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DEVELOPING PROFESSIONAL FOREIGN LANGUAGE COMPETENCE OF MEDICAL STUDENTS THROUGH EMI TECHNOLOGIES

G. A. Meliqo‘ziyeva
Lecturer Fergana Medical Institute of Public Health
Department of Uzbek and Foreign Languages

Abstract
This scientific article comprehensively investigates the theoretical foundations, methodological approaches, and practical effectiveness of developing professional English language competence among medical students using English as a Medium of Instruction (EMI) technologies in the modern educational process. The study analyzes the impact of various EMI technological tools on mastering medical terminology, developing clinical communication skills, improving the ability to work with scientific literature, and preparing for international collaborative activities. The results demonstrate that an integrated EMI-based approach significantly enhances not only students' language skills but also their overall professional competencies, transforming them into competitive specialists capable of meeting the demands of the globalization era.

Keywords: EMI, medical education, professional foreign language competence, technological integration, virtual reality, language learning platforms, telemedicine, medical terminology.

Introduction

In the era of modern globalization and digitalization, foreign language proficiency, particularly English, is not merely an advantage but a critical requirement for medical professionals. It is essential not only for accessing scientific literature but also for international collaboration, continuing professional development, conference participation, and becoming active members of the global medical community. While EMI has been widely

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implemented in medical higher education institutions in over 80 countries, scientific research and practical programs in this direction remain underdeveloped in Uzbekistan.

English as a Medium of Instruction (EMI) is a pedagogical approach that involves using English as the primary language for teaching and learning content. Unlike traditional language teaching, EMI views language not as a subject but as a vehicle for acquiring knowledge. In the context of medical education, EMI enables students to simultaneously master medical knowledge and professional English language skills in an integrated manner.

The main objective of this research is to identify effective mechanisms for developing the professional foreign language competence of medical students using EMI technologies and to develop practical recommendations.

Main Research Tasks:

1. To conduct a theoretical analysis of the role and significance of EMI technologies in medical education.
2. To experimentally test the effectiveness of various EMI technological tools in developing professional language competence.
3. To develop diagnostic tools for assessing students' professional English language competence.
4. To identify problems and limitations encountered in implementing EMI programs.
5. To propose an EMI model suitable for the national medical education system.

Virtual and Augmented Reality (VR/AR) Simulations

- Clinical VR Platform: 50 clinical scenarios (approaching a patient in English, taking anamnesis, interpreting diagnostic information)
- Anatomy 4D AR Application: Studying human anatomy structures with English annotations
- Surgical Simulator VR: Learning surgical procedures with detailed English instructions

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MOOC and Online Learning Platforms

- Mastering "Clinical Terminology" and "Medical Neuroscience" courses in English via Coursera
- Utilizing medical courses from "Harvard Medical School" on the edX platform
- Delivering learning materials through a specially developed LMS (Learning Management System)

Telemedicine and Remote Collaboration Projects

- Participation in international teleconsultation systems (2 hours weekly)
- Conducting joint clinical discussions with medical universities in India and Malaysia
- Interactive participation in virtual hospital simulations

Artificial Intelligence-Based Language Learning Systems

- Teaching medical dialogues through AI-powered chatbots
- Improving pronunciation through speech recognition software
- Adaptive algorithms for creating personalized learning paths

Data Collection and Assessment Methods

The following data collection methods were employed:

1. Pre- and Post-tests: Professionally-oriented English language test based on CEFR

2. Standardized Questionnaires: Measuring motivation, satisfaction, and difficulty levels using Likert scales

3. Observation Protocols: Monitoring participation activity and language skills during classes

4. Interviews and Focus Group Discussions: For deep understanding and qualitative data collection

5. Academic Achievement Assessment: Evaluating test results, project work, and practical skills

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Student and Teacher Perspectives

According to survey results:

- 94% of students rated EMI technologies as more interesting and effective compared to traditional methods
- 89% of students expressed readiness to participate in international projects in the future
- 76% of teachers noted that EMI programs improved teaching quality
- 82% of teachers indicated lack of technological support and methodological guidelines as a problem

Research results indicate that EMI technologies enable the integrated development of not only language skills but also overall professional competence. VR simulations provide students with opportunities to practice language skills in safe, controlled environments, which builds their confidence. MOOC platforms offer access to contemporary medical knowledge and global educational resources.

EMI technologies serve as effective tools for developing professional foreign language competence among medical students. This approach not only makes language learning engaging and practical but also prepares students for active participation in modern globalization conditions and membership in the international medical community. Research results demonstrate that with proper selection and methodological application of technologies, students' professional language competence can be significantly enhanced in a short period.

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