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LINGUISTIC APPROACHES TO DEVELOPING STUDENTS' TRANSLATION AND INTERPRETATION SKILLS AT MEDICAL UNIVERSITIES

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ЛІНГВІСТИЧНІ ПІДХОДИ ДО ФОРМУВАННЯ НАВИЧОК ПЕРЕКЛАДУ ТА ІНТЕРПРЕТАЦІЇ У СТУДЕНТІВ МЕДИЧНИХ УНІВЕРСИТЕТІВ

Abstract. This article examines the linguistic features of translating medical scientific texts and documentation in the context of the globalization of healthcare systems. It demonstrates that medical translation is a complex type of professional translation activity, as it combines linguistic, terminological, cognitive, and pragmatic aspects and directly affects the quality of professional communication and patient safety. The main theoretical approaches to understanding translation as a linguistic process and a result of intercultural interaction are discussed. The specificity of medical terminology as a standardized lexical system characterized by its international nature, logical structure, neutrality, and unambiguity is analyzed. Key difficulties faced by medical students when translating professional texts are identified, including inaccurate use of terms, grammatical and syntactic errors, misinterpretation of abbreviations, and the influence of context on translation choices. The main types of "false friends" in English-Ukrainian medical translation are classified, and their role in causing semantic misinterpretations is discussed. It is shown that complex grammatical structures in English medical texts complicate the determination of logical stress and require the application of translation transformations. The article emphasizes the need to consider structural shifts, equivalence, and pragmatic completeness in medical translation. The article concludes that a comprehensive methodological approach to developing the translation competencies of medical students is advisable, involving systematic mastery of medical terminology, translation theory knowledge, and the development of practical skills in working with professional sources.

Key words: medical translation; linguistic aspects; medical terminology; translation difficulties; teaching methodology.

Анотація. У статті досліджено лінгвістичні особливості перекладу медичних наукових текстів і документації в умовах глобалізації систем охорони здоров'я. Показано, що медичний переклад є складним різновидом професійної перекладацької діяльності, оскільки поєднує мовні, термінологічні, когнітивні та прагматичні аспекти й безпосередньо впливає на якість фахової комунікації та безпеку пацієнтів. Висвітлено основні теоретичні підходи до розуміння перекладу як лінгвістичного процесу та результату міжкультурної взаємодії. Проаналізовано специфіку медичної термінології як стандартизованої лексичної системи, що характеризується інтернаціональним характером, логічністю, нейтральністю та однозначністю. Виокремлено ключові труднощі, з якими стикаються студенти-медики під час перекладу фахових текстів, зокрема неточне використання термінів, граматичні й синтаксичні помилки, неправильне тлумачення абревіатур, а також вплив контексту на вибір перекладацьких рішень. Класифіковано основні типи «хибних друзів перекладача» в англійсько-українському медичному перекладі та показано їхню роль у виникненні семантичних спотворень. Продемонстровано, що складні граматичні конструкції англомовних медичних текстів (інфінітивні та дієприкметникові звороти) ускладнюють визначення логічного наголосу та потребують застосування перекладацьких трансформацій. Акцентовано на необхідності врахування структурних зсувів, еквівалентності та прагматичної повноти медичного перекладу. Зроблено висновок про доцільність комплексного методичного підходу до формування перекладацьких компетентностей студентів-медиків, що передбачає системне опанування медичної термінології, знань теорії перекладу та розвиток практичних навичок роботи з фаховими джерелами.

Ключові слова: медичний переклад; лінгвістичні аспекти; медична термінологія; перекладацькі труднощі; методика навчання.

Introduction. Globalization processes present new challenges and tasks for people, requiring the further development of professional knowledge and skills. Active cooperation and international exchange in medicine and healthcare are essential in the modern world to ensure global health security, sustainable development, and improved patient outcomes. Therefore, high-quality translation of medical texts and documentation is critical.

Translation is a complex and multifaceted human activity. Accuracy and completeness are essential foundational and non-negotiable requirements in professional translation, particularly for certified, legal, and technical documents. Not a single idea of the author should be omitted or distorted as the consequences of changing the meaning of the original source in medical translations may become harmful to the person. In compliance with this, L. Leonardi differentiates accuracy, precision and completeness as the key elements in medical translation (Leonardi, (n.d.)). The urgent need for high-quality translation of medical texts is determined by the potential for severe clinical consequences, including patient harm or death, resulting from even minor informational errors. The above mentioned substantiates the present study relevance.

The objective of the research is to study linguistic aspects of translation as well as to distinguish principal difficulties faced by the students during the translation process of medical scientific texts including healthcare documentation.

Theoretical framework. Currently, medicine is widely considered one of the most in-demand fields of human endeavour. The surge in international scientific collaboration, aimed at achieving faster medical breakthroughs, has indeed triggered a substantial expansion in the scope and demand for medical translation. The translation of medical documentation, including guidelines from the World Health Organization (WHO), is increasing rapidly due to the globalization of healthcare, the need for standardized care, and the necessity of making critical health information accessible across linguistic barriers. Working with medical scientific texts and documentation requires translators to combine various approaches, as the translation is not only medical but also, from some perspectives, legal (in cases of official documentation) or educational, which increases the demands on the adequacy and semantic accuracy of the translation (Korolova, Popova, & Ding, 2021).

Linguistic aspects of translation have been studied throughout the centuries evolving from ancient practical concerns through medieval theological debates, Renaissance humanism, Enlightenment rationalism, and into the modern era, where linguistics (structuralism, generative grammar) and later semiotics, cultural studies, and functional theories became central to establishing translation as a distinct academic field.

In historical retrospect, the key foreign linguists like R. Jakobson distinguished between intralingual (rewording), interlingual (proper translation), and intersemiotic (signs to other signs) translation (Jakobson, 2012, p. 126–131), while others like J. C. Catford defined it as replacing textual material with equivalent material, highlighting its role in cross-cultural communication and bridging linguistic barriers (Catford, 1965, p. 20).

Scholarly definitions of translation vary but centre on transferring meaning from a source to a target language, emphasizing equivalence, function, or cultural context, with the key figures E. A. Nida & C. R. Taber focusing on natural equivalence (Nida, & Taber, 1974), P. Newmark on replacing the author's intended message (Newmark, 2006) and B. Hatim & J. Munday viewing it as a process within a socio-cultural context, i.e., defining translation as a process (transferring) and a product (the text), encompassing cognitive, linguistic, and cultural aspects (Hatim, & Munday, (n.d.)) F. Schleiermacher emphasized the translator as an artist, needing deep familiarity with both languages and cultures, suggesting one should translate towards their own language (Schulte, & Biguenet, 1992, p. 36–54).

These statements highlight translation as both a technical process (replacing words/structures) and a complex, creative act (preserving intent, function, and cultural nuances).

Modern translation theory remains a field of profound plurality without a single, globally accepted definition of translation as a linguistic activity. Based on the provided search results, translation can be identified as "a complete transmission, using one language, of a message formulated in another language" (Rabiychuk, & Nakonechna, 2017, p. 6). Linguistically, translation is defined as the process of converting meaning from a source language text into an equivalent target language text, focusing on preserving the original message, intent, and cultural nuances, not just word-for-word conversion, involving complex code-switching and recreating the source text's function for a new audience (Rabiychuk, & Nakonechna, 2017, p. 6).

Theoretical works on translation offer diverse views on interpreting the "completeness" of information transfer. According to experts, a complete translation of a medical text possesses entirely different characteristics than a complete translation of a journalistic text. "Completeness" is not so much a linguistic property as an extralinguistic, pragmatic one, as it is achieved only by considering factors such as the actual communication situation, the degree of socio-cultural commonality between the original and target audiences, the communicative attitude of the original author, and its relevance to the translation.

The study of the peculiarities of medical translation, the difficulties associated with it, and various approaches is actively researched in modern linguistics. Z. M. Kakulya & E. V. Nesterik investigated the specific features of medical text translation, highlighting the challenges for translators; H. I. Sydoruk authored a textbook on translation theory, relevant to practical medical translation; A. Romanchenko explored lexical and structural features in translating English medical terminology into Ukrainian; P. Terebianikov, V. Verbytskyiy, T. Shkhvatsabaia, L. Dubrovina, B. Zagidulin, studied terminological issues and synonymy in medical contexts; V. Kvitsynska, identified critical challenges faced by junior medical students when translating scientific medical literature from English into Ukrainian and others. However, there is a lack of works devoted to the translation of medical documentation in the Ukrainian-language information space, which leads to inconsistencies between translations by different authors.

Medical language is a specialized, standardized vocabulary (derived heavily from Greek and Latin) for healthcare communication, based on terminology describing the body's condition, medications and their effects on the humans as well as technologies used in treatment, and much more, is recorded in specialized publications related to human health. The texts requiring translation can be of any level: medical records, diagnostic test reports, surgical procedures, laboratory test findings, patient and/ or physician information, medication instructions, treatment recommendations, as well as official guidelines from health care organizations, etc.

English language teaching at medical schools has a number of unique characteristics because it integrates professional, subject-specific content (e.g., medical terminology) from the start, even in pre-clinical years. While technical universities base their language learning on the natural sciences studied in high school, medical schools begin teaching professionally oriented material as early as the pre-clinical course. The difficulties in mastering this material are conditioned by the fact that students are forced to work with concepts that are not entirely clear even in their native language. Therefore, a focus and subject-matter are key features of medical school teaching.

In scientific terminology, effective communication depends on three core principles: precision, brevity, and unambiguity. According to O. Yankovets, term must meet a number of requirements: 1) specificity of use; 2) function of naming a concept; 3) scientific definition; 4) the accuracy of the meaning; 5) contextual stability; and 6) stylistic neutrality (Yankovets, 2023, p. 17),

Summarizing the main features of the term, M. Salamakha singles out normativity (standardized form), precision (specific meaning, not vague), completeness (fully conveys concept), lack of emotionality, absence of synonyms / homonyms within a certain field, and systemic conformity, meaning terms fit into a subject-specific structure, highlighting their scientific, technical, and objective nature for clear communication in a specialized field (Salamakha, 2016).

However, not all terms in terminology meet these requirements. This is why specialists in various sciences, including medicine, pay a particular attention to the standardization of their professional language.

Numerous linguistic studies and educational resources confirm medical terminology (like any other) is a distinct linguistic system with unique structural (roots, prefixes, suffixes), word-formation (compounding, derivation, acronyms), and stylistic (precision, international standardization, evolving nature) features that set it apart from everyday language, making it a specialized, rule-based "language within a language" crucial for scientific communication. This is precisely what makes translating terms from any field quite challenging.

Studying the structure (roots, prefixes, suffixes) and contextual usage of medical terms is foundational for medical students to ensure accurate clinical communication, reduce errors, or interpret complex data. Among the key specific features of professional terminology, it is necessary to highlight the fact that medical texts do not contain stylistic devices (for example, a great number of metaphors or similes). Another important feature is that many medical terms have Latin and Greek roots, meaning they are international. Finally, medical terms are generally logical, neutral, and unambiguous. A specialist with the skills and knowledge of the structure and characteristics of terms is therefore capable of providing an adequate translation of medical texts.

Medical translation is one of the most challenging types of translation, requiring not only excellent language skills but also an understanding of medical processes. During the translation process, medical students face a number of challenges: inaccurate and inappropriate use of relevant medical terminology; incorrect phrase and sentence construction; errors in translating medical abbreviations; the problem of "translator's false friends", etc.

One of the principal challenges in medical translation faced by the medical students is managing synonyms arising from the mix of professional and lay language in documents (e.g., discharge summaries), where consistency is crucial for clarity and patient safety, requiring the students to master diverse terminology, context, and potential cultural variations for accurate communication. "Students struggle with this because it requires mastering the

nuances of both the source and target languages, understanding the specific context in which a term is used, and navigating the unique conventions of medical language" (Prokop, Kitura, & Yelahina, 2025, p. 92).

While mastering medical students' translation abilities and skills, a key attention should also be paid to "translator's false friends" or false cognates, i.e., words in different languages that look or sound similar but have different meanings and origins, posing significant challenges for translators by creating potential for misunderstanding.

In English and Ukrainian, "translator's false friends", numbering several thousand words, occur within four parts of speech: nouns, adjectives, adverbs, and verbs. Based on theoretical work by linguists and lexical material from dictionaries and medical texts, we will attempt to identify common types of inconsistencies within "translator's false friends", pertaining to medical language. The examples of false cognates in English and Ukrainian medical terms creating confusion are demonstrated in Table 1.

These words highlight the need for caution in medical translation, as literal translations can lead to serious misunderstandings about patient conditions or treatments. The students must understand the specific medical context and the nuances of each language.

Medical texts vary in their sentence structure. English sentence structures often contain complex grammatical constructions (infinitives and participial phrases), making it difficult to determine logical stress within the sentence. This leads to ambiguity in the translated text.

Correct grammar is a major issue in medical text translation for students, alongside terminology, ambiguity, and context, requiring deep grammatical understanding and specialized training as essential

components to achieve linguistic mastery. The spectrum of grammatical challenges in translation is obvious, e.g., from direct equivalence (unchanged) to structural shifts (modified word order, transformations like fragmentation/integration) and deeper meaning transfers (lexical/syntactic changes, descriptive/cultural adaptation), reflecting key concepts in translation theory like structural shifts and equivalence. Some sentences need literal conversion, while others demand significant rewriting to convey meaning across different linguistic systems.

Conclusions. Thus, it should be concluded that medical translation is a rather complex field of translation, requiring a more comprehensive theoretical foundation. It is in high demand, driven by rapid advancements in medical science, globalized healthcare, and the need to share clinical trials, research, and regulatory documents across borders.

Medical students frequently struggle with translating specialized texts due to inaccurate terminology, improper syntax, misused abbreviations, false cognates, etc. These challenges stem from complex, context-dependent, and sometimes ambiguous terminology, requiring a high level of both linguistic competence and domain-specific knowledge.

To develop and master translation skills, the students must gain knowledge of medical terminology in a specific field, as well as competencies such as the ability to work with text, use dictionaries, translator forums, and regulatory documentation, and possess a high degree of responsibility. Furthermore, the translation of medical scientific texts is particularly complex and requires a professional approach, namely, excellent linguistic skills and knowledge of translation theory and medicine. Still, the mastering and use of medical terminology remains a critical

Table 1

Common Medical False Cognates

English Term	Actual Meaning in English	Ukrainian "False Friend"	Actual Meaning in Ukrainian
Glands	General term for any secretory organs (e.g., thyroid, adrenal)	*Гланди* [glandy]	Tonsils
Communicable	Contagious or infectious	*Комунікабельний* [komunikabel'ny)]	Sociable, outgoing
Presentation	The position of a foetus in relation to the cervix at the time of delivery	*Презентація* [prezentatsiya]	A general presentation or introduction
Sympathetic	Relating to or denoting the part of the autonomic nervous system (sympathetic nervous system)	*Симпатичний* [sympatychnyy]	Cute, attractive, nice-looking
Angina	Chest pain caused by heart disease (angina pectoris)	*Ангіна* [angina]	A sore throat, tonsillitis
Examine/Exam	A clinical action to asses a patient's condition (to examine a patient)	*Екзамен* [ekzamen]	Refers strictly to a formal test or assessment of students' knowledge

challenge, requiring continuous development at both theoretical and practical levels due to the increasing complexity of healthcare and translation technologies.

Author Contributions. Iryna Prokop – Conceptualization, Methodology, Investigation, Writing – Original Draft, Project Administration.

Halyna Kitura – Data Curation, Writing – Review & Editing, Supervision.

Authors approved the final version of the manuscript.

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