

**DEVELOPING THE PROFESSIONAL COMPETENCE OF FUTURE
DOCTORS IN THE INSTRUCTIONAL SETTING OF HIGHER MEDICAL
EDUCATIONAL INSTITUTIONS**

¹Halyna Yu. Morokhovets, ²Yuliia V. Lysanets

¹Research Department, Ukrainian Medical Stomatological Academy, Poltava, Ukraine

²Department of Foreign Languages with Latin Language and Medical Terminology,
Ukrainian Medical Stomatological Academy, Poltava, Ukraine

Background. The main objectives of higher medical education are continuous professional improvement of physicians to meet the needs dictated by the modern world both at undergraduate and postgraduate levels. In this respect, the system of higher medical education has undergone certain changes – from determining the range of professional competences to the adoption of new standards of education in medicine.

Aim. The article aims to analyze the parameters of doctor's professionalism in the context of competence-based approach and to develop practical recommendations for the improvement of instruction techniques.

Materials and methods. The authors reviewed the psycho-pedagogical materials and summarized the acquired experience of teachers at higher medical institutions as to the development of instruction techniques in the modern educational process. The study is based on the results of testing via the technique developed by T.I. Ilyina. Analytical and bibliosemantic methods were used in the paper.

Results. It has been found that the training process at medical educational institution should be focused on the learning outcomes. The authors defined the quality parameters of doctors' training and suggested the model for developing the professional competence of medical students. This model explains the cause-and-effect relationships between the forms of

instruction, teaching techniques and specific components of professional competence in future doctors.

Conclusions. The paper provides practical recommendations on developing the core competencies which a qualified doctor should master. The analysis of existing interactive media in Ukraine and abroad has been performed. It has been found that teaching the core disciplines with the use of latest technologies and interactive means keeps abreast of the times, while teaching social studies and humanities to medical students still involves certain difficulties.

Keywords: competence, professional competence, competence-based approach, future doctors.

Introduction. The specific nature of doctor's profession consists in constant merging of clinical, communication, research and scientific skills. Therefore, teachers today face the challenge of building a new model of instruction that will prepare students for medical activities in the modern society and will provide the psychological and pedagogical conditions for the improvement of professional competence.

The **aim** of the article is to study the methods for developing the professional competence of medical students, to analyze the existing instruction techniques in the context of competence-based approach and to develop practical recommendations for their enhancement.

Material and methods. The authors conducted the analysis and review of psycho-pedagogical and educational materials; summarized the acquired experience of teachers at higher medical institutions as to the organization and improvement of instruction techniques in the modern educational process.

Results. Training doctors is a continuous integrated process. An indicator of the quality training of future doctors nowadays is a set of professional competences, and not the level of acquired knowledge and generated skills, as previously thought. Thus, the range of professional parameters in doctors is expanding. The essence of educational process in the competence-based approach is to create the teaching conditions and situations that can lead to the formation of a particular competence. This approach is characterized by the action-oriented nature of learning outcomes [1, p. 325]. Competency-based medical education is defined as “an approach to preparing physicians for practice that is fundamentally oriented to graduate outcome abilities and organized around competencies derived from an analysis of societal and patient needs” [2, p. 632]. In fact, competency-based medical education shifts the emphasis from time-based training and eventually promises “greater accountability, flexibility, and learner-centredness” [2, p. 633]. This means that a student does not readily adopt the knowledge, but independently develops the concepts needed to solve the problem. The educational process, which is impregnated with research features, becomes the subject of mastering. The general opinion is that research activity is characterized by the focus on new knowledge. It is an active way to search and construct knowledge, foster the new experiences.

In the process of harmonization of higher medical education according to the European system, there was the rejection of the “specialist” educational level; national qualifications framework (NQF) is gradually introduced; consolidation of specialties according to the International Statistical Classification of Education (2010) is performed, and the list of necessary competencies is determined.

Competency is defined as “an observable ability of a health professional, integrating multiple components such as knowledge, skills, values and attitudes” [2, p. 635]. As a matter of fact, competencies largely depend on the context; therefore they are differently prioritized around the world. For instance, the Accreditation Council for Graduate Medical Education

(ACGME) in the United States identifies six competencies for the physicians of all specialties: (1) Medical knowledge, (2) Patient care, (3) Interpersonal and Communication skills, (4) Professionalism, (5) Practice-based learning and improvement, and (6) System-based practice [3, p. 923]. In the United Kingdom, the General Medical Council defines three basic competencies: (1) Doctor as a scholar and a scientist, (2) Doctor as a practitioner, and (3) Doctor as a researcher [4, p. 647]. In our opinion, the framework designed by the Royal College of Physicians and Surgeons of Canada (RCPSC) is one of the best developed and many-faceted. It comprises a wide range of roles that a doctor constantly adopts in their practice [5, p. 640-641]: (1) Medical expert (i.e., the central competence); (2) Communicator (skills to collect information from patients and build relationships); (3) Collaborator (the ability to work as a part of team together with other healthcare professionals); (4) Manager (managerial skills aimed at developing the high-quality healthcare setting); (5) Health advocate (doctor's aspiration to improve health in individual patients and in communities at large); (6) Scholar (doctor's lifelong education and research work); Professional (ethical aspects of doctor's behaviour).

The purpose of this combination is to form in future doctors the skill of solving unconventional professional tasks, to foster creative thinking that can realize the humanistic principle: "treat the patient, not the disease" [1, p. 327].

As one can observe, for modern specialists it is not enough to possess the information; it is necessary to know how to use it and thus form the new knowledge. The system of higher education should prepare specialists who are able to handle large amounts of information, constantly improve themselves, and use the advanced world experience in their practice. As to the training of future doctors, their professionalism, in addition to high-level special medical training, must include the capacity for continuous improvement, research and dedication; communication skills with patients. Professional competence is an integral part of training

future doctors, which leads to the ability to solve health problems using the knowledge and professional experience [6].

In its turn, higher medical education is twofold in nature: on the one hand – it is the process of mastering the professional qualification in accordance with the specialty, on the other – it constitutes an integral part of healthcare system. Training future doctors in this context is a challenging integration of the specific features of medical education, current trends in health care practice and international experience in reforming this area. Given the above, it is necessary to unify the terminology with international standards and adjust medical education to the appropriate level. Gradual changes are included in the standards of higher medical education as well. Direction of training at medical universities is healthcare, and during the second and third levels of higher education, the list of specialties narrows, and the “former” specialties pass into the category of specializations. Such reforms in medical education are aimed at European standards, and they should not just formally change the curriculum, but promote the transition from the traditional model of higher medical education to the personality-oriented model. This model is a creative combination of competence and activity approaches in education.

Quality of doctor’s training largely depends on the professionalism of teachers, the use of modern instruction technologies and engaging students in research work (student scientific societies, academic groups, and individual research projects). Regarding the professionalism of teachers, it is advisable to mention the ability to comprehensively influence all components of professional competence in students using the latest technologies. On the basis of the analysis of instruction approaches, we have developed the model of professional competence (Fig. 1). Its components include providing the students with motives and personal goals, gaining deontological knowledge, implementation of reflective behaviour, development of clinical thinking, enriching the terminological vocabulary of healthcare, mastering

information and communication technologies (ICT), developing readiness for professional practice. The combination of motives and the issue of students' motivation in this list are of particular importance.

Figure 1. Model of developing the professional competence of medical students

FIGURE 1

An important step is the problem of determining the motive of entering a higher medical educational institution, in order to determine professional orientation of medical students and motivation to acquire knowledge. In this paper, we applied the method of determining the students' motivation developed by T. Ilyina. When processing the results of the survey, which involved over 120 respondents (students of Medical faculties No.1 and No.2, Dental faculty and College of Medicine) it has been found that only 30% of respondents are satisfied with the choice of profession.

Many students enter higher medical education for a variety of reasons: family tradition, advice of relatives and friends, good knowledge in profiling subjects. But none of them can guarantee the successful mastering of the curriculum or quality professional work in the future. Ultimately, the basic condition for student's development into an expert is an appropriate level of education, and to some extent the desire to become a doctor [7]. During the survey, it has also been found that along with professional and scientific motives (the acquisition of knowledge and its application in practice), prestigious and pragmatic reasons – to gain material benefit, to have a prestigious job and gain useful contacts – were also critical for students. That is why, a large number of students do not seek new knowledge, and do not aspire to communicate with people and improve themselves professionally.

Discussion. Certain difficulties arise when teaching social and human sciences. Non-core subjects often involve lack of interest in learning the material. The teachers face a

complex task of interpreting the humanitarian level “people and their health” (social, economic, psychological, educational, spiritual and moral aspects). Thus, a specific kind of niche for teaching science in medicine is formed. For instance, in the study of economic theory by medical students, the formation of certain key competencies is effectively performed, including:

1) training – to develop practical skills and gain professional work experience in the specialty. In particular, the analysis of external market of healthcare system by economics methods will help to determine what is appropriate to develop in the country and what is better to import, involving both tangible assets (equipment, medications and facilities) and direct services. Using methodological apparatus of economic theory in the healthcare and medical care, one can resolve the issues of providing medical care in the rational use of limited resources in the most optimal way;

2) social – understanding the social significance of the chosen profession, social and economic processes in the medical industry, changes in the healthcare system, the dynamics of costs, volume of services provided, and staff time, which will help to develop the adequate policy management of the sector;

3) information and communication – the ability of students to navigate the information space, work with electronic information sources, means of universal information technologies, the ability to search, process, and remember the important information;

4) general cultural – formation of economic culture and economic thinking of future physicians.

Developing these competencies is performed by using one’s own set of tests, multimedia lectures, and action approach to ensure the practical application of knowledge.

The choice of teaching materials and educational technologies in teaching clinical, medical, biological, anatomical and physiological subjects is wide enough. Teachers around

the world actively use interactive educational tools on the basis of different learning platforms. The advantage of such means is the possibility of distance learning, joint research activities, accounting and control of personal criteria of the educational process, the ability to teach students from diverse groups both in the classroom and in extracurricular setting. Many of these tools are developed by teachers from different countries on the basis of Blackboard Learn commercial development. Web-services by Blackboard Company prevent plagiarism using SafeAssign software, which enables teachers to promote among students the understanding of importance of academic integrity and authorship. Integration with the platform Facebook is also effective, since it provides access to the curriculum information, updates, lists and alerts, and the ability of social learning within the interface of Facebook. In Ukraine, these technologies just begin to be implemented and professional medical education still has many unresolved issues. Therefore, the search of new methods for improving the professional competence of doctors involving advanced technologies is still in progress.

Conclusions. The competence-based approach to teaching students involves mastering the professional competence by future specialists during their training and is implemented in the system of teaching and educational work using instruction techniques and interactive learning tools. To increase the motivation of students to professional self-improvement, it is necessary to relate the curriculum material to future medical activity, to ensure the novelty of teaching material, to simulate problem-solving situations. The formation of professional competence in future doctors should be influenced since the first year of study. The best choice of instruction tools can be a modular program of educational material, the use of professional interactive materials, and the use of ICT in education.

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