

## FORMATION OF PROFESSIONAL FOREIGN LANGUAGE COMMUNICATIVE COMPETENCE OF MEDICAL STUDENTS BY MEANS OF REVERSE TECHNOLOGY

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**Abstract.** *The article is devoted to the theoretical substantiation and methodological design of the process of developing foreign language competence of medical university students based on the reversible learning technology. The relevance of the formation of professionally oriented foreign language proficiency in the context of digitalization of medical education and the growing importance of international clinical protocols, English-language scientific sources and interprofessional communication is shown. The paper reveals the essence and didactic possibilities of reversible technology based on the redistribution of classroom and extracurricular activities of students, the transfer of theoretical material to an electronic environment and the intensification of practical and communicative interaction in the classroom.*

*The necessity of integrating authentic medical discourse into the structure of foreign language training is substantiated. A methodological model for the development of foreign language competence is presented, which includes targeted, meaningful, organizational, technological, and evaluative-effective components. Examples of tasks focused on the development of receptive and productive skills, as well as the mechanisms of reflexive and independent work of students are considered.*

**Key words:** *reverse technology; inverted learning; medical education; foreign language competence; professionally oriented foreign language; ESP in medicine; digital educational environment; clinical discourse; communicative approach; independent work of students; interactive teaching methods.*

The development of foreign language competence of medical students in the context of the digital transformation of higher education is considered today as one of the key areas of modernization of medical education.

A future doctor is expected not only to possess professional knowledge and clinical thinking, but also to be able to freely navigate the English-language medical discourse, work with international protocols, scientific articles, communicate with colleagues and patients in a foreign language.

The researchers emphasize that the professional foreign-language competence of a medical student is an integrative personality quality that includes linguistic, communicative, cognitive and professional components and ensures readiness for foreign-language professional interaction in the field of medicine [<sup>1</sup>].

<sup>1</sup> Zhdanova D.E. Application of reverse learning technology in foreign language classes during the coronavirus pandemic // Regional education of the 21st century. 2021. № 2 p. 163-173

The formation of such competence in the traditional lecture-practical model faces a number of limitations: the lack of classroom time for practicing oral communication, the predominance of reproductive tasks, and the low degree of independence of students.

In these circumstances, innovative learning models based on rethinking the relationship between classroom and extracurricular activities are of particular interest, including reversible technology (essentially a variant of "flipped classroom") [2].

In a number of works, reversible technology is interpreted as an educational technology that involves a change in the importance and ratio of classroom and extracurricular activities with the priority of the electronic (remote) component: theoretical material is introduced into extracurricular independent work, and classroom time is used primarily to solve practice-oriented tasks, discussions, projects and reflection [3].

At the same time, it is emphasized that reversible technology organically combines with a competence-based approach and contributes to the growth of academic autonomy, the development of critical thinking and communicative activity of students, including in the field of a foreign language [4].

The experience of introducing the "inverted classroom" model in medical education shows its effectiveness in comparison with traditional lecture forms.: Students' motivation, engagement, learning quality, and willingness to apply knowledge in clinical situations increase.

Foreign studies demonstrate that flipped classroom contributes not only to better assimilation of theoretical content, but also to the development of clinical thinking skills, including when dealing with urgent conditions and complex cases. In the field of teaching English for special purposes (ESP), it has been shown that the inverted classroom model has a positive effect on academic performance, self-efficacy, and activity in the learning process, especially among students of non-linguistic specialties [5].

In relation to the foreign language training of medical students, reversible technology allows for a new way to organize the movement from receptive learning of the material to productive professional communication. Outside the classroom, the student learns about lexical, grammatical and subject content (anatomy, physiology, clinical cases) through video lectures, podcasts, interactive presentations, digital simulations, fragments of medical series and documentaries [6].

The audience frees up time for communicative activities: doctor-patient role-playing situations, clinical case studies, teamwork on projects, training oral presentation skills and error analysis.

It is advisable to build the development of foreign language competence of medical students based on reversible technology as an integrated methodological model, including

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<sup>2</sup> Котов Г.С. Реверсивная технология в системе современного профессионального образования: дисс. ... д-ра пед. наук. 2023

<sup>3</sup> Галимзянова И.И. Специфика формирования иноязычной коммуникативной компетентности будущих врачей // Вестник ЧелГУ. 2020.

<sup>4</sup> Кулакова Е.Н., Кондратьева И.В. «Перевернутое обучение» в медицинском образовании // Современные проблемы науки и образования. 2015

<sup>5</sup> Hsiao I.C.V. The flipped classroom approach in an English for specific purposes course // Journal of Research on Technology in Education. 2023

<sup>6</sup> Phillips J. The flipped classroom in medical education: a new standard? // J Med Internet Res. 2022

targeted, meaningful, organizational, technological, and evaluative-effective components. At the target level, the task of forming the professional foreign language communicative competence of a future doctor is formulated, including cognitive-linguistic, discursive-communicative, socio-cultural and reflexive components.

It is essential for a medical university that the content of foreign language training should be based on authentic medical discourse (medical histories, protocols, scientific articles, clinical recommendations), and not on general everyday topics<sup>[7]</sup>.

The meaningful component of the model in the logic of reversible technology can be organized into modules ("Body Systems", "History Taking", "Emergency Care", "Surgery", "Pediatrics", etc.), each of which includes three blocks: 1) theoretical and informational (video lectures, glossaries, reference notes); 2) training and communicative (language and speech exercises, modeling of professional situations); 3) reflexive and evaluative (self-assessment, mutual assessment, portfolio, mini-essay on one's own progress). At the same time, the key elements of the first block are transferred to the electronic environment (LMS, MOOC platforms, corporate portals of the university), and the second and third blocks become the core of the classroom<sup>[8]</sup>.

The organizational and technological component of the reversible model of foreign language training assumes a clear structuring of the educational cycle: the stage before the lesson (pre-class), the stage during the lesson (in-class) and the stage after the lesson (post-class). At the pre-class stage, the student gets access to a digital package of materials: videos explaining key terminology and grammatical structures, interactive comprehension tasks, online self-control tests, and instructions for preparing to discuss a clinical case.

At the in-class stage, the teacher organizes intensive communicative interaction: analysis of pre-assigned texts and videos in the format of a problem discussion, role-playing games (patient admission, interprofessional discussion), student micro-presentations and team-based clinical problem solving in English<sup>[6]</sup>.

At the post-class stage, the student consolidates the material through writing short reports, reflective diaries, maintaining a glossary, and additional work with digital resources (for example, medical podcasts or English-language learning platforms).

A special role in reverse engineering belongs to a foreign language teacher, who acts not only as a source of knowledge, but also as a moderator, tutor, and designer of the educational environment.

It is noted that the successful implementation of the reverse model requires high methodological and digital competence of the teacher: the ability to design multimedia content, design learning tasks of varying complexity, maintain feedback in online format and manage group forms of work in the classroom<sup>[9]</sup>.

<sup>7</sup> Anvarov, A. (2025). PEDAGOGICAL SIGNIFICANCE OF A COMMUNICATIVE APPROACH IN RUSSIAN LANGUAGE LESSONS. *AMERICAN JOURNAL OF EDUCATION AND LEARNING*, 3(10), 220-230.

<sup>8</sup> Антонова Т.В. Потенциал реверсивной технологии в преподавании иностранного языка в неязыковом вузе // Вестник Костромского государственного университета. Серия: Педагогика. Психология. Социокинетика. 2020. Т. 26. № 1. С. 187–191

<sup>9</sup> Anvarov, A. (2025). THE ROLE OF REVERSIBLE EDUCATION IN THE DEVELOPMENT OF PROFESSIONAL EDUCATIONAL COMPETENCIES OF STUDENTS OF MEDICAL EDUCATION. *Журнал академических исследований нового Узбекистана*, 2(6, 2-qism), 135-138.

An important methodological issue is the selection of types of assignments directly aimed at developing the foreign language competence of medical students. At the stage of independent work, it is justified to use tasks to develop receptive skills and basic terminological training: watching short videos about the structure of organs and systems, listening to fragments of medical consultations, performing exercises to correlate terms and definitions, annotating simple clinical texts.

In the audience, the focus shifts to productive speech activities: working out standard speech clichés when collecting complaints and medical history, modeling "doctor– patient" and "doctor – doctor" dialogues, playing out cases based on the type of USMLE tasks, holding mini-conferences based on the results of the analysis of English-language sources. Such an organization makes it possible to implement the principle of "from information to action": the student does not just reproduce the lecture material, but uses it in conditions of imitation of real professional communication.

Empirical research in medical education confirms that the use of inverted learning leads to an improvement in the quality of learning of theoretical material, improved test results and increased student satisfaction with the learning process compared to traditional lectures.

Individual studies performed on samples of medical university students show that flipped classroom promotes the development of skills in analyzing clinical situations, teamwork, and independent information retrieval, which directly correlates with the development of professional foreign language competence based on working with authentic texts and interprofessional communication.

Russian studies on the methodology of teaching a foreign language in a non-linguistic university emphasize the potential of reverse technology specifically for the formation of communicative and professionally oriented foreign language competence: due to the transfer of the theoretical component to the online environment, the density of speech practice in the audience increases, it becomes possible to differentiate assignments according to the level of students' preparedness, and to use project and research forms of work more widely [<sup>10</sup>].

This is especially important for medical universities, as it allows integrating foreign language teaching with the development of specialized disciplines, using elements of the CLIL approach and building interdisciplinary modules [<sup>11</sup>].

Thus, the development of foreign language competence of medical students based on reversible technology seems to be a promising area of methodological search. This technology allows you to:

- to implement a competence-based approach by shifting the focus from knowledge transfer to the organization of active and responsible learning activities of the students themselves;
- create conditions for in-depth work with authentic medical discourse and modeling of real professional situations in a foreign language;
- to develop academic autonomy, self-organization and reflection skills, which are critically important for a future doctor in the context of continuous professional development.;

<sup>10</sup> Hsiao I.C.V. The flipped classroom approach in an English for specific purposes course // Journal of Research on Technology in Education. 2023

<sup>11</sup> Анваров, А. (2022). Современные требования преподавателям иностранных языков по повышению профессиональных умений и личностных качеств. *Общество и инновации*, 3(2/S), 300-303.

– effectively use digital educational resources by combining face-to-face and distance learning formats.

Promising areas of further research include the development and testing of specific models of the reverse course "Foreign language in Medicine" for various specializations (pediatrics, surgery, dentistry, etc.), assessing the dynamics of components of foreign language competence in reverse and traditional models, as well as studying the impact of reverse technology on the formation of a future doctor's professional identity in an intercultural context.

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