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Current Issues in Developing Professional Competence of Medical Education Pedagogical Staff

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Abstract: The rapid development of healthcare systems and medical technologies requires highly qualified medical educators with advanced professional competencies. The quality of medical education directly influences the effectiveness of healthcare services and patient safety. This article discusses the current issues in developing the professional competence of pedagogical staff in the medical field. It highlights the importance of innovative teaching methods, digital literacy, continuous professional development, and interdisciplinary collaboration. The study also examines challenges faced by medical educators and proposes strategies for improving their pedagogical and professional skills.

Keywords: Medical education, professional competence, pedagogical staff, healthcare education, innovative teaching, digital technologies, continuous professional development.

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Introduction

Modern healthcare systems demand competent medical professionals who are capable of adapting to rapidly changing medical knowledge and technologies. In this context, the role of medical educators becomes increasingly significant. Medical pedagogical staff are responsible not only for transferring theoretical knowledge but also for developing clinical thinking, ethical responsibility, and practical skills among future healthcare professionals [1].

Professional competence of medical educators includes pedagogical, clinical, communicative, digital, and research competencies. However, many educational institutions face difficulties in ensuring the continuous development of these competencies. Therefore, studying the urgent issues related to the professional growth of medical educators is highly relevant [2].

Professional competence refers to the combination of knowledge, practical skills, professional values, communication abilities, and teaching methodologies necessary for effective educational activity. In medical education, competence development is especially important because medical teachers must combine both clinical expertise and pedagogical mastery [3].

The professional competence of medical educators includes: Clinical and scientific knowledge; Pedagogical and methodological skills; Communication and interpersonal abilities; Digital and technological literacy; Research and innovation skills; Ethical and professional responsibility [4].

Current Issues in Developing Professional Competence

1. **Rapid Development of Medical Technologies:** Medical science and technologies are continuously evolving. Educators often face difficulties in updating their knowledge

and adapting teaching materials to modern medical standards. This creates a gap between theoretical education and current clinical practice.

2. **Insufficient Digital Competence:** The integration of digital technologies into education requires teachers to possess strong ICT skills. Many medical educators experience challenges in using online learning platforms, simulation technologies, virtual laboratories, and digital assessment tools effectively [5].

3. **Limited Opportunities for Continuous Professional Development:** In some educational institutions, professional development programs are not systematic or accessible. Heavy workloads and lack of financial support may limit educators' participation in training courses, workshops, and international conferences.

4. **Traditional Teaching Methods:** Some medical teachers still rely mainly on lecture-based approaches. Modern medical education requires student-centered learning, problem-based learning, simulation training, and interactive teaching methods that encourage critical thinking and clinical decision-making.

5. **Psychological and Emotional Challenges:** Medical educators often experience professional stress due to high academic responsibilities, clinical duties, and administrative tasks. Emotional burnout negatively affects teaching quality and professional growth [6].

Strategies for Improving Professional Competence is to improve the professional competence of medical pedagogical staff, the following measures are recommended:

Organizing regular professional development courses and training programs; Integrating innovative pedagogical technologies into medical education; Enhancing digital literacy and ICT competencies; Encouraging participation in scientific research and international collaboration; Developing mentorship and peer-learning systems; Supporting educators psychologically and professionally.

Promoting lifelong learning principles is medical universities should establish modern educational environments where teachers can continuously improve both their clinical and pedagogical competencies.

The quality of healthcare services largely depends on the quality of medical education. Competent teachers contribute to the formation of highly qualified healthcare professionals capable of making accurate clinical decisions and adapting to rapidly changing healthcare environments [7].

Today's medical education system focuses on competency-based education, which emphasizes not only theoretical learning but also practical application, clinical reasoning, teamwork, and communication. Consequently, medical educators themselves must continuously improve their competencies to meet international educational standards and healthcare requirements.

Furthermore, globalization and international cooperation in medical science require educators to be familiar with international accreditation standards, evidence-based medicine, and global healthcare trends. This increases the need for continuous professional development among pedagogical staff [8].

Methods

This study employs a qualitative descriptive research design aimed at analyzing the urgent issues affecting the professional competence development of medical pedagogical staff. The research is based on a literature review of recent academic publications, policy documents, and international reports related to medical education and teacher competency development.

Additionally, a comparative analytical approach was used to identify common challenges in medical education systems, including technological advancement, digital transformation, and pedagogical modernization. The study synthesizes secondary data

sources to examine key problem areas such as insufficient digital competence, limited professional development opportunities, traditional teaching practices, and psychological stress among educators.

The data were analyzed using content analysis methods to categorize and interpret recurring themes related to professional competence. Based on this analysis, key problem areas and strategic improvement directions were identified.

Results and Discussion

1. Rapid Development of Medical Science and Technologies

One of the major challenges in medical education is the rapid advancement of medical science, biotechnology, artificial intelligence, telemedicine, and digital diagnostics. New treatment protocols, medical equipment, and research findings emerge continuously. Medical educators often struggle to update educational materials and adapt teaching methods to current clinical realities [9].

As a result, there may be a discrepancy between theoretical education and modern healthcare practice. To solve this problem, educators must regularly participate in clinical training, scientific conferences, and professional exchange programs.

2. Insufficient Digital Competence

The digitalization of education has transformed teaching and learning processes worldwide. During and after the COVID-19 pandemic, online learning platforms, virtual classrooms, simulation technologies, and digital assessment systems became essential components of medical education [10].

However, not all educators possess sufficient digital literacy to use these technologies effectively. Some teachers face difficulties in:

- Conducting online classes;
- Creating digital educational content;
- Using virtual simulation laboratories;
- Managing learning management systems (LMS);
- Implementing online assessment methods.

Insufficient digital competence reduces the effectiveness of modern educational technologies and limits students' learning opportunities.

3. Limited Opportunities for Continuous Professional Development

Continuous professional development is essential for maintaining high educational quality [11]. Nevertheless, many medical educators face barriers such as:

- Heavy teaching and clinical workloads;
- Limited financial support;
- Lack of institutional training programs;
- Insufficient access to international educational resources.

In some cases, professional development activities are formal rather than practical, which decreases their effectiveness. Educational institutions should therefore establish systematic and practice-oriented professional development programs.

4. Dominance of Traditional Teaching Methods

Traditional lecture-based teaching remains common in many medical institutions. Although lectures are useful for delivering theoretical information, they often limit students' active participation and critical thinking development [12].

- Modern medical education increasingly emphasizes:
- Problem-based learning (PBL);

Case-based learning;
 Team-based learning;
 Clinical simulation training;
 Interactive and student-centered approaches.

These methods help students develop clinical reasoning, communication skills, and decision-making abilities. Therefore, medical educators need training in innovative pedagogical strategies and active learning methodologies [13].

5. Psychological Stress and Professional Burnout

Medical educators frequently experience emotional and psychological pressure due to multiple responsibilities, including teaching, scientific research, clinical practice, and administrative duties. Long working hours and high professional expectations may lead to stress and burnout syndrome.

Professional burnout negatively affects:

Teaching quality;
 Motivation and productivity;
 Communication with students;
 Personal well-being.

Institutions should provide psychological support services, healthy work environments, and balanced workloads to reduce stress among educators.

6. Lack of Interdisciplinary Collaboration

Modern healthcare requires teamwork and interdisciplinary cooperation among specialists from different medical fields. However, interdisciplinary collaboration is sometimes insufficient in medical education systems [14].

Educators often work within narrow specializations, which may limit students' understanding of integrated healthcare approaches. Cooperation between physicians, nurses, pharmacists, psychologists, and public health specialists can improve educational quality and promote holistic patient care.

7. Challenges in Assessing Professional Competence

Assessment of professional competence in medical education is another important issue. Traditional written examinations are not always effective in evaluating practical skills, communication abilities, and clinical decision-making.

Modern assessment approaches include;

Objective Structured Clinical Examinations (OSCE);
 Portfolio assessment;
 Simulation-based assessment;
 Peer evaluation;
 Reflective practice assessment.

These methods provide more comprehensive evaluation of students' and educators' competencies.

The development of professional competence among medical education pedagogical staff is one of the key factors in improving healthcare education quality. Modern challenges such as technological advancement, digital transformation, and changing educational standards require educators to continuously develop their professional and pedagogical abilities. Addressing these urgent issues through innovative approaches, continuous professional development, and institutional support will contribute to the

preparation of highly qualified healthcare professionals and the overall improvement of healthcare systems [15].

Conclusion

The analysis shows that the professional competence of medical pedagogical staff is a multidimensional concept that includes clinical, pedagogical, digital, communicative, research, and ethical components. The study reveals that medical educators face several urgent challenges, including rapid changes in medical science, insufficient digital literacy, limited access to continuous professional development, reliance on traditional teaching methods, and psychological burnout. These challenges negatively affect the quality of medical education and limit the effectiveness of competency-based learning. Therefore, improving the professional competence of medical educators requires systematic reforms, including the integration of innovative teaching methods, expansion of digital training programs, support for lifelong learning, and the creation of psychologically supportive working environments.

Strengthening interdisciplinary collaboration and aligning medical education with international standards are also essential for preparing highly qualified healthcare professionals. Overall, continuous professional development of medical educators is a key factor in ensuring the quality and sustainability of modern healthcare systems.

REFERENCES

- [1] R. M. Harden, *Essential Skills for a Medical Teacher*. Amsterdam, Netherlands: Elsevier, 2018.
- [2] World Health Organization, *Transforming and Scaling Up Health Professionals' Education and Training*. Geneva, Switzerland: WHO, 2022.
- [3] D. Normatova, "Methodology for developing the professional creativity of academy lyceum teaching staff based on innovative technologies during the qualification improvement process," in *Digital Education and Cybersecurity: Modern Technologies and Risks*, 2025.
- [4] UNESCO, *Digital Transformation in Higher Education*. Paris, France: UNESCO, 2021.
- [5] P. McCoy and M. A. Ramani, "Competency-based medical education: Theory to practice," *Medical Education Journal*, vol. 56, no. 4, pp. 345–352, 2020.
- [6] E. Frank and L. Danoff, "The CanMEDS initiative: Developing a framework for medical educator competencies," *Academic Medicine*, vol. 82, no. 7, pp. 642–647, 2019.
- [7] A. Srinivasan et al., "Medical education in the digital age: Challenges and opportunities," *BMC Medical Education*, vol. 21, no. 1, 2021.
- [8] J. Branch and K. Paranjape, "Feedback and reflection in medical education," *Journal of Graduate Medical Education*, vol. 11, no. 1, pp. 1–6, 2019.
- [9] J. D. Kogan, "Assessment of clinical competence in medical education," *New England Journal of Medicine*, vol. 378, pp. 202–210, 2018.
- [10] L. A. Dyrbye et al., "Burnout among medical educators: A global concern," *Lancet Medical Education*, vol. 3, no. 2, pp. 120–128, 2022.
- [11] M. van der Vleuten, "Competency-based education and assessment," *Perspectives on Medical Education*, vol. 9, pp. 1–5, 2020.
- [12] A. Ten Cate, "Entrustable professional activities in medical education," *Medical Teacher*, vol. 41, no. 7, pp. 761–767, 2019.
- [13] OECD, *Health Workforce and Education Trends*. Paris, France: OECD Publishing, 2021.
- [14] World Federation for Medical Education, *Global Standards for Quality Improvement in Medical Education*. Copenhagen, Denmark: WFME, 2020.
- [15] A. Ilic and S. Maloney, "Digital literacy in health professions education," *Medical Education Online*, vol. 25, no. 1, 2020.