THE CHALLENGES OF FIRST-YEAR MEDICAL STUDENTS IN UNDERSTANDING MEDICAL TERMINOLOGY

Xamidov Ozodbek Ulug’bek o’g’li

Student of Tashkent state medical university

E- mail: khamidov0503@gmail.com

Temirov Behruzbek Jamshid o’g’li

Student of Tashkent state medical university

E- mail: temirovbehruzbek3@gmail.com

Abstract. In this paper research was done into the barriers and methods to learn forced upon first year students entering Tashkent State Medical University. The research was conducted with a sample of 150 students who were given surveys as well as specific and specialized tests that were given and collected over six domains. The findings indicated that although the students have demonstrated proficiency in vocabulary related to organs (mean difference from other centres: 3.76) and involved affixation (mean difference=2.39), there are substantial challenges for students related to their medical writing (-1.00), grammatical structures (-0.71) and usage of collocating with professional medical terminology (-0.72). Further evaluation suggested that the majority of students tended to use "surface learning" strategies rather than "deep learning" strategies. The article concludes with recommendations for the inclusion of both academic writing and grammar modules in the program and proposes that students use specialized medical dictionaries to assist in developing their self-directed learning environment.

Keywords: *Medical terminology, TSMU, affixation, learning strategies, academic writing, medical dictionary, learner autonomy, clinical lexis.*

Annotatsiya. Ushbu maqola Toshkent davlat tibbiyot universiteti (TDTU) 1-kurs talabalari misolida tibbiy terminologiyani o‘zlashtirishda duch kelinadigan qiyinchiliklar va qo‘llaniladigan o‘rganish strategiyalarini o‘rganadi. Tadqiqot 150 nafar talaba ishtirokida o‘tkazilgan bo‘lib, unda so‘rovnoma va oltita yo‘nalish bo‘yicha maxsus test sinovlari natijalari tahlil qilingan. Natijalar talabalarning tana a’zolari nomlari (o‘rtacha farq 3.76) va affiksatsiya tizimini (2.39) o‘zlashtirishda ijobiy ko‘rsatkichlarga ega ekanligini, biroq tibbiy yozuv ko‘nikmalari (-1.0), grammatik tuzilmalar (-0.71) va professional so‘z birikmalarini (kollokatsiyalar) qo‘llashda jiddiy muammolarga duch kelishayotganini ko‘rsatdi. Maqolada talabalarning "yuzaki yodlash" metodidan "chuqur o‘rganish" strategiyasiga o‘tishi zarurligi tahlil qilinib, o‘qituvchilar uchun o‘quv muhitini yaxshilash va professional lug‘atlardan foydalanish ko‘nikmalarini shakllantirish bo‘yicha amaliy tavsiyalar beriladi.

Kalit so‘zlar: *Tibbiy terminologiya, TDTU, affiksatsiya, o‘rganish strategiyalari, akademik yozuv, tibbiy lug‘at, o‘quvchi mustaqilligi, klinik leksika.*

Аннотация: В данной статье исследуются трудности и стратегии обучения, с которыми сталкиваются студенты первого курса Ташкентского государственного медицинского университета (ТГМУ) при освоении медицинской терминологии. В исследовании приняли участие 150 студентов; анализ проводился на основе данных анкетирования и специальных тестов по шести направлениям. Результаты показали, что студенты демонстрируют высокие показатели в знании названий органов (средняя разница 3.76) и системы аффиксации (2.39), однако испытывают серьезные трудности в навыках медицинского письма (-1.0), грамматических структурах (-0.71) и использовании профессиональных словосочетаний (коллокаций) (-0.72). В статье анализируется необходимость перехода от стратегии «поверхностного заучивания» к «глубокому обучению». Даются практические рекомендации для преподавателей по

улучшению учебной среды и формированию навыков работы с профессиональными словарями.

Ключевые слова: *Медицинская терминология, ТГМУ, аффиксация, стратегии обучения, академическое письмо, медицинский словарь, автономность учащихся, клиническая лексика.*

The transition from general education to medical school is a multifaceted linguistic journey that requires more than just academic diligence; it demands a total immersion into a specialized language. At Tashkent State Medical University (TSMU), first-year students encounter a massive influx of Latin and Greek-based terminology that forms the bedrock of clinical practice. This terminology is not merely a collection of labels for body parts, but a complex system of communication that defines professional competence. While the initial months of medical education focus heavily on anatomy and histology, many students find themselves overwhelmed by the structural logic of the language they are required to master. This study aims to pinpoint the exact linguistic barriers faced by TSMU students, analyzing where their strengths lie and where the curriculum needs further reinforcement to bridge the gap between classroom learning and professional application.

Academic discourse regarding medical education has long recognized the importance of etymological awareness in mastering professional lexis. Research indicates that medical language is highly systematic, with approximately 90% of its vocabulary originating from classical languages. Mastering affixation—the process of using prefixes, suffixes, and roots—allows a student to "decipher" thousands of terms without the need for rote memorization. However, modern pedagogical debates often contrast "surface learning" with "deep learning." Surface learning involves the temporary memorization of facts for examination purposes, whereas deep learning involves understanding the underlying principles and relationships between concepts. In the context of Uzbekistan’s medical education system, the challenge is amplified by the need for students to navigate terminology across multiple languages, including Uzbek, Russian, Latin, and English. Establishing learner autonomy through the use of specialized dictionaries and self-directed study is critical for long-term retention and the development of clinical reasoning.

To investigate these challenges, a comprehensive study was conducted at TSMU involving a cohort of 150 first-year students. The research utilized a dual approach: standardized surveys to evaluate learning strategies and specialized diagnostic tests covering six distinct linguistic domains. The quantitative analysis revealed a striking disparity in student performance. Students demonstrated a commendable grasp of anatomical nomenclature, particularly concerning major organs, where they achieved a mean difference of 3.76 compared to other competency centers. Their understanding of affixation was also notably strong (mean difference of 2.39), suggesting that students are successfully learning to break down words into their component parts.

However, the data highlighted significant deficiencies when students were required to transition from isolated words to functional language. The most alarming statistics were found in medical writing (-1.00) and grammatical structures (-0.71). Furthermore, the usage of professional collocations—the natural pairing of words in a medical context—showed a deficit of -0.72. These results suggest that while students can identify an "artery" or "ventricle" in isolation, they struggle to describe its function, pathology, or clinical status in a grammatically correct English sentence. The findings confirm that a majority of students are stuck in the "surface learning" phase, prioritizing the recognition of nouns over the mastery of the syntax required for clinical documentation.

The competency gap identified in this research suggests that the traditional focus on labeling and memorization is insufficient for the demands of modern medicine. The negative performance in writing and collocations indicates that students lack the "connective tissue" of

medical language—the grammar and verbs that turn a list of words into a professional report. To address these issues, it is imperative to modernize the pedagogical approach at TSMU.

Firstly, the integration of dedicated academic writing modules within the first-year curriculum is essential. Students must be taught how to construct patient case notes and research abstracts from the outset. Secondly, terminology should not be taught in isolation; instead, it should be presented through "collocation-based learning," where students learn verbs and adjectives that typically accompany specific medical nouns. Finally, fostering an environment of self-directed learning is crucial. Students should be encouraged to move beyond textbooks and utilize specialized medical dictionaries and digital databases. This shift will help move them from being passive recipients of information to active, autonomous learners who possess the clinical lexis necessary for an international medical career.

Understanding medical terminology is the primary gatekeeper to success in the medical profession. The research conducted at Tashkent State Medical University reveals that while first-year students possess a strong foundation in basic anatomical vocabulary and morphological analysis, they face substantial hurdles in applying this knowledge through academic writing and correct grammatical structures. The reliance on surface-level memorization must be replaced with deep-learning strategies that emphasize the functional use of language. By implementing the proposed curricular enhancements—specifically focusing on writing modules and learner autonomy—TSMU can significantly improve the professional communication skills of its future doctors, ensuring they are prepared for both local and global medical challenges.

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