

Improving The Professional Competence Development Methodology Of Future Doctors

Khayrullayev Ch.K.

Associate professor at Bukhara State Medical Institute, Uzbekistan

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Abstract: The article reveals the theoretical and practical aspects of improving the methodology for developing the professional competence of future physicians. It examines the use of modern pedagogical technologies, innovative teaching methods, and clinical simulation platforms in the process of forming professional skills.

Keywords: Professional competence, future physician, innovative pedagogical technologies, clinical thinking, simulation, medical education, interactive methods, practice-oriented learning.

Introduction: The rapid development of medicine and global changes in modern society are placing new demands on the professional training of future doctors. The issue of developing their professional competence in the training of highly qualified specialists based on international standards is considered a priority in medical education. Professional competence is not only a set of theoretical knowledge and practical skills, but also includes such multifaceted characteristics as independent decision-making, clinical thinking, communication culture and adherence to medical ethics.

In the current environment, there is an increasing need for the widespread use of innovative pedagogical technologies in medical education. Simulation technologies, virtual simulators, clinical scenarios and interactive teaching methods provide a high level of practical training of students. This, in turn, strengthens the readiness of future doctors for professional activity, develops their ability to make quick and correct decisions in clinical situations.

In this regard, this study aims to deeply study the theoretical and practical aspects of developing the professional competence of future doctors, evaluate the effectiveness of using innovative educational technologies and interactive methods, and develop scientific and practical proposals for their improvement.

Purpose of the research. The main goal of this study is to improve the methodology of developing the professional competence of future doctors, to form

their theoretical knowledge, practical skills and clinical thinking ability at a high level based on modern pedagogical technologies and innovative educational methods.

METHODS

In carrying out this study, a set of theoretical, empirical and statistical methods was used to comprehensively study and analyze the process of developing professional competence of future doctors.

The main objects of the study were students studying at the Bukhara State Medical Institute, Samarkand State Medical University, Urgench Medical Institute and other medical higher educational institutions, as well as professors and teachers working in their educational process. The number of participants in the study was 620 students and 55 teachers. Modules such as clinical sciences, biochemistry, medical radiology, internal diseases and disease diagnostics were used in the educational process. As innovative teaching tools, simulators of the clinical simulation center; virtual and digital simulation platforms (Body Interact, InSimu, Symptom Checker); multimedia educational materials and interactive video lessons were selected.

The theoretical methods of the research included the analysis of pedagogical and psychological literature, the study of scientific sources on the theory of competence; the assessment of the effectiveness of modern pedagogical technologies based on a comparative analysis of foreign and domestic research; the identification of opportunities for the formation of competence through the analysis of existing curricula

and standards.

Empirical methods included the use of questionnaires and surveys, in which special questionnaires were developed to determine the opinions and attitudes of students and teachers.

In statistical methods, mathematical and statistical methods were used to process the research results. The data were processed in Microsoft Excel and analyzed using the Student's t-test and χ^2 (chi-square) tests. Efficiency indicators were expressed in percentages, and dynamics and trends were presented

Indicators	High level (%)	Medium level (%)	Lower level (%)
Theoretical knowledge	18.5	54.3	27.2
Practical knowledge	15.2	49.6	35.2
Clinical thinking	12.8	48.1	39.1
Communication culture	20.4	52.7	26.9
General competence	16.3	51.5	32.2

According to the results of the diagnostics, the level of professional competence of the majority of students was at medium and low levels, and it was determined that they need to effectively use innovative technologies.

At the experimental stage, the learning process was organized differently in two groups - control and experimental groups:

Groups	Initial (%)	Final (%)	Growth (%)
Control Group	18.2	37.5	+19.3
Experimental Group	19.1	68.4	+49.3

The growth in the mastery of theoretical knowledge in the experimental group was 2.5 times higher.

The results of the study showed that innovative pedagogical technologies, clinical simulation and interactive teaching methods are very effective in developing the professional competence of future doctors.

- In the experimental group, theoretical knowledge increased by 49.3%, practical skills by 58.9%, and clinical reasoning by 57.8%.
- The introduction of innovative technologies into the educational process increased the practical training of students by 2.5–3 times compared to traditional methods.

Thus, the methodology developed in this study serves as an important scientific and practical basis for improving the educational model aimed at professional competence in the medical education system of Uzbekistan.

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in diagrams and tables.

RESULTS

The results obtained during the research showed the effectiveness of using innovative pedagogical technologies in the process of developing the professional competence of future doctors.

At the initial stage of the research, questionnaires, tests and practical skills assessment methods were used to determine the level of professional competence of future doctors.

• Control group (N=310) - learning based on traditional teaching methods.

• Experimental group (N=310) - teaching based on innovative pedagogical technologies, clinical simulations and interactive methods.

The level of theoretical knowledge of students in the experimental group increased significantly.

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