

Interdisciplinary Aspect Of Teaching Medical English In The Context Of Globalized Education

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Abstract: The article examines the theoretical and methodological foundations of an interdisciplinary approach to teaching medical English in the context of globalized education. It is emphasized that English in the medical field acts not only as a means of communication, but also as an integrative tool linking medicine, pharmacology, anatomy, biology, psychology and information technology. Modern trends in higher education require training specialists who are able to think comprehensively, use knowledge from different fields and apply it in their professional activities. The methodological basis of the study includes an analytical review of scientific literature, a comparative analysis of the curricula of medical universities in different countries, as well as modeling of pedagogical situations reflecting real interdisciplinary tasks. The use of authentic materials, clinical cases and project assignments made it possible to identify the specifics of integrating medical English with other disciplines.

Keywords: Medical English; interdisciplinary approach; globalized education; professional training; knowledge integration; critical thinking; clinical cases; educational technologies.

Introduction: Modern medical education is developing in the context of deep integration of sciences and globalization of the educational space. Medical English occupies a special place in this system: it is becoming not only a tool for professional communication, but also a kind of mediator between different areas of knowledge. Today, a doctor or researcher cannot limit himself to narrow disciplinary knowledge. To fully participate in scientific and clinical activities, it is necessary to master the terminology and methodology of related disciplines, skillfully integrating them into one's own professional practice.

Globalized education dictates new requirements: students must be ready for interdisciplinary cooperation, including in English. Medicine is closely related to pharmacology, biochemistry, molecular biology, anatomy, psychology, medical informatics and even engineering. Each of these elements is reflected in medical English discourse and requires inclusion in the educational process. Thus, the interdisciplinary approach is becoming not optional, but a necessary condition for successful mastering of medical English. The peculiarity of the interdisciplinary dimension is that it allows students to perceive English not only as an object of study, but also as a working tool for solving

complex problems. For example, when analyzing clinical cases in English, students use knowledge of anatomy and pharmacology; when writing a scientific article, they need elements of biostatistics; when preparing a presentation, they need knowledge of medical informatics and multimedia. Such a synthesis of knowledge forms critical thinking, analytical skills and readiness for research activities.

Modern research in the field of pedagogy emphasizes that interdisciplinarity in teaching foreign languages contributes not only to the expansion of vocabulary and improvement of communication skills, but also to the formation of a deeper professional identity. In the medical context, this is especially important: a doctor of the 21st century must be ready to work in a multidisciplinary team, where decisions are made jointly by representatives of different fields of knowledge, and it is the English language that provides a universal platform for such interaction. The relevance of the topic is determined by the fact that existing programs in medical English in most cases retain a focus on the acquisition of terminology and basic clinical scenarios, leaving the interdisciplinary aspect on the periphery. This reduces the effectiveness of training specialists who are subsequently faced with

the need to work in the context of interdisciplinary projects and international research. Therefore, a theoretical and methodological substantiation of the interdisciplinary aspect and the development of didactic models for its integration into the learning process are required. This article aims to reveal the essence of the interdisciplinary aspect of teaching medical English, identify its key areas and analyze the possibilities of application in the context of globalized education.

Methods

To achieve the stated goal, the study used a comprehensive methodological approach, including several complementary methods.

First, a theoretical and analytical review of modern literature on the problems of interdisciplinary education, methods of teaching foreign languages of professional orientation and the organization of training in medical universities was conducted. Particular attention was paid to works devoted to the synthesis of medical, linguistic and pedagogical knowledge, as well as studies examining language as a tool for integrating scientific disciplines.

Second, the method of comparative pedagogical analysis of the curricula of medical universities in various countries was used. The programs were analyzed in which the courses "Medical English" are integrated with the disciplines of anatomy, pharmacology, biochemistry and medical informatics. This made it possible to identify the differences and similarities in approaches to the organization of interdisciplinary training.

Third, the method of modeling pedagogical situations based on interdisciplinary cases was used. They considered clinical cases that required students not only to have command of English medical terminology, but also knowledge of anatomy, pharmacology, biostatistics and psychology. The scenarios included preparing presentations, writing mini-articles and conducting role-playing games, which allowed us to track how students use English to solve complex problems.

Additionally, content analysis of authentic materials (scientific articles, clinical protocols, multimedia resources) used in the educational process was used. This method made it possible to identify terminology systems of different disciplines that intersect in medical discourse and determine their role in the formation of students' professional competence.

Thus, the combination of theoretical, comparative and practice-oriented approaches provided a comprehensive consideration of the interdisciplinary

aspect of teaching medical English and made it possible to identify its specificity in the context of globalized education.

Results

The analysis of curricula, authentic materials and teaching practices allowed us to identify three key areas of implementation of the interdisciplinary approach to teaching medical English: linguistic and terminological, cognitive and practice-oriented.

1. Linguistic and terminological direction

The study of authentic materials showed that the terminology of medical English is closely related to the disciplines of anatomy, physiology, biochemistry, pharmacology and medical informatics. Including texts in the training that reflect interdisciplinary connections helps to expand students' vocabulary and develop the ability to work with texts of different profiles. For example, when analyzing articles on cardiology, students encounter not only clinical vocabulary, but also terms of pharmacokinetics and molecular biology.

2. Cognitive direction

The interdisciplinary approach develops in students the ability to perceive English as a tool for analyzing and interpreting scientific information. Working with English-language publications from various fields of medicine helps develop critical thinking, research skills, and the ability to compare data from different disciplines. During the simulation of educational situations, students demonstrated the ability not only to correctly use professional vocabulary, but also to establish cause-and-effect relationships between clinical symptoms and biochemical parameters, anatomical structures, and physiological processes.

3. Practice-oriented direction

The interdisciplinary approach is most clearly manifested in practical assignments. Role-playing games and simulations of clinical cases in English allowed students to combine knowledge from different fields: use anatomical terminology when describing pathology, pharmacological terms when explaining the purpose of drugs, elements of psychology when simulating communication with a patient. Project assignments (preparing posters, presentations, mini-studies) showed that students learn the material better when working with integrated sources that include medical, statistical, and technological data. Final observations

The results of the study showed that an interdisciplinary approach to teaching medical English contributes to:

the formation of a broader and more flexible professional vocabulary;

the development of analytical and critical thinking;
the formation of research competence;
increasing students' readiness to work in multidisciplinary teams and international projects.

Thus, interdisciplinarity manifests itself not only as an auxiliary element of training, but as a central strategy that determines the effectiveness of training future specialists.

Discussion

The obtained results confirm that the interdisciplinary approach to teaching medical English is not just an additional component, but a fundamental condition for high-quality training of students. Its implementation ensures not only mastery of terminology and basic communication skills, but also the formation of a comprehensive professional competence, which is necessary for working in a globalized academic and clinical environment.

Comparison with modern research in the field of pedagogy and methods of teaching foreign languages shows that the integration of various disciplines enhances the cognitive effect of learning. This conclusion is consistent with the principles of Content and Language Integrated Learning (CLIL), according to which a foreign language becomes a means of mastering professional content. In the case of medical English, this is manifested in the combination of clinical terminology with concepts from biochemistry, pharmacology, statistics and medical informatics. Such a synthesis of knowledge allows students to use English as a universal tool for professional activity.

Interdisciplinarity also contributes to the development of research thinking. In the context of globalized education, where students are actively involved in international projects and publication activities, proficiency in English becomes inextricably linked with the ability to analyze data from different fields of science. In this context, Medical English is no longer just a means of communication — it is becoming the basis for scientific interaction and professional integration.

However, the results of the analysis revealed a number of difficulties that hinder the implementation of an interdisciplinary approach. Among them:

insufficient training of teachers, who often have deep knowledge of the language, but do not have a command of related medical disciplines;

limited teaching and methodological materials focused specifically on the integration of Medical English with other fields of knowledge;

lack of uniform standards governing the inclusion of an interdisciplinary component in the curricula of medical

universities;

difficulty in assessing the development of interdisciplinary competence, since traditional language exams do not reflect the ability to work at the intersection of sciences.

Thus, the discussion of the results allows us to conclude that institutional and methodological solutions need to be developed. This includes the creation of special modules that combine English with clinical disciplines; the introduction of project-based learning focused on interdisciplinary tasks; and the organization of advanced training programs for teachers who are able to conduct classes at the intersection of language, medicine, and pedagogy. In general, the interdisciplinary aspect of teaching medical English should be considered as a strategic direction for the modernization of the educational process. Its implementation ensures the training of specialists who are ready for research, clinical, and communicative activities in the global medical space.

Conclusion

The conducted study showed that the interdisciplinary aspect of teaching medical English in the context of globalized education is a strategically important area for modernizing the system of training future doctors and researchers. In the modern world, where medicine is closely integrated with biotechnology, pharmacology, molecular biology, psychology and information technology, proficiency in English is becoming inextricably linked with interdisciplinary thinking.

The analysis allowed us to identify three key areas for implementing the interdisciplinary approach:

Linguistic and terminological — expanding vocabulary by integrating terms from related sciences, which forms students' flexibility in professional communication and the ability to work with multi-level sources of information.

Cognitive — using English as a tool for critical thinking and analyzing data from different areas of medical knowledge, which develops research and analytical competencies.

Practice-oriented — the use of interdisciplinary assignments, cases and project activities that allow students to master the skills of real interaction in multidisciplinary teams. The study confirmed that the interdisciplinary approach not only facilitates the acquisition of medical terminology, but also develops students' ability to think systematically, which is extremely important for working in the context of globalized healthcare. At the same time, interdisciplinarity in teaching Medical English is not an

additional element, but a central methodological guideline that determines the effectiveness of professional training.

At the same time, barriers to the implementation of an interdisciplinary approach were also identified: limited educational and methodological base, insufficient training of teachers to conduct integrated courses, lack of unified standards and tools for assessing the interdisciplinary competence of students. These problems indicate the need to develop institutional strategies and methodological solutions aimed at the systematic inclusion of the interdisciplinary aspect in the educational process of medical universities. Prospects for further research are related to the creation of complex educational models combining Medical English courses with the disciplines of anatomy, pharmacology, medical statistics and informatics; with the development of digital educational resources that contribute to the formation of integrated competencies; as well as with the formation of international criteria for assessing the interdisciplinary readiness of students. Thus, the interdisciplinary aspect of teaching Medical English is an integral condition for the training of a new generation of specialists capable of effective professional activity in the context of globalized education and interdisciplinary medicine of the future.

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