Competence in Uzbek and Russian Medical Students

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Abstract. *This exploratory article examines the multifaceted process of developing bilingual terminological competence in Uzbek and Russian among medical students in Uzbekistan. Grounded in an analysis of contemporary research and drawing upon pedagogical observations, the paper highlights the unique sociolinguistic context where Russian historically holds a significant position in medical education and literature, while Uzbek is increasingly vital as the state language and for direct patient communication. Key challenges are identified, including linguistic interference, the ongoing standardization of Uzbek medical terminology, and the need for didactic materials that adequately reflect bilingual clinical realities. The article explores various pedagogical strategies, such as comparative terminological analysis, case-based learning, and the integration of authentic communicative tasks. Furthermore, it presents observations on student learning patterns and discusses the crucial implications of robust bilingual terminological proficiency for effective healthcare delivery, patient trust, and the overall enhancement of medical education standards in Uzbekistan. The discussion underscores the necessity for continued research, curriculum innovation, and resource development to support this essential competence.*

Key words: *bilingualism, medical terminology, Uzbek language, Russian language, medical education, terminological competence, pedagogical strategies, Uzbekistan.*

The landscape of medical education in Uzbekistan is intrinsically linked to its rich linguistic heritage, where both Uzbek, the state language, and Russian, a historically significant language in science and inter-ethnic communication, play pivotal roles. For medical students aspiring to become competent healthcare professionals, the ability to navigate and utilize medical terminology proficiently in both languages is not merely an academic asset but a fundamental requirement for effective clinical practice and lifelong learning (Avezova, 2025). This article aims to explore the complexities, challenges, and pedagogical approaches related to fostering such bilingual terminological competence among future medical practitioners in the Uzbek context, drawing from published materials and offering observations gleaned from years of pedagogical experience within this environment.

The concurrent use of Uzbek and Russian in the medical sphere presents a unique set of circumstances. A substantial body of medical textbooks, research articles, and established clinical documentation continues to be in Russian, reflecting its long-standing role in the region's higher education system (Rozanna M. Abdullaeva, 2022). Consequently, medical students must develop a strong command of Russian medical terminology to access this wealth of information and often to communicate in diverse professional settings. Simultaneously, with the strengthening of Uzbek as the national language, and its primary role in doctor-patient interaction for a large segment of the

population, mastery of Uzbek medical terminology is paramount for ensuring clear communication, patient understanding, and culturally sensitive care (AcadFly, 2025a; Murtazayeva, 2024).

However, the path to achieving balanced bilingual terminological competence is laden with challenges. Students often encounter difficulties stemming from linguistic differences between Uzbek (a Turkic language) and Russian (a Slavic language), leading to potential interference. A significant hurdle is the ongoing process of standardization and modernization of Uzbek medical terminology. While considerable efforts are underway (Movlanova, 2025; Isakova, 2024), inconsistencies can arise, with multiple Uzbek equivalents sometimes existing for a single Russian or international term, or a reliance on direct loan translations from Russian (Rozanna M. Abdullaeva, 2025). This situation can lead to ambiguity and poses challenges for both teaching and learning (Akbarkhodjaeva, 2024). Furthermore, educators often observe a gap between the formal terminology taught in classrooms and the practical language, including code-switching, used in actual clinical environments (Nakamura, 2025). Students themselves may enter medical institutions with varying levels of proficiency in one or both languages, necessitating differentiated pedagogical approaches.

Addressing these challenges requires thoughtful and innovative methodological considerations. Simply relying on rote memorization of terms in two languages proves insufficient. Instead, a more meaning-focused and communicative approach is advocated (Nurmatova, 2025). Pedagogical strategies such as Case-Based Learning (CBL) have shown promise in integrating language learning with professional skills, enhancing lexical retention and doctor-patient communication abilities by immersing students in real or simulated medical cases where they must actively use terminology in both languages (Nurmatova, 2025). A comparative-contrastive analysis of medical terms – examining their Latin and Greek roots, and how these are actualized or translated into Russian and Uzbek – can provide students with deeper etymological understanding and facilitate retention. The development and utilization of comprehensive bilingual (Uzbek-Russian and Russian-Uzbek) medical glossaries, dictionaries, and updated textbooks are crucial (Djurayeva, 2025). Moreover, incorporating active learning techniques, such as role-playing patient consultations, preparing case presentations in both languages, and engaging in group discussions on terminological nuances, can significantly enhance practical competence. Technology-enhanced learning, including specialized language learning software and access to online medical databases in both languages, also offers valuable support.

From my own pedagogical practice at the Bukhara State Medical Institute, several observations emerge. Many students initially exhibit a tendency to memorize Russian medical terms, often due to the prevalence of Russian-language textbooks, without always achieving a conceptual grasp of the corresponding Uzbek terminology or its appropriate contextual use. There is a palpable and growing motivation among students to master Uzbek medical language, driven by an understanding of its importance for future patient interaction; however, they sometimes express frustration regarding the availability of comprehensive, contemporary Uzbek-language resources, particularly in highly specialized medical subfields. Code-switching between Uzbek and Russian is a common and often efficient communication strategy observed not only among students but also among practicing bilingual medical professionals, particularly when interacting with patients or colleagues who are also bilingual. This linguistic reality suggests that while striving for terminological precision in both languages, medical education should also equip students with the sociolinguistic competence to navigate such mixed-language environments effectively.

These observations lead to several critical implications for medical education in Uzbekistan. Firstly, there is an undeniable need for accelerated and collaborative efforts involving linguists, medical experts, and educators to further develop, standardize, and disseminate high-quality Uzbek medical terminology resources, including textbooks, digital tools, and reference materials. Curricula should be systematically reviewed and updated to embed bilingual terminological training explicitly, moving beyond simple translation to a deeper engagement with conceptual equivalents and usage in context. This includes training in how to explain complex medical terms to patients in clear, accessible language in both Uzbek and Russian. Secondly, the professional development of language educators in medical institutions is paramount. They require not only linguistic expertise but also specialized training in the methodologies of teaching medical terminology in a bilingual context, including an

understanding of the cognitive benefits that bilingualism can confer on learners, such as enhanced executive functions and problem-solving skills (Meditopia, 2024; MyNeuroBalance, 2025). Finally, and most importantly, enhancing bilingual terminological competence among medical students has profound implications for the quality of healthcare. Accurate and empathetic communication, facilitated by precise terminological understanding in the patient's preferred language, is fundamental to building trust, ensuring informed consent, improving diagnostic accuracy, and promoting treatment adherence (Rozanna M. Abdullaeva, 2025).

In conclusion, developing robust bilingual terminological competence in Uzbek and Russian is a cornerstone of effective medical education in contemporary Uzbekistan. While challenges related to linguistic diversity, resource availability, and pedagogical approaches persist, strategic interventions focusing on curriculum enrichment, teacher training, and the development of standardized, accessible terminological resources can pave the way for success. By cultivating this dual linguistic proficiency, we not only empower our future doctors with essential professional tools but also contribute to a more equitable, accessible, and high-quality healthcare system that effectively serves the needs of a multilingual society. Further empirical research into the most effective didactic models for this specific linguistic pairing and medical context remains a vital area for exploration.

References

1. AcadFly. (2024, March 18). Disadvantages of Bilingual Medical Education MBBS Abroad. Retrieved from https://www.acadfly.com/blogs/disadvantages-of-bilingual-medical-education-mbbs-abroad
2. Gafurov, B. Z. (2022). Sociolinguistics and its functions in modern linguistics. Economy and innovation. Vol. 26. *Poznan, Taxes USA*, 92-95.
3. Gafurov, B. Z. (2023). Specification of error correction in language learning process.
4. Gafurov, B. (2023). The relationship between culture and language in learning process. *Евразийский журнал социальных наук, философии и культуры*, *3*(5), 55-63.
5. Гафуров, Б. З. Тексты С Фоностилистическими Фоновариантами И Их Перевод (На Материале Узбекского Языка). *Ilim Hám Jámiyet*, *72*.
6. Гафуров, Б. З. (2010). презентация фоностилистики в узбекском языкознании (на материале фоновариантов имен существительных). *Journal of Modern Turkish Studies*, *7*(4), 68.
7. Гафуров, Б. З. (2021). АНАЛИЗ ЛИНГВОСТАТИСТИЧЕСКОЙ ХАРАКТЕРИСТИКИ АКЦЕНТНЫХ ФОНОВАРИАНТОВ ИМЕН СУЩЕСТВИТЕЛЬНЫХ РУССКОГО ЯЗЫКА. *МЕЖДУНАРОДНЫЙ ЖУРНАЛ ИСКУССТВО СЛОВА*, *4*(1-1).
8. Gafurov, B. Z. (2022). Analysis of medical version in texts of advertising of hygiene products in the fight against COVID-19 (on the material of Russian and Uzbek languages). *Emergent: Journal of Educational Discoveries and Lifelong Learning (EJEDL)*.
9. Gafurov, B. Z. (2020). Analysis of the relationship of medical terminology with segment phonostylistics of the noun in Russian, Uzbek and English languages. *Theoretical & Applied Science. International Scientific Journal*, *1*(81), 464-466.
10. Zakirovich, G. B. (2020). Super-segment phonostylistics as the basis for studying the problems of accent variants of Russian nouns. *Creation of Ethnographies with Popular Traditions*, *11*(13), 39.
11. Zakirovich, G. B. (2022). The Theme of Female Gender in the Texts of Advertising in Russian and Uzbek Languages (On the Material of Medical Vocabulary). *Pindus Journal of Culture, Literature, and ELT*, *2*(1), 23-29
12. AcadFly. (2025a, January 19). Medical Studies in Uzbekistan: Language Requirements, Fees, Eligibility, and Admissions. Retrieved from https://www.acadfly.com/blogs/medical-studies-uzbekistan-complete-guide

13. Akbarkhodjaeva F.A.. (2024). CLASSIFICATION AND ANALYSIS OF MEDICAL TERMS IN MEDIA DISCOURSE. Science and Innovation International Scientific Journal, 3(9). Retrieved from http://scientists.uz/uploads/202409/C-10.pdf
14. Avezova A., (2025) TEACHING UZBEK AS A FOREIGN LANGUAGE TO MEDICAL STUDENTS IN UZBEKISTAN. Retrieved from https://webofjournals.com/index.php/12/article/download/3118/3079/6066
15. Djurayeva , M. (2025). PRINCIPLES OF COMPILING A DICTIONARY OF TERMS RELATED TO ENGLISH-UZBEK MEDICINE. International Journal of Artificial Intelligence, 1(1), 497–499. Retrieved from https://inlibrary.uz/index.php/ijai/article/view/70879