International Journal of Philology, 28(4), 2024
Journal homepage: https://philologicalscience.com.ua/en
Received 19.07.2024 Revised 25.10.2024 Accepted 27.11.2024

UDC 81'25'276.6:61 Doi: 10.31548/philolog/4.2024.77

Challenges in translating medical literature (English-Ukrainian) for junior medical students

Viktoriia Kvitsynska*
Doctor of Philosophy, Senior Lecturer
O.O. Bogomolets National Medical University
01601, 34 Beresteyskyi Ave., Kyiv, Ukraine
https://orcid.org/0000-0001-7583-848X

Abstract. The translation of scientific medical texts is an essential component of medical education, as it enriches students' medical terminology and provides new information for future professional use. This article examined the translation of medical literature by medical students during their studies and the challenges encountered when working with scientific sources. The study aimed to analyse current issues faced by students in translating, adapting, and utilising medical literature and to provide recommendations for addressing these difficulties. The findings indicated that the translation process is fraught with challenges, particularly due to the complexity of medical terminology, the presence of Greek and Latin roots, the use of calques and Anglicisms, and the lack of direct equivalents in the target language. These factors contribute to inaccurate or imprecise translations, which may lead to misinformation when applied in professional practice. Additionally, linguistic and cultural barriers further complicate the translation process. The article also explored key strategies for addressing each of the identified challenges, aiming to facilitate junior medical students' work with scientific medical texts. Methods that yield the best results in language learning and help enhance communication skills were proposed, including engagement with native speakers, regular use of dictionaries and encyclopaedias, and practical translation exercises to develop additional skills. The identification of common errors and difficulties encountered by students will contribute to improving the learning process and enhancing the quality of medical text translations. The findings may be of value to educators in medical institutions as well as professionals involved in the translation of medical literature

Keywords: scientific literature; medical terminology; medicine; communication skills; language barriers; term adaptation

Suggested Citation:
Kvitsynska, V. (2024). Challenges in translating medical literature (English-Ukrainian) for junior medical students. *International Journal of Philology*, 28(4), 77-88. doi: 10.31548/philolog/4.2024.77.

*Corresponding author

Introduction

The 21st century is marked by rapid advancements in medicine, which leads to a constant exchange of information, knowledge and experience between doctors and scientists. As English is a key international language of science, many scientific and practical discoveries are published in English. Therefore, there's a need to learn English or improve existing English skills to a level that allows for understanding and adapting medical terms and concepts into Ukrainian. Lecturers at language departments of Ukrainian medical universities face the important task of helping students learn foreign languages, especially given the constant changes and rapid development of medicine in other countries. One effective way to gain new knowledge is through the translation of medical literature. Lecturers select materials that suit the students' level, university requirements, and future specialisations. However, the translation of medical texts, particularly for junior medical students, can present challenges due to a range of complex factors, including the intricacy of terminology, lexical specificity, and language barriers.

For many years, researchers have examined the key challenges associated with translating scientific literature and have developed methods to address these issues, aiming to minimise difficulties for future generations of scholars (Panov & Zapara, 2022). Among the difficulties encountered in translation are lexical challenges, such as synonymy, abbreviations, acronyms, and eponymy, as well as syntactic complexities. A lack of precise equivalents between languages, intercultural factors, and insufficient awareness of terminology, its origins, or possible translations are also recognised as major issues.

As noted by I. Agung (2021), medical terminology possesses distinct characteristics, including Latin and Greek roots, eponyms, acronyms, compounding, affixation, and the phenomenon of doublets, all of which complicate the translation process. The primary translation strategies identified in the study were borrowing and literal translation. Based on these findings, the author concludes that medical term translation tends to be source-language-oriented. T. Ismayilli (2024) highlights that medical text translation is a highly specialised field requiring not only linguistic proficiency but also an in-depth understanding of medical terminology and context. According to the author, errors in medical translation can have serious consequences for patients and global healthcare, making high-quality medical translation essential for effective communication and patient safety. Achieving high translation quality requires collaboration between translators and medical professionals, continuous training, the use of specialised resources, and a rigorous review process.

R. Noll *et al*. (2023) in their research explore the main challenges of translating medical terms, particularly the difficulty of ensuring accurate and consistent information transfer across language barriers. Since much standard medical terminology is only available in English, this creates problems for international research and automated processing of medical data. According to the authors, automated translation, particularly Natural Language Processing (NLP) and Machine Translation (MT) methods is seen as a potential tool to address this issue. The study found that English is the most common source language for medical term translations (55.9%), and Google Translate is the most frequently used translation tool (36.4%). According to R. Kasperė *et al*. (2023), while machine translation is increasingly used in the medical field, it is not yet fully reliable and requires careful editing. Research shows that while the accuracy of terminology translation and the adequacy of longer segments can be acceptable for non-professional use, the quality and readability of machine translation are often poor. Therefore, while machine translation can be a useful tool, it cannot be relied upon as the sole source. Medical translation is

complicated not only by terminology problems but also by the variety of genres and types of texts.

J. Buysschaert (2021) argues that the greatest challenge in medical translation is the vast amount of medical terminology. Finding accurate equivalents for technical terms is a primary task for translators, complicated by terminological variability, homonymy, polysemy, false friend, and the use of abbreviations. Although efforts have been made to standardise terminology, they often result in competing standards. Terminological variation can be functional, as medical communication occurs in diverse contexts, requiring different terminological solutions (AlAsbahy & Shamsi, 2023). This study aimed to identify the difficulties faced by junior medical students when reading and translating scientific literature and to explore solutions to these challenges through classroom activities and independent study.

Materials and Methods

The study utilised a range of medical texts covering various fields of medicine and levels of complexity. It involved the analysis of educational texts as well as authentic English-language materials designed for junior medical students. These texts were used to identify common errors made by students in the early stages of learning medical translation. Additionally, specialised literature, including scientific articles, monographs, and other professional texts related to anatomy, pharmacology, and clinical practice, was analysed. These materials were examined to explore the challenges of translating medical terminology and the complex grammatical structures characteristic of scientific writing. For comparative analysis, Ukrainian translations of medical texts produced by professional translators or medical specialists were used as benchmarks. These reference texts allowed for the evaluation of student translations and the identification of discrepancies in the interpretation of medical terms and phrases.

The study was conducted in several stages. In the first stage, an analysis of student translations was carried out. The students' work was examined to identify common errors, particularly lexical, grammatical, and stylistic mistakes. Special attention was given to errors arising from misunderstandings of medical terminology and context. The second stage involved a comparative analysis of texts. Student translations were compared with authentic Ukrainian texts and existing translations of medical literature. This made it possible to assess the quality of student work, identify discrepancies in translation, and determine factors influencing the success of translation activities. In the third stage, a contextual analysis was conducted. Medical terms and phrases that posed difficulties for students were examined within the context of specific texts. This helped to clarify their precise meaning and usage in medical literature. In the final stage, the collected data were systematised and summarised to identify patterns in student errors and formulate recommendations for improving the quality of medical translation.

The study employed a range of methods. Comparative analysis was used to contrast student translations with original texts and existing translations to identify errors and inconsistencies. Contextual analysis facilitated the examination of medical terms and phrases within their specific contexts, ensuring an accurate understanding of their meaning and usage. Statistical analysis enabled the quantitative processing of data to identify the most common errors and patterns in students' translation activities. The research database included medical articles in English and Ukrainian, textbooks and manuals, master's theses on linguistics and medical terminology, as well as scientific article databases such as PubMed, Scopus, and Web of Science. The methods and materials employed allowed for a comprehensive investigation into the challenges of medical literature translation by medical students and the development of

practical recommendations for improving their translation skills.

Results and Discussion

The complexity of medical terminology and the use of Latin and Greek roots

Researchers conclude that medical students encounter two primary categories of challenges when translating scientific texts: lexical and syntactic translation difficulties, and issues related to intercultural communication (Belyaeva, 2014). Among lexical challenges, difficulties associated with Latin and Greek roots, calques and Anglicisms, as well as lexical and syntactic peculiarities of medical texts, can be identified. Many English medical terms lack direct equivalents in Ukrainian, leading to the need for approximate translations (Liu, 2013; Sydoruk, 2016). This presents a critical issue, as alternative translations do not always convey the precise meaning of medical terms. A. Ageicheva & I. Rozhenko (2019) highlight that "the corpus of Greek and Latin terminology is still the base of the contemporary medical language, which also uses new eponyms, acronyms and trade names". According to L. McMorrow (1998), contemporary medical language frequently employs derivatives of Greek and Latin words "with no concern for etymological purity". T. Turmezei (2012), in an analysis of medical terminology, found that 89% of English medical terms have classical roots, with 65% derived from Latin and 24% from Greek. M. Bujalková (2018) concludes that without a solid understanding of medical Latin, students may struggle to successfully complete their studies.

S. Radetska & K. Turyanytsia (2017) note that most medical terms are international, as Greek and Latin terms form the basis of medical terminology in almost all European languages. The creation of terms from classical term elements has led to medical terms having a high degree of motivation and being semantically transparent. However, they also point out that translating medical literature is one of the most complex and responsible tasks, making it incredibly difficult. Medical texts contain many Latin names, abbreviations, and, given the rapid development of medicine, new words and terms appear almost daily, unlike the appearance of new dictionaries containing these terms. Yu. Vokhmina (2023) notes that the entire body of medical terms, along with the terms of related sciences (biology, chemistry, physics, microbiology, radiology, genetics, psychology, technology, etc.) used by doctors, is a large macrosystem numbering several hundred thousand names, including synonyms and drug names. The components of this macrosystem, the sets of terms from individual sciences and fields of knowledge, form private microsystems of terms. Each term is an element of a specific microterm system (anatomical, therapeutic, obstetric, endocrinological, haematological, etc.). Each term occupies a specific place in the microsystem and is in fixed generic or other relationships with other terms in that microsystem. At the same time, terms from different microsystems form certain structures of connections with each other at the macrosystem level. These structures reflect the dual trend of scientific progress: the differentiation of medical sciences, on the one hand, and their integration, on the other.

For example, terms related to biological processes, anatomy, pharmacology, physiology, pathology, and clinical practice each have their own specific wording. These terms require a special approach when translating, with attention to both vocabulary and meaning (Kussmaul, 1995). Translating such terms requires additional research, and clarification of ambiguous words using dictionaries, collections of materials, and other supplementary sources, which may have several translation options depending on the specialty. O. Kochergina & A. Sukhova (2017) note that special attention should be paid to abbreviations and acronyms, as they often have both medical and non-medical meanings, which can lead to translation

errors. A. Ionov (2024) in his research also notes that when translating medical abbreviations, errors occur when the same abbreviation can have several medical meanings, which differ only depending on the context in which the abbreviation is used. E. Marecková & L. Červený (2002) emphasise that medical students must learn what special words mean, how they are used, and how they are pronounced.

To address this issue, T. van Dijk & W. Kintch (1983) suggest various exercises, such as identifying sounds and letters, and determining the structure of words, which allows for making inferences. M. Lewis (1996) proposes distinguishing between four types of lexical units: word, phrase, expression, and sentence. He suggests exercises involving the selection of synonymous meanings, gap-filling exercises, word formation activities, and more. M. Bujalková (2018) recommends that students, during independent study, systematically organise and record new vocabulary, grouping it by themes, translation, and definitions of terms, the presence of antonyms, verb forms, and so on. Thus, it can be concluded that to successfully master the vocabulary of Latin and Greek origin, researchers advise students to work with a variety of resources and not neglect the study and systematisation of medical vocabulary, which will help avoid errors during translation.

The use of transformations. The specifics of medical vocabulary and syntax

R. Kuliev (2024) notes that the translation of contemporary English-language medical literature into Ukrainian is accompanied by structural and semantic changes, which involve lexical, grammatical, and cultural adjustments. These changes present challenges for Ukrainian native speakers, leading to the need for the adaptation of terms and their alignment with the linguistic norms of the Ukrainian language. The scholar highlights that among the adaptation techniques, one can distinguish the creation of new terms, descriptive translation, and calquing. Calquing is one of the techniques most frequently employed by students when translating medical scientific texts. Another technique is the use of Anglicisms. However, this can lead to incorrect usage of terms in Ukrainian, resulting in the loss of the term's meaning and the boundaries of its application in medical scientific language. For instance, the English term "patient care" is often translated as "пацієнтська допомога" (patient's assistance), which is not entirely accurate, as it would be more appropriate in Ukrainian to use "допомога пацієнтам" (assistance to patients) or "догляд за пацієнтами" (care for patients).

O. Mukhanova *et a*l. (2022) suggest that the translation of texts should begin with lexical transformations – transcoding, the essence of which lies in conveying the sound form of a word from the original language using the alphabet of the target language. Regarding calquing or literal translation, the researchers note that this method can be applied when translating complex words. N. Varga *et a*l. (2023), in their study, identify six types of transformation: transcription (recording according to the letters and sounds), transliteration (recording a foreign word using the alphabet of the target language), calquing (creating new words by borrowing word formation from the original language), descriptive translation (translation through a lexicalised phrase), approximate translation (selecting the closest equivalent), and transplantation (transferring words into the translation text for authenticity). When translating medical terminology, it is crucial to preserve the meaning of each term, as any mistake in the interpretation or explanation of a term may lead to errors in treatment or the application of new treatment methods. Thus, the lecture's task is not only to prepare a text for translation practice but also to create a context that provides additional information if necessary, directing students to comprehend

the scientific material from each medical topic in the syllabus. In light of this, it is important to consider the linguistic traditions and context in which these terms are used in both English and Ukrainian medical practices when translating, as this will help avoid misunderstandings when applying the term in a new terminology system.

Medical literature contains complex syntactic structures, which complicate translation for students in the early stages of their studies. The vocabulary in such texts can be highly specialised, making comprehension difficult for those just beginning to study medicine. This specificity necessitates changes in grammatical structure during the translation of terms (MuñozMiquel *et al.*, 2018; Romanchenko, 2023). For example, grammatical replacements are used, such as lung disorder – захворювання легень (disorder of the lungs), bladder outlet obstruction – непрохідність вихідного отвору сечового міхура (obstruction of the bladder outlet), blood test – аналіз крові (test of blood). First-year students often have a limited vocabulary, which can lead to inaccurate translations or misinterpretations of certain phrases. Furthermore, the presence of numerous specialised expressions creates additional challenges for understanding and correct translation, as the same expressions may have different meanings in general language and the specialised context (Herasimova, 2016).

The presence of abbreviations in medical texts is a particular challenge. H. Yencheva & T. Semyhinivska (2021) explain the appearance of these terms as a trend towards linguistic economy and the tendency of the English language towards monosyllabism, as well as the need to name new phenomena and realities of objective reality. Abbreviations are divided according to the number of letters – from one- to six-letter abbreviations. Translating these units poses a particular problem for junior students, as ambiguous abbreviations of medical and non-medical use are often encountered. In addition, some abbreviations are understandable to medical professionals of specific specialities, leading to confusion during translation. For example, Table 1 shows several English abbreviations that have different meanings in medical and non-medical contexts.

Table 1. *Examples of English abbreviations with different meanings in medical and non-medical contexts*

AD	CT	BP	PE	HR	ICU	IV
Alzheimer's Disease	Computed Tomography	Blood Pressure	Pulmonary Embolism	Heart Rate	Intensive Care Unit	Intravenous
Anno Domini	Cardiotonic	Bone Pathology	Physical Education	Hormone Replacement	IntraCranial Unit	In Vitro
Average deviation	Cervical Thrush	Basal Prolactin		Hyperreflexia	Internal Communications Unit	Invasive Ventilation
	Chronic Tonsillitis	Benign Prostate		Hepatic Resection	International Cricket Union	Intravenous Immunoglobulin
	Cytotoxic T-cells	Business Plan		Human Rabies		Ischemic Vasculitis
				Human Resources		
				High Resolution		
				Heat Resistant		

Source: author's development

Researchers recommend translating abbreviations using several methods: by providing the full form of the word with an explanation in parentheses, if the abbreviation occurs multiple times; by describing it if there is no equivalent in the target language; by direct borrowing with transference, transcoding, or creating a new Ukrainian abbreviation.

Cultural differences, contextual adaptation, and language barriers

Every text written in a scientific environment has a specific cultural code. Therefore, medical texts written in an English-speaking environment often reflect the specifics of a particular country's medical system, which may not be entirely clear to medical students from other countries (Ersland, 2014; Montalt *et al*., 2018). For example, treatment methods, diagnosis, or patient approaches may differ from practices accepted in Ukraine. Such differences require not only translation but also context adaptation. In such cases, students need to have knowledge not only of medical terminology but also of the cultural and practical aspects of the language from which the translation is being made. D. Nazarchuk (2023) believes that when working with texts, it is necessary to determine the content, analyse and comprehend the text, create associative links, and select the information necessary for the student. A. Marlova (2015a; 2015b) notes that before reading the text, the lecture should explain the reasons for reading the text, provide information, and explain the lexical and grammatical difficulties that students may encounter.

S. Tregub (2023) divides the process of working with a text into three stages: pre-textual, textual, and post-textual. According to the researcher, the pre-textual stage involves exercises aimed at clarifying linguistic units and mastering structural material (such as word grouping, filling in gaps, etc.). The textual stage is characterised by the use of techniques for acquiring information (such as exercises on constructing sentences from keywords, creating expressions, etc.). The posttextual stage allows for a deeper understanding of the text's subject. These methods enable students not only to translate the text but also to gain new insights into the country of origin and enrich their vocabulary.

For students of medical faculties in junior courses, one of the biggest challenges is insufficient command of English at the level required to understand medical scientific texts (Karwacka, 2015). This leads to errors in translation, misinterpretation of terms, or even distortion of meaning. This issue can be addressed with the help of a large number of online resources that students can use to improve their translation skills. N. Venhrynovych (2024) recommends educational platforms such as "Coursera" and "EdX" ("Medical Terminology", "Clinical Terminology for International and U.S. Students", "Anatomy & Physiology"); and online resources such as "MedlinePlus", "MerriamWebster Medical Dictionary", "Stedman's Online", "Taber's Medical Dictionary", "OpenMD Medical Dictionary", "Dorland's Medical Dictionary Online". These resources can help students master, improve, and develop medical knowledge, skills, and abilities.

Addressing challenges in translating medical texts

All the issues that need to be addressed aim to help students overcome difficulties in translating medical literature. This, in turn, will help influence the positive dynamics of the development of language and professional skills of junior students, allowing them to master modern information to improve their future professional qualities. The lecture in this environment is the driving force that forces them to fight the problems posed, as well as an assistant who can suggest the stages of solving each specific problem. To improve translation skills, first of all, the student's attention should be drawn to the use of medical dictionaries, encyclopaedias,

and various online resources, such as Coursera, etc., since this makes it possible to enrich the lexical stock of students in general, will help clarify each specific term and its usage options (this is especially true of abbreviations, since, as already mentioned, the same abbreviation can have several meanings in medicine, depending on the speciality), the origin and specificity of each term, which, in turn, will lead to memorising the roots and, in the future, will help to quickly understand each subsequent term in the medical term system.

Introducing practical sessions on translating medical texts will help students improve their skills, provided that specific terms are discussed and the context is analysed. To make this stage of learning effective, it is advisable to start with popular science medical literature and scientific articles, depending on the students' level of knowledge, and progress to specialised scientific articles and monographs on selected topics from journals indexed in the SCOPUS and WoS databases. However, it is important to note that some articles in medical popular science literature may sometimes contain unverified data or, more problematically, falsify research findings or even deceive readers. Thus, the lecture's task is not only to select appropriate material but also to verify its credibility and quality to avoid misunderstandings. This can be achieved in several ways: by researching the study in journals indexed in Scopus and WoS; using AI as an assistant in finding articles that confirm or refute the research published in each specific article; and consulting with specialists.

An additional tool that can improve students' skills in translating scientific medical literature is engaging with native English-speaking students. This can include exchange lecturers working at the departments, as well as foreign students studying at medical institutions of higher education. Communication plays a key role in familiarising students with the culture of speech, enriches vocabulary, and provides practical speaking skills, which, in turn, help in further translation practice, as they give an understanding of living language, which can be used in printed materials (for example, abbreviated names of instruments or equipment). This tool makes it possible not only to improve their knowledge of English and medical culture but also to helps foreign students improve their skills in learning the Ukrainian language, which will lead to positive dynamics in intercultural communication. Such classes also help students adapt medical texts to the Ukrainian context. This can be especially observed during classes in mixed groups, where after reading and analysing the text, each side explains the features according to their experience and knowledge. Thus, the adaptation of the text to the Ukrainian language is much easier and allows for identifying differences between foreign and Ukrainian medicine.

Conclusions

The process of translating medical texts is a complex and multifaceted task that requires a high level of specialised knowledge. The problems identified in the study, which medical students face, confirm that the main difficulties are lexical, syntactic and intercultural barriers that complicate the accurate and correct translation of medical terms during the reading and translation of scientific literature. Important aspects that need improvement are the understanding of Latin and Greek terminology, the correct use of abbreviations, as they are the most common cause of confusion when translating scientific literature and when used in professional activities, as well as the adaptation of medical texts to the linguistic norms of the Ukrainian language. However, despite all the challenges, modern translation methods, in particular, the use of contextual analysis and transformations, allow for significant improvement in the accuracy and adequacy of medical text translation. The role of lectures is also important, they should not only teach students

the technique of translation but also promote the development of their critical thinking in solving language problems, which, in the future, makes it possible both to improve the educational process and to help future doctors in their professional activities.

Further research could focus on improving methods for teaching medical text translation, including developing specialised programs to train students in solving lexical and grammatical problems. An important direction is also the use of existing universal dictionaries and reference books and the creation of new ones that would contain the most common medical terms and their translation options. Since medical science is constantly evolving, it is also necessary to analyse new terms that appear in medical practice and propose adequate methods for their translation for students. Thus, further research in this area can contribute to improving the quality of medical translation, which, in turn, will ensure a high level of professional training for future medical specialists and increase the effectiveness of communication in the international scientific community.

Acknowledgements

The author would like to thank all the researchers who have uploaded their research to scientific platforms, as well as those who have provided access to their work.

Conflict of Interest

None.

References

[1] Ageicheva, A.O., & Rozhenko, I.V. (2019). Medical texts translation peculiarities. *Young Scientist*, 5.1(69.1), 1-4.

[2] Agung, I.G.A.M. (2021). The translation of medical terms in two translation versions of Into the Magic Shop. In *Proceedings of the 10th UNNES virtual international conference on English language teaching, literature, and translation* (pp. 407-414). Semarang: European Alliance for Innovation. doi: 10.4108/eai.14-8-2021.2317629.

[3] Al-Asbahy, W., & Shamsi, M. (2023). Translating medical terminologies: Problems and suggestions. *Journal of English Studies in Arabia Felix*, 2(1), 1-9 doi: 10.56540/jesaf.v2i1.32.

[4] Belyaeva, O.M. (2014). Typology of language errors and ways to minimise them in the process of teaching future doctors Latin and medical terminology. In *Language disciplines in the context of the development of modern higher education: Materials of the All-Ukrainian distance scientific and practical conference with international participation* (pp. 23-29). Kharkiv: Tim Public Group.

[5] Bujalková, M. (2018). The coexistence of Latin and English in medical terminology and its contribution to ESP teaching. *International Journal of Humanities Social Sciences and Education (IJHSSE)*, 5(6), 7-14. doi: 10.20431/2349-0381.0506002.

[6] Buysschaert, J. (2021). Medical terminology and discourse. In Ş. Susam-Saraeva & E. Spišiaková (Eds.), *The Routledge handbook of translation and health* (pp. 65-79). London: Routledge. doi: 10.4324/9781003167983-7.

[7] Ersland, A. (2014). *Is change necessary? A study of norms and translation universals in intralingual translation*. (Thesis submitted for the MA Degree, University of Bergen, Bergen, Norway).

[8] Herasimova, O.M. (2016). Peculiarities of translating terms (using the example of border discourse). *Scientific Bulletin of the International Humanitarian University. Series: Philology*, 22, 180-182.

[9] Ionov, A.O. (2024). Practical difficulties of translating abbreviations in professional fields. In *Language and educational space in the countries of the world: Materials of the XIV International scientific and practical student conference. Collection of abstracts* (pp. 121-124). Kyiv: National Pedagogical Drahomanov University.

[10] Ismayilli, T. (2024). Navigating complexities in medical text translation: Challenges, strategies, and solutions. *Acta Globalis Humanitatis et Linguarum*, 1(2), 170-176. doi: 10.69760/aghel.01024080.

[11] Karwacka, W. (2015). Medical translation. In Ł. Bogucki, S. Goźdź-Roszkowski & P. Stalmaszczyk (Eds.), *Ways to translation* (pp. 271-298). Łódź: Wydawnictwo Uniwersytetu Łódzkiego.

[12] Kasperė, R., Mikelionienė, J., & Venckienė, D. (2023). Medical terminology issues: A feasibility study of machine translation in a low-resource language. *SKASE Journal of Translation and Interpretation*, 16(2), 5-22. doi: 10.33542/JTI2023-2-2.

[13] Kochergina, O.M., & Sukhova, A.V. (2017). Specificity of translation of medical texts from English into Ukrainian. *Studia Philologica: A Collection of Student Research Papers*, 1, 169-173.

[14] Kuliev, R.V. (2024). Analysis of structural and semantic changes in the translation of English terms into Ukrainian. In *Language and learning space in the countries of the world: Materials of the XIV International scientific and practical student conference. Collection of abstracts* (pp. 142-145). Kyiv: National Pedagogical Drahomanov University.

[15] Kussmaul, P. (1995). *Training the translator*. Amsterdam/Philadelphia: John Benjamins.

[16] Lewis, M. (1996). Pedagogical implications of the lexical approach. In J. Coady & T. Huckin (Eds.), *Second language vocabulary acquisition: A rationale for pedagogy* (pp. 255-270). Cambridge: Cambridge University Press. doi: 10.1017/CBO9781139524643.018.

[17] Liu, J. (2013). Translators training: Teaching programs, curricula, practices. *Journal of Language Teaching and Research*, 4(1), 127-132. doi: 10.4304/jltr.4.1.127-132.

[18] Marecková, E., & Cervený, L. (2002). Latin as the language of medical terminology: Some remarks on its role and prospects. *Swiss Medical Weekly*, 132(4142), 581-581. doi: 10.4414/smw.2002.10027.

[19] Marlova, A. (2015a). Peculiarities of teaching reading the foreign language texts for specific purposes. *Youth and the Market*, 3, 102-106.

[20] Marlova, A. (2015b). Preconditions for teaching productive reading of special texts in foreign languages in higher educational establishments. *Youth and the Market*, 6, 82-85.

[21] McMorrow, L. (1998). Breaking the Greco-Roman mold in medical writing: The many languages of 20th century medicine. In H. Fischbach (Ed.), *Translation and medicine* (pp. 13-28). Amsterdam/Philadelphia: John Benjamins. doi: 10.1075/ata.x.04mcm.

[22] Montalt, V., Zethsen, K.K., & Karwacka, W. (2018). Medical translation in the 21st century – challenges and trends. *MonTI. Monographs in Translation and Interpreting*, 10, 27-42. doi: 10.6035/MonTI.2018.10.1P.

[23] Mukhanova, O., Tikan, Ya., & Kupchak, I. (2022). Methods of formation of English language medical terminology and its translation into Ukrainian. *Advanced Linguistics*, 10, 67-73. doi: 10.20535/2617-5339.2022.10.267233.

[24] Muñoz-Miquel, A., Ezpeleta-Piorno, P., & Saiz-Hontangas, P. (2018). Intralingual translation in healthcare settings: Strategies and proposals for medical translator training. *MonTI. Monographs in Translation and Interpreting*, 10, 177-204. doi: 10.6035/MonTI.2018.10.7.

[25] Nazarchuk, D. (2023). The role of using authentic materials in teaching a foreign language. In *Topical issues of linguodidactics: Tradition and innovation. Proceedings of the international scientific and practical online conference* (pp. 65-67). Zaporizhzhia: Zaporizhzhia State Medical and Pharmaceutical University. doi: 10.6084/m9.figshare.24599550.

[26] Noll, R., Frischen, L.S., Boeker, M., Storf, H., & Schaaf, J. (2023). Machine translation of standardised medical terminology using natural language processing: A scoping review. *New Biotechnology*, 77, 120-129. doi: 10.1016/j.nbt.2023.08.004.

[27] Panov, S.F., & Zapara, V.M. (2022). On special approaches to teaching a second foreign language for translators of technical information (German based on English). *Scientia et Societus*, 1(2), 9-14. doi: 10.31470/2786-6327/2022/2/9-14.

[28] Radetska, S.V., & Turyanytsia, K.S. (2017). English and Ukrainian medical websites: Use and translation of medical terminology. Pragmatic adaptation of translation. *Scientific Notes of Nizhyn Mykola Gogol State University. Philological Sciences*, 1, 210-213.

[29] Romanchenko, A. (2023). Lexical and structural features of translation of English medical terminology. *Actual Problems of Foreign Philology and Linguodidactics: Collection of Scientific Papers of Higher Education Applicants of the Faculty of Foreign Philology of H.S. Skovoroda Kharkiv National Pedagogical University*, 5, 188-192.

[30] Sydoruk, H.I. (2016). *Basics of translation theory: Textbook*. Kyiv: NULES of Ukraine.

[31] Tregub, S. (2023). Working with professional texts in teaching a foreign language for professional purposes in medical universities. In *Topical issues of linguodidactics: Traditions and innovation. Collection of materials of the International scientific and practical online conference* (pp. 95-97). Zaporizhzhia: Zaporizhzhia State Medical and Pharmaceutical University.

[32] Turmezei, T.D. (2012). The linguistic roots of modern English anatomical terminology. *Clinical Anatomy*, 25(8), 1015-1022. doi: 10.1002/ca.22062.

[33] Van Dijk, T.A., & Kintch, W. (1983). *Strategies of discourse comprehension*. New York: Academic Press.

[34] Varga, N., Zykan, H., & Bertha, E. (2023). *Introduction to translation studies: Study guide*. Uzhhorod: Uzhhorod National University.

[35] Venhrynovych, N.R. (2024). Typical mistakes made by medical students in pronouncing English medical terms: Reasons for their occurrence and ways of elimination. *Medical Education*, 2, 126-133. doi: 10.11603/m.2414-5998.2024.2.14825.

[36] Vokhmina, Yu.D. (2023). *Features of translation of medical terms in scientific and technical discourse*. (Term paper in translation studies, Kyiv National Linguistic University, Kyiv, Ukraine).

[37] Yencheva, H., & Semyhinivska, T. (2021). Translation of normative documents of the World Health Organization: Terminological abbreviations and acronyms. *Scientific Bulletin of the International Humanitarian University. Series: Philology*, 47(3), 115-119. doi: 10.32841/2409-1154.2021.47-3.26.

Проблемні питання перекладу медичної літератури (англійська-українська) студентів-медиків молодших курсів

Вікторія Квіцинська

Доктор філософії, старший викладач
Національний медичний університет ім. О.О. Богомольця
01601, просп. Берестейський, 34, м. Київ, Україна
https://orcid.org/0000-0001-7583-848X

Анотація. Переклад наукових текстів з медицини є важливим та невід'ємним етапом навчання студентів медичних вишів, оскільки дає можливість збагатити медичний термінологічний запас та отримати нову інформацію для подальшого використання у професійній діяльності. Стаття присвячена питанню перекладу медичної літератури студентами-медиками під час навчання у виші та проблемам, з якими стикаються студенти під час опрацювання наукових джерел. Метою дослідження було проаналізувати сучасні проблеми, які постають перед студентами під час перекладу, адаптації та використання наукової літератури медичного спрямування, та надати рекомендації для їх вирішення. Встановлено, що процес перекладу супроводжується численними труднощами, зокрема через складність медичних термінів; наявність грецьких та латинських коренів, використання кальок, англіцизмів; відсутність прямих відповідників у мові перекладу, що формує некоректний або неточний переклад опрацьованого джерела та може містити помилкову інформацію під час подальшого використання в роботі, а також мовні та культурні бар'єри. У статті також розглянуто основні засоби для вирішення кожної з визначених проблем, що передбачає полегшення роботи з медичними науковими текстами студентам-медикам молодших курсів. Запропоновано засоби, які дають найкращий результат під час вивчення іноземної мови та допомагають покращити комунікативні навички, серед яких залучення носів мови, постійне використання словників та енциклопедій, проведення практичних занять з перекладу наукових текстів для отримання додаткових навичок. Виявлені типові помилки та труднощі, з якими стикаються студенти, дозволять удосконалити процес навчання та підвищити якість перекладів медичних текстів. Отримані дані можуть бути корисними для викладачів медичних навчальних закладів, а також для фахівців, які займаються перекладом медичної літератури

Ключові слова: наукова література; медична термінологія; медицина; комунікативні навички; мовні бар'єри; адаптація термінів