JOURNAL OF MULTIDISCIPLINARY SCIENCES AND INNOVATIONS
GERMAN INTERNATIONAL JOURNALS COMPANY
ISSN: 2751-4390
IMPACT FACTOR (RESEARCH BIB) : 9,08. Academic reserach index

USING CASE-BASED LEARNING TO IMPROVE RUSSIAN LANGUAGE PROFICIENCY AMONG UZBEK MEDICAL STUDENTS

Nurmatova Faiza Irikovna
Tashkent Medical Academy
Russian language teacher
faizanurmatova6565@gmail.com

ABSTRACT: This article explores the effectiveness of case-based learning (CBL) in improving Russian language proficiency among Uzbek-speaking medical students. As future doctors, students must acquire not only medical terminology in Russian but also effective communication skills for patient interactions. The study examines how real-life medical cases, role-playing, and simulations can enhance language acquisition, focusing on contextual learning, problem-solving, and professional communication. The findings suggest that CBL fosters critical thinking, enhances vocabulary retention, and improves doctor-patient dialogue skills, making it an effective pedagogical approach in medical language education.
KEY WORDS: Case-Based Learning, Russian for Medical Purposes, Language Proficiency, Uzbek-Speaking Medical Students, Medical Communication.

АННОТАЦИЯ: В данной статье рассматривается эффективность обучения на основе кейсов (Case-Based Learning, CBL) для улучшения владения русским языком среди узбекскоязычных студентов-медиков. Как будущие врачи, студенты должны освоить не только медицинскую терминологию на русском языке, но и навыки эффективного общения с пациентами. В исследовании анализируется, как реальные медицинские случаи, ролевые игры и симуляции способствуют изучению языка, акцентируя внимание на контекстном обучении, решении проблем и профессиональной коммуникации. Результаты показывают, что CBL развивает критическое мышление, способствует лучшему запоминанию медицинской лексики и улучшает навыки ведения диалога врач-пациент, делая его эффективным педагогическим подходом в обучении медицинскому языку.
КЛЮЧЕВЫЕ СЛОВА: Обучение на основе кейсов, русский язык для медицинских целей, языковая компетенция, узбекскоязычные студенты-медики, медицинская коммуникация.

INTRODUCTION

In the field of medical education, effective communication is as crucial as clinical knowledge. For Uzbek-speaking medical students, acquiring proficiency in Russian for medical purposes is essential, as a significant portion of medical literature, patient interactions, and professional exchanges occur in Russian. However, traditional language-learning methods often fail to equip students with the necessary contextual fluency required for real-life medical scenarios. This raises the need for innovative, immersive teaching strategies that bridge the gap between linguistic theory and professional practice.

One such approach is Case-Based Learning (CBL), an instructional method that emphasizes real-world medical cases as the primary learning framework. CBL is widely used in medical education to enhance clinical reasoning, decision-making, and problem-solving skills. When applied to language instruction, CBL provides a dynamic, interactive learning environment where students engage with authentic doctor-patient dialogues, diagnostic discussions, and emergency scenarios, reinforcing both linguistic competence and medical communication skills.

Several studies in applied linguistics and medical education suggest that learning in context significantly improves vocabulary retention, comprehension, and practical application (Byram, 1997; Krashen, 1982). Traditional methods of language instruction, which primarily focus on grammar and isolated vocabulary drills, do not fully address the complexities of professional medical discourse. Instead, CBL allows students to acquire language skills in a problem-solving environment, mirroring real-world interactions in hospitals and clinics.

This study explores the effectiveness of Case-Based Learning in improving Russian language proficiency among Uzbek-speaking medical students. Specifically, it examines: How CBL enhances medical vocabulary acquisition and contextual fluency; The impact of case discussions and role-playing on communication skills; The challenges and benefits of integrating CBL into Russian language instruction for medical purposes.

By analyzing student performance, engagement, and learning outcomes, this research aims to provide insights into best practices for teaching Russian for medical purposes and suggest practical recommendations for medical educators. The findings will contribute to the ongoing development of innovative language instruction methodologies that cater to the specific needs of future healthcare professionals.

LITERATURE REVIEW

Teaching Russian for medical purposes to Uzbek-speaking students has been an area of interest for both Uzbek and international scholars. Researchers such as Kryuchkova (2015), Rasulov (2021), and Mamatov (2022) emphasize that medical language learning requires more than just memorization of vocabulary. It demands contextual fluency, cultural awareness, and specialized communication skills. One of the most effective approaches to achieving these goals is Case-Based Learning, which integrates problem-solving and real-life applications into the language acquisition process.

Russian remains a dominant language in medical education in Uzbekistan, as a significant portion of medical textbooks, clinical documentation, and professional communication occurs in Russian. Studies by Abdug‘afforov (2020) and Turdialiyeva (2021) highlight that Uzbek-speaking medical students often struggle with mastering medical terminology, conducting patient interactions, and understanding formal documentation in Russian. Many of them face difficulties in linguistic and pragmatic aspects of medical discourse, which affect their ability to communicate effectively with Russian-speaking patients and colleagues.

Sociocultural theory proposed by Vygotsky (1978) suggests that language learning is most effective when it occurs within a meaningful social and professional context. This perspective is particularly relevant for medical students, who must acquire Russian not just for academic purposes but for direct patient interaction and diagnosis. Communicative language learning principles emphasized by Larsen-Freeman (2000) highlight that language acquisition should be integrated with professional skills rather than taught in isolation. Case-Based Learning aligns with this approach by providing structured medical scenarios where students actively apply their linguistic knowledge in realistic situations.

Case-Based Learning has been widely recognized as an effective methodology in medical education. Scholars such as Dolmans et al. (2005) and Schmidt et al. (2011) have shown that CBL enhances clinical reasoning, problem-solving, and decision-making skills. Unlike traditional memorization-based methods, CBL immerses students in real or simulated medical cases, requiring them to apply Russian medical terminology, develop doctor-patient communication skills, and practice critical thinking in diagnostic discussions. Research conducted by Mamatov (2022) and Tursunov (2023) demonstrates that students who engage with CBL retain medical vocabulary more effectively, communicate with greater fluency, and show improved comprehension of authentic medical materials.

Several Uzbek researchers have examined the effectiveness of CBL in medical Russian language instruction. Studies by Usmonov (2021) and Turdialiyeva (2021) indicate that students who engage with real-life cases develop stronger speaking confidence, are better prepared for medical consultations, and show a greater ability to use medical terminology in appropriate contexts.

Furthermore, case-based approaches help students understand the cultural and ethical dimensions of medical communication, which are often overlooked in traditional language courses.

Despite its advantages, implementing CBL in Russian for medical purposes presents challenges. Research by Kuznetsov (2019) and Rasulov (2021) points out the lack of specialized teaching materials and structured CBL-based Russian language textbooks, making it difficult to fully integrate this method into existing curricula. Volkova (2020) and Mamatov (2022) highlight the issue of teacher training, as instructors need expertise in both medical discourse and language pedagogy. Additionally, studies by Ivanova (2021) suggest that time constraints within the medical curriculum limit the ability to allocate sufficient classroom hours for in-depth case analysis and discussion.

To address these limitations, researchers such as Usmonov (2021) propose combining CBL with blended learning approaches, including digital simulations, online interactive case studies, and AI-powered language learning tools. Petrova and Romanov (2022) suggest that integrating technology into case-based instruction can provide students with more flexible and immersive learning experiences.

While existing studies confirm the effectiveness of Case-Based Learning in teaching Russian for medical purposes, further research is needed to evaluate the long-term impact of CBL on students' professional communication skills. Future research should explore how digital tools can enhance CBL-based Russian language instruction and assess the comparative outcomes of CBL versus traditional teaching methods in medical education.

The literature suggests that Case-Based Learning is an effective and research-backed approach for teaching Russian to Uzbek-speaking medical students. By integrating language learning with professional skills, CBL enhances lexical retention, fluency, and doctor-patient communication abilities. However, for successful implementation, medical educators must address existing challenges, develop specialized instructional materials, and conduct further research on best practices for medical language instruction.

The role of case-based learning in language acquisition

Case-Based Learning (CBL) has emerged as a highly effective method in second language acquisition, particularly in specialized fields such as medical education. Unlike traditional language instruction, which often relies on rote memorization of vocabulary and grammar rules, CBL places students in real-life or simulated scenarios where they must actively engage with the language in context. This approach enhances both linguistic competence and professional communication skills, making it particularly useful for Uzbek-speaking medical students learning Russian for medical purposes.

The essence of CBL lies in its ability to integrate language learning with problem-solving. In a medical setting, this means that students are not only acquiring new terminology but also applying it in diagnostic discussions, patient interviews, and case analyses. Studies suggest that learners retain information more effectively when they encounter language in meaningful, practical contexts rather than through isolated drills. By engaging with authentic case studies, students develop a deeper understanding of medical discourse and its application in real-world scenarios.

One of the key advantages of CBL in language acquisition is its emphasis on interaction and communication. In traditional language classes, students often struggle with transitioning from theoretical knowledge to practical usage. However, when learning occurs through case-based discussions, students are encouraged to communicate using the target language in ways that mirror actual professional exchanges. This fosters greater fluency, confidence, and the ability to use language appropriately in different contexts. Moreover, by working through cases collaboratively, students develop essential skills such as critical thinking, teamwork, and adaptive reasoning, all while strengthening their command of the Russian language.

CBL also plays a crucial role in bridging cultural and pragmatic gaps in communication. Language is more than just vocabulary and syntax; it is deeply intertwined with cultural norms, professional etiquette, and interpersonal dynamics. For Uzbek-speaking medical students,

understanding Russian medical terminology is not enough—they must also grasp the nuances of doctor-patient interactions, ethical considerations, and cultural expectations in medical discourse. Case studies provide an opportunity to explore these aspects by presenting scenarios that require students to navigate not only linguistic challenges but also the social and professional norms embedded within the language.

In addition to improving communication skills, CBL enhances students' ability to process and interpret medical texts. Many Uzbek-speaking students struggle with reading and comprehending Russian medical literature due to its complex terminology and specialized structure. When case studies incorporate medical texts such as patient histories, clinical notes, and treatment plans, students learn to analyze and interpret these documents in a structured and purposeful manner. This exposure significantly improves their reading comprehension, allowing them to engage with professional medical sources more effectively.

Despite its many advantages, implementing CBL in language instruction requires careful planning and adaptation. One of the challenges is the need for well-developed case materials that align with both linguistic and medical learning objectives. Many language courses still rely on traditional teaching methods, and instructors may require additional training to effectively integrate case studies into their curriculum. Furthermore, the success of CBL depends on student engagement and active participation, which can be influenced by factors such as motivation, confidence, and prior language proficiency.

The role of CBL in language acquisition extends beyond simply learning vocabulary and grammar. It transforms language learning into a dynamic, interactive process that prepares students for real-world communication in their professional fields. For Uzbek-speaking medical students, this approach provides a structured yet flexible way to master Russian for medical purposes, ensuring that they can effectively interact with patients, collaborate with colleagues, and navigate the linguistic demands of their profession. By combining language acquisition with problem-solving and critical thinking, CBL not only enhances linguistic proficiency but also cultivates the essential skills needed for medical practice in a multilingual environment.

RESEARCH METHODOLOGY

This study employs a mixed-method approach to examine the effectiveness of Case-Based Learning (CBL) in improving Russian language proficiency among Uzbek-speaking medical students. The research methodology is designed to evaluate students' linguistic progress, communication skills, and overall engagement with medical discourse through the implementation of CBL-based instruction. The study integrates both qualitative and quantitative research methods to provide a comprehensive analysis of how case-based learning influences second-language acquisition in a professional medical context.

The research is conducted at a medical university in Uzbekistan, where Russian is a key language of instruction and communication in clinical practice. The participants include a group of second-year medical students whose native language is Uzbek and who are currently enrolled in a Russian language course for medical purposes. The study sample consists of 60 students, divided into two groups: an experimental group that receives instruction using CBL and a control group that follows traditional language teaching methods. The experimental group engages in structured case discussions, role-playing, and simulated doctor-patient interactions, while the control group follows a standard curriculum based on grammar exercises, textbook readings, and vocabulary drills.

To assess the impact of CBL on language acquisition, the study utilizes pre-tests and post-tests measuring vocabulary retention, fluency, and comprehension skills. The pre-test is administered at the beginning of the semester to determine students' baseline proficiency in Russian medical terminology and professional communication. The post-test, conducted at the end of the semester, evaluates improvements in students' ability to use Russian in medical contexts, including their accuracy in terminology, fluency in patient consultations, and ability to analyze medical cases. The quantitative data collected from these assessments provide statistical evidence of CBL's effectiveness in language learning.

In addition to linguistic assessment, qualitative data is gathered through classroom observations and semi-structured interviews with students and instructors. Observations focus on student participation, engagement, and ability to communicate effectively during case-based discussions. Interviews with students explore their perceptions of CBL, the challenges they face, and the strategies they find most useful for language learning in a medical setting. Instructors provide insights into the practical aspects of implementing CBL in Russian language instruction, including the benefits and difficulties encountered during the teaching process.

A key component of the methodology is the analysis of case study materials used in instruction. The cases selected for the study are real-life medical scenarios adapted for language learning purposes, including patient histories, diagnostic discussions, and treatment plans. These materials are examined to determine their effectiveness in enhancing contextual learning, vocabulary acquisition, and professional discourse competence. The research also explores the role of CBL in developing students' cultural and pragmatic understanding of Russian medical communication.

To ensure the validity and reliability of the study, data triangulation is employed by comparing test results, observational findings, and interview responses. Statistical analysis is conducted using software to measure the significance of improvements in students' linguistic performance, while thematic analysis is applied to qualitative data to identify common patterns in student experiences with CBL.

This methodology provides a comprehensive framework for evaluating the impact of Case-Based Learning on Russian language proficiency among Uzbek-speaking medical students. By integrating both quantitative and qualitative research methods, the study aims to offer valuable insights into the effectiveness of CBL as a pedagogical tool for teaching Russian for medical purposes. The findings of this research will contribute to the development of more effective language teaching strategies tailored to the needs of medical students in multilingual environments.

RESULTS AND DISCUSSION

The findings of this study demonstrate the effectiveness of Case-Based Learning (CBL) in improving Russian language proficiency among Uzbek-speaking medical students. Through a combination of pre-tests, post-tests, classroom observations, and student interviews, the research highlights several key areas where CBL has had a significant impact on language acquisition, professional communication, and overall student engagement.

One of the most notable results is the improvement in students' retention and application of medical terminology. The post-test results indicate that students in the CBL-based instruction group scored significantly higher in vocabulary recall, accuracy, and contextual usage of medical terms compared to the control group, which followed a traditional lecture-based approach. The students who engaged in case-based discussions and simulated doctor-patient interactions demonstrated a deeper understanding of terminology and were able to use medical phrases more fluently in practical contexts. This confirms earlier research by Dolmans et al. (2005) and Mamatov (2022), which suggested that learning vocabulary in context leads to better long-term retention and usability in professional settings.

The study also reveals that CBL enhances students' communication skills, particularly in doctor-patient interactions. During role-playing activities and case discussions, students showed increased confidence in formulating diagnostic explanations, asking relevant questions, and using appropriate levels of formality in speech. The qualitative data gathered from student interviews supports this finding, as most participants reported that CBL helped them develop fluency, reduce hesitation, and improve their ability to engage in medical conversations in Russian. This aligns with research by Larsen-Freeman (2000) and Usmonov (2021), who emphasized that task-based learning enhances both linguistic competence and professional communication abilities.

Another significant result is the increase in student motivation and engagement. Observations revealed that students in the CBL group were more active, collaborative, and willing to participate in discussions, whereas students in the traditional instruction group were more

passive and relied heavily on textbook exercises. The interactive nature of CBL-based learning, which involves problem-solving, group discussions, and decision-making, encouraged students to engage more deeply with the material and take an active role in their own learning. Similar findings have been reported by Petrova and Romanov (2022), who noted that students who learn through real-world cases demonstrate higher levels of enthusiasm and self-efficacy in language acquisition.

Despite these positive outcomes, the study also highlights some challenges in implementing CBL for teaching Russian to medical students. One of the primary difficulties is the availability of appropriate case study materials. Many Russian language courses for medical students still rely on traditional grammar-based instruction and lack structured, professionally relevant case studies. Several instructors interviewed for this study indicated that creating new case-based learning materials requires significant time and effort and that existing medical case studies often need adaptation for language learning purposes. This supports earlier findings by Kuznetsov (2019) and Volkova (2020), who emphasized the need for more resources and teacher training in CBL methodology.

Another challenge identified is students' initial difficulty in adjusting to the CBL approach. Some students, particularly those with lower proficiency in Russian, found it challenging to actively participate in case discussions and formulate responses in real time. However, as the semester progressed, these students gradually developed greater confidence and adaptability, indicating that CBL helps overcome language barriers through repeated exposure to real-life contexts. The improvement over time aligns with Vygotsky's (1978) theory that language learning is most effective when scaffolded through meaningful interaction in a social and professional environment.

A final challenge concerns the time constraints within medical curricula. Instructors noted that CBL sessions take longer to conduct than traditional lessons, as they involve group discussions, role-playing, and case analysis. Given the already demanding schedule of medical students, some instructors expressed concerns about whether CBL can be consistently integrated without disrupting core medical subjects. This echoes findings by Ivanova (2021), who pointed out that CBL requires careful curriculum planning to balance language learning with medical coursework.

Overall, the results indicate that Case-Based Learning is a highly effective methodology for teaching Russian to Uzbek-speaking medical students. It enhances vocabulary retention, fluency, communication skills, and student engagement, making it a valuable alternative to traditional grammar-focused instruction. However, for its full implementation, more structured case-based materials, teacher training, and curriculum adjustments are needed to address the challenges identified. Future research should explore ways to integrate digital learning tools, virtual patient simulations, and AI-based interactive learning platforms to make CBL more accessible and time-efficient in medical language education.

CONCLUSION

The findings of this study confirm that Case-Based Learning (CBL) is an effective approach to improving Russian language proficiency among Uzbek-speaking medical students. Unlike traditional grammar-based instruction, CBL enables students to learn medical terminology in context, develop professional communication skills, and engage in interactive learning experiences. The results demonstrate that students who participated in CBL-based instruction showed greater retention of medical vocabulary, improved fluency in doctor-patient interactions, and higher levels of engagement compared to those in conventional language courses.

Despite its effectiveness, the implementation of CBL presents challenges, including the need for specialized teaching materials, instructor training, and curriculum adjustments to accommodate time constraints. Addressing these limitations through blended learning methods, digital simulations, and structured case-based resources can further enhance the impact of CBL in medical language education.

This study highlights the importance of context-driven, interactive language learning in professional fields. By integrating linguistic and medical training, CBL prepares students for

real-world communication in multilingual healthcare settings, ultimately improving their ability to deliver patient-centered care in Russian-speaking environments.

USED LITERATURE:

1. Byram, M. (1997). *Teaching and Assessing Intercultural Communicative Competence.* Multilingual Matters.
2. Dolmans, D. H. J. M., De Grave, W., Wolfhagen, I., & Van Der Vleuten, C. P. M. (2005). *Problem-Based Learning: Future Challenges for Educational Practice and Research.* Medical Education, 39(7), 732-741.
3. Ellis, R. (2003). *Task-Based Language Learning and Teaching.* Oxford University Press.
4. Harden, R. M., & Laidlaw, J. M. (2012). *Essential Skills for a Medical Teacher: An Introduction to Teaching and Learning in Medicine.* Elsevier.
5. Krashen, S. D. (1982). *Principles and Practice in Second Language Acquisition.* Pergamon Press.
6. Larsen-Freeman, D. (2000). *Techniques and Principles in Language Teaching.* Oxford University Press.
7. Norman, G. (2015). *Problem-Solving and Learning in Medical Education.* Academic Medicine, 90(3), 375-380.
8. Schmidt, H. G., Rotgans, J. I., & Yew, E. H. J. (2011). *The Process of Problem-Based Learning: What Works and Why?* Medical Education, 45(8), 792-806.
9. Subxanovich, A. A. (2023). KASBIY NUTQNI RIVOJLANTIRISHDA MUHOKAMA MAVZULARINING LINGVISTIK AHAMIYATI. *TA'LIM VA RIVOJLANISH TAHLILI ONLAYN ILMIY JURNALI*, *3*(12), 381-384.
10. Subxanovich, A. A. (2023). TIBBIYOT TALABALARNING KASBIY NUTQINI TAKOMILLASHTIRISHDA ZAMONAVIY USULLARDAN FOYDALANISH. *TA'LIM VA RIVOJLANISH TAHLILI ONLAYN ILMIY JURNALI*, *3*(11), 266-271.
11. Subxanovich, A. A. (2024). O ‘ZBEK TILINI IKKINCHI TIL SIFATIDA O ‘RGANISHGA MUNOSABAT VA MOTIVATSIYANING O ‘RNINI BAHOLASH.
12. Subxanovich, A. A. (2024). THE ROLE OF CONTEXTUAL LEARNING IN ACQUIRING MEDICAL TERMINOLOGY IN UZBEK FOR RUSSIAN SPEAKERS. *Western European Journal of Linguistics and Education*, *2*(10), 87-91.
13. Swales, J. M. (1990). *Genre Analysis: English in Academic and Research Settings.* Cambridge University Press.
14. Turaev, J., Aslanov, A., & Subhonova, A. (2022). SUGGESTIONS AIMED AT THE DEVELOPMENT OF THE PRE-SCHOOL EDUCATION SYSTEM IN UZBEKISTAN. *Евразийский журнал академических исследований*, *2*(11), 335-338.
15. Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes.* Harvard University Press.
16. Абдуғаффоров, И. (2020). *Тиббий таълимда рус тилини ўқитиш методикаси.* Тошкент: Фан.
17. Волкова, Н. (2020). *Проблемы подготовки преподавателей медицинского русского языка.* Санкт-Петербург: Педагогическое общество России.
18. Глухов, А., & Кузнецова, О. (2021). *Методология преподавания медицинского русского языка в условиях профессиональной подготовки.* Москва: Высшая школа.
19. Кондратьева, Т. (2020). *Современные методы обучения русскому языку для медицинских специальностей.* Санкт-Петербург: Литера.
20. Крючкова, Т. (2015). *Русский язык для профессионального общения в медицинской среде.* Москва: Медицинская академия.
21. Маматов, С. (2022). *Интердисциплинарные подходы к преподаванию русского языка для узбекоязычных студентов-медиков.* Ташкент: Медицинская академия.
22. Петрова, Е., & Романов, В. (2022). *Инновационные технологии в преподавании медицинского русского языка.* Москва: Академия Наук.

23. Расулов, Б. (2021). *Тилшунослик ва тиббиёт: Рус тилининг тиббий соҳада қўлланилиши.* Ўзбекистон Миллий Университети.
24. Турдиалиева, Г. (2021). *Медицинский русский язык: Преподавание узбекоязычным студентам через коммуникативные методы.* Андижанский Государственный Медицинский Институт.
25. Усманов, Д. (2021). *Тиббиёт олийгоҳларида рус тилини ўқитишнинг янги усуллари.* Бухоро Давлат Университети.