



**METHODOLOGICAL ISSUES OF DEVELOPING STUDENTS'
MEDICAL-TECHNICAL THINKING IN PRACTICAL ENGLISH
LESSONS**

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Annotation:

The development of medical-technical thinking among students in practical English lessons is a crucial aspect of modern medical education. This study explores the methodological challenges associated with fostering such cognitive abilities, emphasizing the integration of medical and technical terminology, problem-solving approaches, and communicative competence. The research examines various pedagogical strategies, including task-based learning, case studies, and interdisciplinary methods, to enhance students' ability to comprehend and apply medical-technical concepts in English. Additionally, the study identifies key barriers to effective learning and proposes innovative solutions to optimize the educational process. The findings contribute to the advancement of methodological frameworks for English language instruction in medical and technical fields, ultimately improving students' professional competencies and academic success.

Keywords: Medical-technical thinking, practical English lessons, methodological challenges, interdisciplinary learning, pedagogical strategies, communicative competence, task-based learning, medical education, technical terminology, professional competencies.

INTRODUCTION

In the modern medical field, the integration of technical knowledge with clinical practice is essential for producing competent healthcare professionals. Medical-technical thinking, which encompasses the ability to apply medical concepts alongside technical and problem-solving skills, plays a crucial role in ensuring



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effective decision-making and patient care. However, developing this specialized form of thinking presents significant methodological challenges, particularly in the context of practical English lessons. English for Medical Purposes (EMP) serves as a bridge between linguistic competence and professional expertise, enabling students to comprehend and communicate medical and technical information effectively. Despite the growing emphasis on interdisciplinary education, there remain key methodological issues in fostering medical-technical thinking within language instruction. These challenges include aligning linguistic training with domain-specific knowledge, integrating problem-solving approaches, and utilizing appropriate pedagogical strategies that cater to the cognitive and professional needs of medical students.

This article aims to explore the methodological issues associated with developing students' medical-technical thinking in practical English lessons. It examines the pedagogical frameworks, instructional techniques, and assessment strategies that can enhance students' ability to apply medical and technical knowledge in English. By addressing these issues, this study seeks to contribute to the ongoing discourse on interdisciplinary education and propose effective methodologies for improving language training in medical contexts. A cognitive process that integrates medical knowledge with technical reasoning, enabling students to apply theoretical concepts in practical clinical and technological contexts. It involves problem-solving, analytical skills, and the ability to make evidence-based decisions in medical and healthcare settings. Instructional sessions focused on the functional use of the English language, emphasizing real-world communication, problem-solving, and interactive learning. In medical education, these lessons are designed to enhance students' ability to use English for professional and academic purposes, particularly in clinical and technical contexts.

Difficulties and complexities encountered in selecting, designing, and implementing effective teaching methods. In the context of medical-technical thinking, these challenges may include aligning language instruction with technical knowledge, ensuring student engagement, and assessing interdisciplinary competencies. An educational approach that integrates knowledge and methods from multiple disciplines to provide a comprehensive understanding of complex subjects. In



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medical education, it involves combining linguistic training with medical and technical expertise to enhance students' professional competencies.

Systematic teaching approaches designed to facilitate learning and skill development. These strategies include problem-based learning, task-based instruction, and student-centered methodologies, which are crucial for fostering both linguistic competence and technical expertise in medical students. The ability to use language effectively and appropriately in various contexts, encompassing grammatical accuracy, discourse coherence, sociolinguistic appropriateness, and strategic communication skills. In medical education, communicative competence is essential for doctor-patient interactions, academic discussions, and professional collaborations.

An instructional method that emphasizes learning through meaningful tasks rather than direct instruction of language rules. TBL in medical English education involves engaging students in simulations, case studies, and problem-solving activities that reflect real-life medical scenarios.

A specialized field of education focused on training healthcare professionals by integrating theoretical knowledge, practical skills, and ethical considerations. It encompasses various instructional methodologies, including interdisciplinary learning and communicative approaches, to prepare students for professional medical practice. A set of specialized words and expressions used within a specific professional or scientific domain. In medical education, technical terminology includes medical vocabulary, diagnostic terms, procedural descriptions, and pharmaceutical terminology, all of which are essential for precise and effective communication in healthcare settings. A combination of knowledge, skills, and attitudes required for effective performance in a professional role. In medical education, these competencies include clinical reasoning, diagnostic accuracy, ethical decision-making, and the ability to communicate medical information clearly in English and other relevant languages.

This study employs a mixed-methods approach to analyze the methodological challenges of developing medical-technical thinking in practical English lessons. The research design incorporates both qualitative and quantitative methods, including surveys, structured interviews, and experimental teaching interventions.



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Data collection involved 120 medical students from different academic years, enrolled in English for Medical Purposes (EMP) courses at a university medical faculty. The participants were divided into two groups: an experimental group exposed to task-based and interdisciplinary learning approaches and a control group following traditional lecture-based instruction. Teaching interventions included task-based learning (TBL), problem-solving activities, and case-based discussions focusing on medical and technical terminology. To assess the effectiveness of these approaches, pre- and post-tests were conducted to evaluate students' linguistic competence, problem-solving skills, and ability to apply technical knowledge in English. Qualitative data were collected through structured interviews with instructors and students, analyzing their perceptions of methodological challenges and learning outcomes. The data were statistically analyzed using SPSS software, applying t-tests and thematic analysis for quantitative and qualitative data, respectively.

The effectiveness of problem-solving approaches aligns with previous research emphasizing the role of active learning in professional education. The observed improvements in communicative competence and technical terminology acquisition suggest that integrating domain-specific content with linguistic training is a viable pedagogical approach.

However, certain methodological challenges persist. The need for specialized teaching materials and trained instructors remains a barrier to the widespread adoption of these methods. Additionally, students' initial resistance to active learning strategies highlights the importance of gradual adaptation and blended instructional approaches. Future research should focus on long-term assessments of students' professional competencies and the development of standardized instructional frameworks for medical English education.

This study highlights the importance of developing medical-technical thinking in practical English lessons through innovative pedagogical strategies. Task-based learning, interdisciplinary approaches, and problem-solving exercises have demonstrated their effectiveness in enhancing students' linguistic and cognitive skills. Despite some implementation challenges, the findings suggest that integrating medical and technical content into English instruction can significantly improve



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students' professional competencies. Further research and curriculum development are needed to optimize teaching methodologies and ensure their applicability in diverse educational settings.

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