Scientific and Pedagogical Staff and Formation of Professional Competencies for Higher Education Applicants in Pharmaceutical Profile

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Abstract. The concept of professional competence stands as the paramount criterion in the education and training of future experts. It is this competence that fundamentally determines the effectiveness and success of their professional endeavors. Professional competence is not a static or simple attribute; rather, it is an integrated, multifaceted, and dynamic construct. This construct encompasses a broad spectrum of elements, including but not limited to, a deep well of knowledge, a diverse set of abilities, and a wide range of skills. However, the scope of professional competence extends beyond these technical aspects. It also includes personal capabilities, such as emotional intelligence and adaptability, as well as indicators of general culture, which reflect a person's broad educational background and understanding of the world. At the core of professional competence lies the concept of professional suitability. This term refers to a combination of various mental and psychophysiological traits that a person possesses. These traits are crucial as they underpin the individual's ability to perform their professional duties effectively. In addition to these innate qualities, professional suitability also involves communication skills and specific competencies necessary for excelling in one's professional life. A significant direction for future research is the development of a comprehensive model that outlines the process of forming and enhancing the professional competence of pharmacists. This research could provide valuable insights into how educational programs can be structured to better prepare students for their future careers. Furthermore, the role of research and teaching staff in shaping the professional competencies of higher education applicants is an area of great importance. These educators play a pivotal role in guiding and nurturing the next generation of professionals, ensuring they are well-equipped with the necessary knowledge, skills, and attitudes to succeed in their respective fields. This comprehensive approach to understanding and developing professional competence is crucial for the advancement of various professions and the effective functioning of health care society.

Keywords: teaching staff, scientific and pedagogical staff, competence, student of higher education, stakeholder, pharmaceutical profile, pharmacists.

Introduction. Today, the pharmaceutical industry is a driver of economic development in Ukraine. The pharmaceutical business is developing dynamically, modern pharmacies are opening close to health care facilities, bus stops, the metro and residential buildings of citizens. Virtually all pharmaceutical enterprises, wholesale and retail drug trade networks belong to the private sector (stakeholders). Today, there is a need for higher education institutions to train highly qualified pharmacists. It is the stakeholders who are the interested party, and these are individuals and legal entities who:

- have a personal interest in the activities of higher education institutions;
- promote the development of modern educational programs for the training of pharmacists;
- interested in high-quality training of specialists;
- provide a basis for practice, internships, advanced training at cycles of thematic improvement, specialization, pre-certification, internships;
- are employers of future graduates;
- cooperate with representatives of state authorities and local self-government bodies, public organizations and provide charitable assistance;

- cooperate with health care institutions and are in the system of legal relations "doctor-patient-pharmacist-lawyer".

Accordingly, employers set fairly high requirements for the professional level of their employees. The foundations of professionalism are laid in the educational institution where yesterday's school graduate studied and are based on the Constitution of Ukraine (Article 53. Everyone has the right to education), the Laws of Ukraine "On Higher Education", "On Professional Pre-Higher Education", "On Medicines". It is important to train highly professional, competent, competitive personnel capable of creative work and professional development. For example, academic mobility in vocational higher education enables participants in the educational process to study, teach, do internships or conduct research in another educational institution (scientific institution) on the territory of Ukraine or outside it. Formation of professional competence of future pharmacy specialists is an urgent, multifaceted and practically significant task. Competence is a dynamic combination of knowledge, abilities, skills, ways of thinking, views, values, and other personal qualities that determine a person's ability to successfully socialize, conduct professional and educational activities. Innovative development, which is constantly accelerating, requires from pharmacy specialists the ability to quickly and qualitatively learn, to master new technologies; to take responsibility for one's activities (disciplinary, administrative, criminal law), the ability to work in a team of specialists of various profiles (doctors, lawyers, economists) [1-7].

It is the professor-teaching staff, scientific and pedagogical workers, and stakeholders who are the foundation that underlies the formation of professional competencies of students of higher education. The graduate's professional competence is a guarantee of his future demand on the pharmaceutical labor market.

It should be noted that in modern conditions it is the role of scientific and pedagogical workers that is key in this issue. Being a genius in your field of activity is not enough. It is necessary to be able to transfer one's knowledge, one's experience to the younger generation, to be able to instill love for the future activity and profession, the desire for new knowledge and self-improvement. Communication and teamwork are equally important. Therefore, consideration of the level of formation of professional competences of modern graduates of higher education in the pharmaceutical profile is facilitated by the study of the experience of professional competence of leading organizers, teachers and scientists, namely Volokh D.S., Voronenko Yu.V., Gudzenko O.P., Kryvko Yu.Ya., Ponomarenko M.S., Tykhonov O.I., Tolochko V.M., Shapovalova V.O., Shapovalov V.V. and others, which developed pedagogical, theoretical-legal, and methodological-professional foundations continuous professional training of future pharmacists.

The purpose of the study. Determination of the role of scientific and pedagogical workers and the formation of professional competences of those obtaining higher education in the pharmaceutical field.

Materials and methods. Studying the recommendations of WHO, FIP, laws, normative legal acts, pedagogical and scientific-theoretical articles of modern scientists. To achieve the goal, the methods of documentary analysis, structural and logical analysis, systematic approach, questionnaire, scientific observation, generalization of positive own experience and experience of the teaching staff of the Academy were used.

Results and discussion. In the structure of professional competence of a specialist of pharmacy, the following components can be distinguished [8]:

- whole motivational (awareness of the need for constant increase in the level of professional competence, disclosure of their creative abilities and opportunities);
- cognitive (mobility of knowledge, mastering new information for successful use in the conditions of professional activity, awareness of the need for constant self-improvement);
- personal (flexibility and critical thinking, a specialist should not only be aware of the essence of the problem, but also be able to effectively solve it in various standard and non-standard situations; be able to choose the most optimal solution in these conditions at present and be responsible for it, reasoned, reasoned for it reject false judgments, etc.);

- communicative (ability to communicate constructively with patients, their relatives, doctors, colleagues, partners);
- control and reflexive component (be able to reflect your activity, regulate your emotional state and behavior).

The formed professional competence in the specialists of the pharmaceutical industry determines the ability of a specialist to effectively perform professional activity. The formation of professional competences and achievement of programmatic learning results in accordance with the educational and professional program is ensured. The competence pharmacist important for the future is identified: the skills of using information and communication technologies; the ability to communicate in the state language that provides effective professional activity. Graduates of higher education can realize their scientific potential through participation in student scientific societies, Olympiads, conferences, publications of research results in scientific publications in Ukraine and abroad [9, 10].

In recent years, according to the dynamic development of digital society, the development of professional activities of future masters of pharmacy has been developing. The profession acquires new qualities, which leads to the emergence of new forms of learning, in particular, remote [11].

One of the main threats to human health at the present stage is infectious diseases, such as tuberculosis. In the formation of professional competences of higher pharmaceutical education applicants, the role of pharmacists using Viber, Zoom, Google Classroom, Google Workspace in continuing professional development is substantiated [12].

To solve the challenges in the formation of competences of the future pharmacist, coordination of pharmaceutical, medical, scientific, human, financial, natural, technological and social resources is required. Searching, developing, manufacturing in the pharmacy and use of extemporary medicines will help to improve the planning, organization and control of the processes of providing medical and pharmaceutical care to patients in armed conflict. The study of educational components pharmaceutical management, marketing, pharmaceutical analysis, clinical pharmacy forms a comprehensive approach for the use of extemporaphic drugs in pharmacotherapy of health disorders [13].

The Covid-19 pandemic has influenced the current trends in pharmacists, doctors and their advanced training. At the same time, the pandemic contributed to the development of the science of pharmaceutical law as a basis for optimizing the legislation of Ukraine on the organization of pharmaceutical cases in pharmacies and health care institutions. Through modern medication research, it has contributed to the creation of vital vaccines for the prevention of Sars-COV-2 coronavirus. At the same time, during the COVID-19 Pandemic, the health care and pharmaceutical industry, based on the principles of medical and pharmaceutical law, showed that experts can minimize forensic pharmaceutical risks in the legal-pharmaceutical doctor's legal and pharmaceutical system [14].

Organizational and legal, clinical and pharmacological study of the latest international classification of diseases (ICD-11) on its changes compared to ICD-10 given in the article [15]. Particular attention was paid to new ways of labeling diseases and new ICD-11 functions. A new structure based on cluster coding was mentioned, which allows you to bind basic diagnostic codes with extended clinical indicators. The author found that ICD-11 has become a fully electronic publication for the first time, providing access to more than 17,000 diagnostic codes. In the new ICD-11 edition, the dependence on gambling is first classified as a mental disorder-behavioral dependence on gambling online and offline. The list of short stories of ICD-11 also contains the classification of the following: chronic pain, exhaustion, stroke, sexual health, post-traumatic stress disorder, allergies, alternative medicine and more. ICD-11 is indicated in medical practice.

Management and marketing of the first-line anti-tuberculosis drugs are of paramount importance for the effective restraint and treatment of tuberculosis, a global healthcare problem. Ensuring optimal circulation of these medicines requires complete integration of supply chain management, demand forecasting and strategic marketing. The introduction of innovative research technologies has changed the landscape by proposing advanced methods of drug dissemination,

patients' commitment and tracking efficacy. Digital platforms use analytical data to more accurately forecast medicine demand, providing timely production and distribution, minimizing losses and optimizing the distribution of resources. In addition, innovative technologies, such as blockchain, can protect the chain of supplying medicines from counterfeiting, ensuring that only real products will get to the end consumers. With regard to marketing, artificial intelligence-driven tools allow you to carry out purposeful information campaigns, providing personalized information to patients and improving compliance with treatment regimens. Modern research technologies help to track the consumption of medicines with a patient in real time, to detect potential breaks and to interfere in time [16].

According to the requirements of WHO, pharmacists may include: providing pharmaceutical assistance to any person in need; knowledge, skills and professional skills; communicative skills, including the ability to talk, communicate, establish communicative contact with visitors to pharmacy institutions, navigate the features of a partner in communication, observe, understand and use non-verbal language, prevent and overcome obstacles in mutual understanding.

The concept of the Seven Star Pharmacist was introduced by the World Health Organization. Subsequently, he was picked up by the International Pharmaceutical Federation (FIP) in 2000. It is a model of an ideal pharmacist, outlining the competencies, roles and responsibilities they must perform. The Concept of the Seven-Started Pharmacist emphasizes the role of a pharmacist as a healthcare provider who goes beyond the traditional release of medicines to actively promote patient care and public health. Seven stars symbolize the following key roles and responsibilities:

✓ Guardian: Pharmacist is responsible for providing a patient-oriented pharmaceutical care, ensuring safe and effective use of medicines and promoting positive health results.

✓ The decision-making person: the pharmacist is involved in making reasonable decisions on drug therapy, taking into account the specific factors of the patient, scientifically substantiated recommendations and therapeutic considerations.

✓ Communicator: Effective communication skills are crucial for the interaction of pharmacists with patients, healthcare professionals and community, facilitating understanding, medical education and adherence to treatment.

✓ Leader: Pharmacists are encouraged to take a guiding role in healthcare teams, take an active part in politics development, defend patients' safety and promote the role of pharmacists in public health.

✓ Manager: Pharmacists must have management skills in order to effectively organize and optimize pharmacy services, ensuring the quality, safety and availability of medicines.

✓ Learning throughout life: is emphasized on continuous professional development, as pharmacists should keep up with achievements in pharmaceutical practice, new methods of treatment and developing health care systems to provide modern and evidence based on evidence.

✓ Teacher: Pharmacists play an important role in teaching patients, healthcare professionals and the public about medicines, disease prevention and health promotion, aimed at increasing medical literacy and expanding opportunities.

The Seven Star Pharmacist concept is a benchmark for the development of pharmaceutical practice and education around the world.

According to the Higher Education Standard [7], 226 pharmacy, industrial pharmacy, higher education must have such competences as: the ability to carry out educational work of the population and provide pre-medic assistance; monitor the efficacy and safety of medicines; organize the activity and functioning of pharmacy establishments; to control the quality of medicines and a number of others [19]. All of these competences are acquired in the process of logically and consistent study of the educational components provided for in the educational and professional program.

Only qualified scientific and pedagogical workers can ensure the qualitative development of educational components, who keep up with the times, constantly increase their professional level, monitor the innovations in the field of their educational component. On the skill of submission of educational material, the use of different combined teaching methods [17] will depend on the level

of development of professional competences of higher education. And only the employer will be able to evaluate this powerful level of the young employee.

The ability to collect, interpret and apply the data necessary for professional activity will quickly bring the young employee to a higher stage in his or her activity. The basics of these skills are laid in the process of training with the participation of scientific and pedagogical workers. It is likely that some of the graduates will have the desire to combine their future with scientific activities and become a part in the link of higher education-a scientific and pedagogical worker.

Higher education institutions for the preparation of masters of the second level of higher education in the specialty 22 health care, specialty 226 pharmacy, industrial pharmacy, specialization 226.01 Pharmacy from the 2023/2024 educational year should be guided by the new higher education standard. Determined that the standard provides for differences in pharmacy specializations. The study contains information on compliance with the competences set by the standard, the descriptors of the national qualifications framework and the compliance of the learning outcomes and the competences set by the standard. An example of the article developed by the authors of the project of the educational program of the second (master's) level [20].

The modern educational process encourages the teaching staff, scientific-pedagogical workers and stakeholders to self-education, self-improvement, self-development as necessary elements of providing quality educational services. The high level of quality of educational services in turn will ensure proper development of professional competences of higher education applicants.

A logical and consistent presentation of the material of different educational components forms a holistic personality of a pharmacist capable of critical of thinking, analyzing, predicting, making objective decisions, applying all the acquired knowledge in practice, during the circulation of legal groups of drugs in the system of legal relations "doctor-patient-pharmacist.

Therefore, the level and quality of acquired professional competences of higher pharmaceutical education applicants depends clearly on the skill of the academy, scientific and pedagogical staff and stakeholders who are involved in the educational process and participation in international events [21]. With the help of training technologies, students learn to identify the main areas of their future activity, acquire professional skills and improve them, adapt to future professional activity. The training algorithmizing forms the expected behavior of the future specialist. The use of algorithms in practical classes encourages the student to actively work on himself, to deepen erudition, to organize material, to develop skills that are aimed at solving professional problems. The success of the training is ensured by a certain order and system of automated actions – skills that are the key to successful learning. Algorithmizing leaves the teacher as the main figure in the process of developing skills and at the same time is an effective means of teaching to think creatively. The efficiency of use is usually determined by simplicity and accessibility, the level of similarity of mental reasoning and practical actions. Properly compiled algorithmic prescriptions of professional training make it possible for students to consolidate theoretical knowledge and help future professionals to act reliably and competently even in extreme conditions.

Conclusion. The use of professional training in practical classes in professional disciplines makes it possible to bring the learning process as close as possible to production conditions and to form the professional competencies of higher education applicants. Future pharmacists acquire the ability to solve typical specialized tasks in the field of industry activity and be responsible for the results of their activities. Therefore, for the implementation of programmatic results of training, the main tool for the formation of competencies of specialists is the algorithmizing of professional training in the process of studying pharmaceutical disciplines.

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