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**WISSENSCHAFT UND BILDUNG ALS BASIS FÜR DIE
MODERNISIERUNG DER WELTORDNUNG**

**BEGRÜNDUNG FÜR DIE NOTWENDIGKEIT, CHEMISCHE UND BIOLOGISCHE
KOMPETENZEN IN DIE ALLGEMEINE AUSBILDUNG ZUKÜNFTIGER MEDIZINER
UND PHARMAZEUTEN IM KRIEGSRECHT ZU INTEGRIEREN – EINE HISTORISCHE
BETRACHTUNG**

***SCIENCE AND EDUCATION AS THE BASIS FOR THE
MODERNIZATION OF THE WORLD ORDER***

**JUSTIFICATION OF THE NEED TO DEVELOP CHEMICAL AND BIOLOGICAL
COMPETENCE IN THE GENERAL EDUCATIONAL TRAINING OF FUTURE MEDICAL
AND PHARMACEUTICAL SPECIALISTS IN MARTIAL LAW - A HISTORICAL ASPECT**

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Problems and content of professional practical training of pharmaceutical specialists industries investigated scientists: AND. D. Boychuk, AND. Vitenko, K. Platonova, B. Yasko [16, p. 18–22]. IN works famous specialists pharmaceutical science (V. P. Chernykh, O. P. Volosovets, B. P. Zimenkovsky, R. B. Lesyk, O. P. Gudzenko, L. AND. Vishnevskaya, IN. M. Zaporozhian, IN. IN. Trokhymchuk, I. IN. Workshop foreman, D. P. Volokh, M. L. Syatynya, G. IN. Dziak, E. M. Neiko et al.) investigated all types of pharmaceutical and medical care.

The official document recognized by the European Association of Pharmacy Faculties is the Directive European Union 85/432 EC of the Council of the European Economic Community of 16 September 1985 on the coordination of provisions laid down by law, regulation or administrative action relating to certain activities in the field of pharmacy.

Pharmaceutical education has one of the best educational indicators in our country. It is progressively integrating into the European Educational Space, and global educational standards are actively and purposefully being introduced into the system of professional training of specialists.

The emergence of professional and social problems, industrial accidents, technogenic and environmental problems is caused by the incompetence of specialists, therefore the creation of an educational system that provides future specialists p knowledge, skills, abilities, qualities that meet the current conditions and are adequate to the trends of constant changes in the external environment is a way out of the competence crisis. The definition and justification of methodological approaches to the professional training of specialists in the pharmaceutical industry contributes to increasing the efficiency of the personnel management system of pharmaceutical organizations.

Constant appeal from pharmaceutical industry specialists and all those involved in the development pharmacies citizens, to study and implementation in pharmacy accumulated by her considerable experience by past decades not loses its meaning and relevance even today.

Let's consider process becoming and development pharmaceutical education in



Ukraine. Pharmaceutical education in Ukraine was formed in 1990s years in conditions significant changes in the socio-economic and spiritual space of society, caused by the significant spread of new educational technologies and a significant expansion of opportunities and needs for personal development of a person. The directions of pharmaceutical education in Ukraine were oriented towards updating and making significant adjustments to the goals, objectives and content of the educational process, which was reflected in the Concept of Multi-stage Continuing Education, approved by the Ministry of Health of Ukraine in February 1991.

Concept was expected allocation preparation personnel for industrial pharmacy, as well as specialists in economics and management, clinical pharmacy. The foundations were laid for modern specializations in the specialty "Pharmacy". At the end of 1992 At the 1st Congress of Pedagogical Workers of Ukraine, the State National Program "Education" ("Ukraine of the 21st Century") was approved. By the Resolution of the Cabinet of Ministers of Ukraine dated November 3, 1993 year no. 896 was approved approved - well on AND congress pedagogical employees Ukraine State national program "Education" ("Ukraine of the 21st Century") and measures for its implementation [61]. Further development of the provisions and amendments to the Program were approved at the 2nd Congress in October 2001 Also important is the National Doctrine of Education Development, approved by Decree of the President of Ukraine No. 347 of April 17, 2002 year no. 347/2002, which defines: main directions modernization content, forms and methods teaching, education and management of educational institutions; ways to ensure continuity and accessibility of quality education for all citizens and to establish its national character [163].

IN 2002 river control and analytical service, analyzing level education specialists involved in the pharmaceutical industry concluded that 80,000 people work in the pharmacy network, of whom more than a third have no special education at all, 35 % are employees p pharmacist qualifications and 28.8 % – pharmacists, people p a full higher pharmaceutical education. All this prompted the Ministry of Health Ukraine and Ministry education and sciences Ukraine expand network pharmaceutical faculties at higher medical educational institutions [261, p. 11].



Chain higher institutions education, which carry out professional preparation specialists in the specialty "Pharmacy" changed as follows [250, pp. 63–68]:

–until 1992 3 faculties – Ukrainian Pharmaceutical Academy (since 1999) – National Pharmaceutical Academy of Ukraine, since 2002 – National Pharmaceutical University); Lviv State Medical University named after D. Galitsky; Zaporizhia State Medical University;

–since 1997 river – National Medical University named after O. AT. Bogomolets; Luhansk Medical University;

–since 1999 river – Ivano-Frankivsk Medical Academy, Medical Institute of the Ukrainian Association of Traditional Medicine (Kyiv);

–p 2000 river – Ternopil state medical academy them. M. I. Gorbachev - sky; Vinnytsia State Medical University named after M. I. Pirogov;

–p 2001 river – Odessa state medical university;

–since 2004 river – Medical Faculty of Uzhhorod National University;

–p 2010 river – Bukovynsky state medical university [22].

It is worth noting that until 1992, the direction "Pharmacy" consisted of only one specialty. During the years of independence, significant changes have occurred in pharmaceutical education. Taking into account the real needs in the field of medical and pharmaceutical education and science, changes and additions were made to the List of directions and specialties of professional training of specialists, approved by the resolution of the Cabinet of Ministers of Ukraine dated May 24, 1997 r. for number 507. Currently, the specialty "Pharmacy. Industrial Pharmacy" provides professional training for specialists p higher pharmaceutical education according to the educational programs: "Pharmacy", "Perfume and Cosmetic Technologies" means", "Technologies" pharmaceutical drugs", "Clinical Pharmacy", and the training of junior specialists – from three specialties: “Pharmacy”, “Production of pharmaceutical preparations”, “Analytical quality control of chemical medicinal compounds” [245].

Professional training of pharmaceutical industry specialists at the VM(F)ZO of Ukraine at the educational and qualification levels of specialist and master was carried out in four specialties in accordance p the list of specialties 2010–2015 The outlined



structure of the “Pharmacy” direction allowed for the professional training of specialists for the comprehensive provision of the pharmaceutical industry of Ukraine (see Appendix A).

In accordance with the order of the Ministry of Education and Science of Ukraine No. 1151 from 06 Jul - stopada 2015 In 2011, a new list of fields of knowledge and specialties was introduced, in which professional training of higher education applicants, in particular specialists in the pharmaceutical industry, was carried out at the Ministry of Higher Education (F) of Ukraine, approved by the resolution Cabinet Ministers Ukraine from 29 April 2015 river No. 266. List specialties 2015, according to which professional training of pharmaceutical industry specialists was carried out in the VM(P)ZO of Ukraine at the educational and qualification levels of specialist and master, until 31.12.2015 included the field of knowledge 1202 "Pharmacy" and consisted of 4 specialties. From 01.01.2016 (Resolution of the Cabinet of Ministers of Ukraine dated April 29, 2015 No. 266) the list of fields of knowledge and specialties in which professional training of pharmaceutical industry specialists is carried out at the VM(F)ZO includes the field of knowledge – 22 "Healthcare", specialty – 226 "Pharmacy. Industrial Pharmacy" (instead of the 4 specialties that existed before), as well as educational programs: "Pharmacy", "Clinical Pharmacy", "Technology of Pharmaceutical Preparations", "Technology of Perfumery and Cosmetics" [184].

Educational program "Technology pharmaceutical drugs" (to 1998 river – "Industrial Pharmacy") aims to train process engineers for pharmaceutical enterprises, whose professional training is currently carried out in 5 higher educational institutions of Ukraine, such as:

- National pharmaceutical university;
- Ukrainian state chemical-technological university (m. Dnipro);
- Institute chemistry and chemical technologies National university "Lviv-ska polytechnic» [303, p. 419–420];
- Rubizhanskaya affiliate Eastern Ukrainian state university;
- Odessa state polytechnic university.

The educational program "Technology of Perfumery and Cosmetics" orients its



graduates to work in cosmetology clinics and salons and at perfumery and cosmetic enterprises, which is very important for improving the quality both products and services. Since 1997 This specialty is licensed at the National Pharmaceutical Academy of Ukraine, since 2003. at the Ternopil State Medical University named after I. I. Gorbachevsky [303, p. 475–476], from 2004 at Zaporizhzhia State Medical University, since 2010 at the O. O. Bogomolets National Medical University.

The educational program "Clinical Pharmacy" has become a connecting link between the doctor and the and pharmacist, because future hospital pharmacies consists of not in development

unprofitable and outdated hospital pharmacies, and in increasing the role of clinical pharmacy. Patient education, identification of side effects of drugs, as well as correction agreed p the doctor are the main functions of the clinical pharmacist, which positively affect the improvement of the quality of pharmacotherapy [234, pp. 102–103].

The importance and prospects of this specialty have already been assessed by 5 VM(F)ZO of Ukraine, which have begun professional training of clinical pharmacists, namely:

–p 1998 river – National pharmaceutical academy Ukraine;

–since 2001 river – Lviv State Medical University. D. Halytskyi; Ternopil State Medical Academy named after M. I. Gorbachevsky [286]; Bukovina State Medical Academy; Dnipropetrovsk State Medical Academy [303, pp. 145–146].

Professional training of pharmaceutical industry specialists in Ukraine is carried out at the following levels: associate specialist, bachelor, master.

By order of the Ministry of Health Ukraine No. 838 from 18.12.2007 river was approved Development concept pharmaceutical sector industries security health Ukraine [148], which defines priority areas and program objectives for the formation of a system of professional training for specialists in the pharmaceutical industry, namely:

–phased introduction of graduated professional training for pharmaceutical industry specialists and creation of conditions for the implementation of the thesis:



“lifelong learning” and preservation of the postgraduate education system;

–introduction of a credit-modular organization of training taking into account the labor intensity of students' educational work based on the European Credit Transfer and Accumulation System (ECTS);

–expanding academic mobility, which consists of a significant expansion of the mobility of students, teaching and other staff for mutual enrichment p European experience;

–ensuring graduate employability: simplifying the professional recognition of qualifications through the use of the Diploma Supplement recommended by UNESCO;

–expansion research of definition needs in specialists certain specialties and the opening of new specialties to meet the needs of the pharmaceutical sector of the healthcare industry;

–studying the effectiveness and quality of professional training of pharmaceutical industry specialists (part-time study, postgraduate education);

–ensuring the development of the clinical direction in the system of professional training of general pharmacists to improve the quality of drug therapy and provide proper pharmaceutical care in accordance p GPP requirements.

According to p By resolution Cabinet ministers Ukraine #787 from 08/27/2010

“On approval of the list of specialties in which specialists are trained in higher educational institutions at the educational and qualification levels of specialist and master ” and the order of the Ministry of Education and Science of Ukraine No. 1067 of 09.11.2010 Since 2011/2012 academic year, a list of specialties in which professional training of specialists was carried out in Ukrainian universities at the educational and qualification levels of specialist and master is being put into effect [195].

For example, the curriculum for professional undergraduate training of specialists in the specialty "Pharmacy" p the qualification "Pharmacist" of full-time study, approved on March 24, 2015 Ministry of Health of Ukraine and educational plan professional undergraduate preparation specialists by specialty

"Technology of perfumery and cosmetic products" qualification "Pharmacist" –



cosmetologist » full -time, approved on April 20, 2015 by the Ministry of Health of Ukraine, is calculated on the basis of 5 years of study or (300 ECTS credits). One academic year lasts 40 weeks and includes 60 credits (1 week – 1.5 ECTS credits), 1 ECTS credit is 30 academic hours. The academic year includes 1800–1960 academic hours. The total academic load includes time for lectures, practical, seminar and laboratory classes, consultations, independent and individual work, educational and industrial practice and specialization, as well as control activities. The weekly classroom load is an average of 22.75–25.3 academic hours for students. The volume of independent work is approximately 50 % of the total. Schedule educational process consists of p two educational semesters. The schedule provides for an additional period for completing the study of individual modules in disciplines (retaking them, increasing the rating, etc.) – 1-2 weeks after the end of the semesters in the 1st–4th courses. Pin this period, the integrated licensing exam “Step 1. Pharmacy” is to be taken. The last semester of the final course involves, in addition to the student's studies, preparation to state certification and its implementation. The names and scope of study of humanitarian and socio-economic disciplines are regulated by the Ministry of Education and Science of Ukraine [146, pp. 3–4; 147, pp. 4–5].

The state certification of graduates includes a standardized test and a practically-oriented state exam. The standardized test state exam consists of two test exams: “Step 1. Pharmacy” and “Step 2. Pharmacy”. The test exam “Step 1. Pharmacy” is an integrated exam that is held after the 3rd year and measures the quality indicators of the professional component of the basic higher pharmaceutical education. Test exam "Step 2. Pharmacy" (for educational program "Pharmacy") and "Step 2. Technology of perfumery and cosmetics " (for the educational program "Technology of perfumery and cosmetics") are part of the state certification of graduates of VM(F)ZO and measure the quality indicators of the professional component of complete higher pharmaceutical education. The practically-oriented state exam is held in the form of state final exams or comprehensive graduation exam, form carrying out The practical-oriented state exam is determined by the VM(F)ZO [146, pp. 3–4; 147, pp. 4–5].

It is worth noting that the processes of modernization of higher pharmaceutical



education in the international space encourage the creation of appropriate conditions for high-quality professional training of specialists in the pharmaceutical industry: professional competence, general education and culture, sociability, independence in decision-making and responsibility for one's actions.

In accordance p the requirements of the World Health Organization (WHO), emphasis has been placed on the need to significantly change the acquisition of deep professional knowledge in pharmacy, on improving personal qualities, which, along p the acquired professional skills and abilities, will allow a specialist in the pharmaceutical industry to take due place among employees systems security health.

Recommendations of the VII Meeting on Pharmaceutical Education of the World Health Organization, held on June 17–18, 2002 r., it is noted that there are significant differences in different countries regarding qualifications, terms and content of training. In most of them, educational and professional undergraduate training does not include such disciplines as clinical pharmacy, skills in conducting scientific research, preparation of medicines in a pharmacy, team management, quality assurance, etc. All pharmacists and druggists should have such knowledge and skills. Analysis of the content of professional training of pharmacists shows that this training does not provide for the formation of computer skills, professional work in various sectors of the pharmaceutical industry; knowledge of pharmacoeconomics; development of methodological materials, a system for registering medicines, the concept of primary health care, personnel and financial management, organizational management of pharmaceutical activities, etc. [165].

According to the results of the conducted research and the requirements of the World Health Organization, the professional competencies of pharmacists and druggists include: providing pharmaceutical care to any person who needs it; knowledge, skills and abilities in the professional sphere; communication skills and abilities, the ability to conduct a conversation, communicate p visitors to pharmacy establishments, etc. According to experts of the World Health Organization, it is necessary to provide in the curricula of professional undergraduate training of specialists in the pharmaceutical industry disciplines and practices that would include



work in polyclinics, medical care, therapeutic practice, management of drug supply, rational use of drugs [165].

Of modernizing the professional training of pharmaceutical specialists in Ukraine in the context of the Bologna Process is to achieve such goals as improving the quality of medicines and pharmaceutical care, preserving and improving the health of the nation, improving the quality of educational, scientific and professional activities of higher medical (pharmaceutical) educational institutions and institutions of postgraduate pharmaceutical education; competitiveness of pharmaceutical specialists in the European and global labor markets.

Professional training of specialists for the pharmaceutical industry is carried out in 39 VM(P)ZO (13 – universities, academies; 26 – colleges, schools). 18,853 people study at the pharmaceutical faculties of VM(P)ZO. The training of pharmaceutical personnel is carried out by 1,177 scientific and pedagogical workers of specialized departments, including doctors of sciences – 156, candidates of sciences – 665, post a degree – 355 (30 %) [165]. The number of pharmaceutical faculties in the country has already reached the average level compared to developed countries of the world. – 1 faculty per 5 million population only for the educational program “Pharmacy”.

Let us consider in more detail the VM(F)ZO, which provide professional training for specialists in the pharmaceutical industry in Ukraine in the 21st century. Thus, the training of junior specialists and Bachelors of Pharmacy provide: Zhytomyrskyi Basic Pharmaceutical College named after G. P. Protasevich; College of the National Pharmaceutical University and 21 medical colleges p pharmaceutical departments. Professional training of pharmacists and masters of pharmacy is provided by 18 VM(F)ZO, the leading among which is the National Pharmaceutical University (city of Kharkiv). On base university conducted III, V, VI, VII, VIII National Congresses of Pharmacists of Ukraine. At the initiative of the Academy and p the support of the Ministry of Health of Ukraine: the Concept of the Development of the Pharmaceutical Industry and the Concept of the Development of Pharmaceutical Education were developed and implemented; 20 pharmaceutical faculties were opened in the system of higher medical educational institutions of Ukraine, and a professional holiday "Day of



the Pharmaceutical Worker" was established (1999 (2005) and the honorary title "Honored Worker of Pharmacy of Ukraine" (2005).

A museum of the history of pharmacy in Ukraine p a monumental unique sculptural composition "Pharmacy in centuries" (2004 r.), "Personalities" in pharmacies» (2010 r., on honor organizers pharmacies rectors of M. AT. Valyashka and D. P. Fat), The world's first Pharmaceutical Encyclopedia was published (2005 r.). Developed and Code of Ethics adopted pharmacists Ukraine. By During the existence of the university, more than 45,000 specialists have been trained for the domestic pharmaceutical industry and more than 5,000 Masters of Pharmacy for 85 countries around the world. Pharmaceutical faculty in warehouse National medical university named after O. AT. Bogomolets was opened in 1997. Today, the faculty has 7 departments, including 5 core and 6 graduate departments: pharmacy and industrial drug technology, medical and general chemistry, pharmaceutical, biological and toxicological chemistry, organization and economics of pharmacy, pharmacology, clinical pharmacy and clinical pharmacology, pharmacognosy and botany [306].

In 1998 In 2003, by the decision of the Personnel Certification Department of the Ministry of Education of Ukraine, Luhansk State Medical University was granted the right to carry out educational activities in the field of "Pharmacy". In 2006, the Faculty of Pharmacy received the right to provide professional training for interns and masters. river was open postgraduate study in the specialty "Technology medicines and organization of pharmaceutical business", in 2007 river – in the specialty "Pharmaceutical Chemistry and Pharmacognosy". Over 15 years, the Faculty of Pharmacy has opened the way to the profession for 697 pharmacist specialists, who were fully distributed and work in pharmacies in the city of Luhansk, Luhansk region and Ukraine [305].

The Department of Pharmacy of Kyiv International University was established in 2012. r., the main goal – professional training of pharmacy specialists at the Bachelor's degree level, meeting the growing demand of the domestic pharmaceutical sector of the healthcare industry for professional training of modern highly qualified specialists. The department provides educational and methodological activities in the disciplines



of the scientific and natural sciences and professional training cycle, including: history of medicine and pharmacy; hygiene in pharmacy; pharmacy technology of medicines; industrial technology of medicines; organization and economics of pharmacy; extreme medicine; ethics and deontology in pharmacy [100].

At Ivano-Frankivsk National Medical University, professional training of pharmaceutical specialists takes place at 20 departments. Among the teachers of the departments are 24 doctors and 82 candidates of medical sciences. The graduating departments of the faculty are: the Department of Pharmacy, the Department of Clinical Pharmacology and Pharmacotherapy p a course on the basics of bioethics and biosafety, the Department of Economics and Organization of Pharmacy and Drug Technology. [84]. The total number of full-time graduates in 2013 was 57 people, and part-time graduates – 71 people (Table 1).

Table 1 - General number graduates pharmaceutical faculty by all years

Year of release	Graduates, which received a diploma p honors		General number graduates		
	daytime	correspondence	daytime form of study	correspondence form teaching	
			summer	summer	winter
2004	7	–	35	–	–
2005	13	–	54	–	–
2006	7	–	58	–	–
2007	9	–	58	–	–
2008	6	–	68	–	–
2009	11	–	78	85	31
2010	14	1	100	92	31
2011	8	1	109	101	–
2012	8	1	73	70	24
2013	13	–	57	20	51
2014		–			95

A source: [84]

At Vinnytsia National Medical University named after M. AND. The Pirogov Department of Pharmacy was established in 2002. The staff of the department differs from other departments in that, in addition to scientific and pedagogical experience, many teachers have extensive experience in practical activities in the field of pharmacy. These are pharmacists of the highest category, heads and deputy heads of pharmacies. The main task of the department – to teach future specialists the ability to



organize the work of pharmacy enterprises and their divisions, to determine and implement various areas of their activity in order to ensure a high level of pharmaceutical assistance to the population.

The department's teachers provide teaching of specialized disciplines. In the 1st–2nd year, students study general biological disciplines. – medical biology and botany, and during the training practice they get acquainted p the species diversity of plants common in Podillia and their practical application, collect and herbarize plants, which are then used in practical classes. In the senior years, future specialists in the pharmaceutical industry study the following disciplines: technology of medicinal products (pharmacy and industrial technology of medicinal products); manufacturing of medicines in the field; technology of homeopathic medicinal products; pharmacognostic foundations of phytotherapy; pharmacology; organization and economy pharmacies; pharmaceutical commodity science; small-scale production product - production of finished medicines; analysis of the financial and economic activities of pharmaceutical enterprises [32].

Training of future pharmaceutical industry specialists in the field of preparation "Pharmacy" in Bukovynsky state medical university started in 2001 r., When was received license on preparation specialists by specialty "Clinical Pharmacy". The first graduation in this specialty took place in 2006. Since 2010 The Faculty of Pharmacy of the Bukovina State Medical University was established in August 2004. This was facilitated by the insufficient provision of pharmaceutical personnel in Bukovina and the adjacent regions. The Faculty of Pharmacy is a full-fledged component of a European-style university. The Faculty of Pharmacy includes 7 departments: medical and pharmaceutical chemistry, bioorganic and biological chemistry and clinical biochemistry, pharmacy, social sciences and Ukrainian studies, biological physics and medical informatics, medical biology, genetics and pharmaceutical botany, physiology. The structural units of the faculty are educational and production areas for the cultivation of medicinal plants and an educational and production pharmacy. Professional training specialists on pharmaceutical faculty is carried out by specialty "Pharmacy" (educational programs "Pharmacy" and "Clinical Pharmacy") degrees



“Bachelor” and “Master”. The faculty trains about 400 future specialists in the pharmaceutical industry in full-time and part-time forms of study [304].

It should be noted that the pharmaceutical industry needs qualified specialists knowledgeable in quality issues, capable of competently organizing the implementation of the requirements of international quality management standards and specific industry norms and rules. [155]. According to p requirements, person, which on pharmaceutical enterprise responsible for quality management (assurance) must have basic professional education that would enable them to effectively perform all their functional duties in accordance p the licensing conditions [131]. Currently, such specialists are usually appointed from among employees p higher pharmaceutical education. However them missing knowledge and skills for solution all relevant tasks.

Reliable equipment, high-quality raw materials and validated technological processes – these are important components of ensuring the quality of pharmaceutical products, but in light of modern requirements, other aspects of the functioning of pharmaceutical enterprises cannot be ignored: the document management system, human resources, internal audits, corrective and preventive measures, as well as ensuring proper infrastructure and information, strategic and operational planning, risk management [49, p. 24–32]. All these types of activities necessary manage as the only one system interconnected processes, which and is a quality management system. And this requires specific knowledge and skills from those responsible for the formation and maintenance of the quality management system. Pharmaceutical - ceutical enterprises decide this problem by additional teaching specialists p pharmaceutical education in specialized specialties that allow obtaining a second higher education (for example, “Quality, Standardization and Certification”). However, in many cases, the necessary professional training of industry specialists is attempted to be provided by participating in specialized seminars, courses or trainings. [101, p. 52–55]. Such situation not maybe be recognized as satisfactory, because such activities do not allow for the acquisition of relevant knowledge and skills.

IN result analysis of professional preparation specialists by direction "Quality Management" in Ukraine V. AND. Gorodetska [49, p. 25–26] notes that such a



specialty is not included in the classifier in accordance p Resolution No. 787 KM of Ukraine from 27 August 2010 river This classifier includes only specialty

“Product Safety and Quality Management”, which is being implemented in higher educational institutions for the professional training of specialists for the food industry, because it is recognized that this industry has a pronounced specificity, and therefore requires competent specialists p knowledge both in the field of organizing the production and sale of food products, and in the field of quality management itself. In our opinion, a similar situation occurs in the pharmaceutical sector, which does not require additional justification.

The scientist analyzed the situation regarding the availability of other related specialties that currently provide the quality management sector p urgently needed specialists.

Today in Ukraine, professional training of a quality management specialist for a pharmaceutical company is possible in several ways:

1) additional professional training in quality management for a specialist p basic pharmaceutical education through participation in thematic seminars, courses, conferences, master classes and other events;

2) retraining through obtaining a second higher education as a specialist based on the existing pharmaceutical education in the specialty "Quality, Standardization and Certification " (for example, at the National Pharmaceutical University, where several pharmaceutical disciplines are taught at the choice of the higher educational institution, including – GMP basics). However, postgraduate training through specific professional training cannot claim to be full and sufficient in communication p its short duration and unsystematic. Receiving second higher education in the specialty "Quality, Standardization and Certification" from this point of view looks more rational and correct, however, such training does not provide full-fledged knowledge and skills in the development, implementation, maintenance and continuous improvement of the quality management system of a pharmaceutical enterprise due to the specificity of industry requirements. In addition, such " two -stage " training (first pharmaceutical education + second higher education in the specialty "Quality, Standardization and



Certification ") requires more time and costs than basic training in the field of quality management in pharmacy [49, pp. 25–26].

In the table. 1.2 shows the specialties in which professional training of specialists for the pharmaceutical industry in Ukraine is carried out. The main specialties are determined by real socio- economic processes, namely: low direct health indicators population of Ukraine; imbalances in the system of professional training and use of specialists in the pharmaceutical industry; insufficient implementation of modern effective systems of professional training of specialists in the pharmaceutical industry at the undergraduate and postgraduate stages, and the integration of Ukraine into the world community.

According to the degree and specialty obtained, the graduate according to the Classifier professions DK 003:2010, approved by order State Committee for Consumer Protection and Standardization

Ukraine dated 28.07.2010 No. 327, will be able to work in the following primary professions [104]: head of a pharmacy; head of a pharmacy warehouse; head of a pharmaceutical enterprise; head of a department (structural unit) of a health care institution; head of a non-prescription dispensing department; research associate; analytical chemist; consultant on the efficiency of an enterprise in the field of pharmacy; consultant on the rational production of pharmaceutical products; specialist in methods of expanding the market for pharmaceutical products; laboratory assistant (chemical and physical research); laboratory assistant for technical analysis and spectral analysis; commercial agent in the field of pharmacy; dispatcher for the supply of pharmaceutical products.

Analysis modern pharmaceutical personnel potential testifies about that which in Ukraine works close 1680 scientists. From them 224 doctors sciences and 884 candidates sciences – it specialists high qualifications, which assigned scientist degree. By the indicator of the number of specialists p a degree (73 %) pharmaceutical institutions of Ukraine in the system of the Ministry of Health and the National Academy of Medical Sciences of Ukraine are practically not inferior to many medical institutions. The average indicator of staffing p academic degrees in the Ministry of



Health of Ukraine in 2000 was 75% [319].

The largest number of doctors of sciences works at the National Pharmaceutical University of Ukraine (Kharkiv), Zaporizhzhia State Medical University, the State Scientific Center for Medicinal Products (Kharkiv), and the largest number of candidates of sciences – in addition to the above institutions, he works extensively at Lviv State Medical University, the National Medical University named after AT. AT. Bogomolets, Odessa State Medical University. Pharmaceutical scientists in Ukraine have traditionally created scientific schools in which the search and research of pharmacologically active compounds, the improvement of existing medicines are combined p intensive professional training of highly qualified personnel [319].

Based on the above, an important task of pharmaceutical education is the professional training of personnel for pharmaceutical faculties. The leading role in this is played by the National Pharmaceutical University of Ukraine, which, thanks to its powerful scientific and teaching potential, can conduct internships for teachers of pharmaceutical faculties, train candidates and doctors of sciences, and also, on the basis of the Institute for Advanced Training of Pharmacy Specialists, which is part of the university structure, carry out continuous professional training of pharmaceutical personnel throughout the entire period of practical activity. The Kyiv Medical Academy of Postgraduate Education named after P. L. Shupyk, Institute of Postgraduate Education of the National Medical University named after O. AT. Bogomolets, as well as the postgraduate education faculties of Lviv and Zaporizhzhia State Medical Universities.

In order to coordinate issues related to the development and improvement of pharmaceutical education at the National Pharmaceutical University of Ukraine, a and is functioning Scientific and methodological commission p pharmacies Ministries education

and science of Ukraine. One of the most significant achievements of the Scientific and Methodological Commission on Pharmacy was the creation of a new generation of higher education standards, which allowed to bring the content of education into line p the needs of the pharmaceutical industry.



In order to further improve the system of medical and pharmaceutical education in Ukraine, improve the quality of professional training of specialists, as well as taking into account the recommendations of scientific and methodological conferences, by Order of the Ministry of Health of Ukraine dated 09.11.98 year no. 317 among the leading departments of VM(F)ZO, supporting departments in the specialty "Pharmacy" were identified in [319]: Zaporizhzhia State Medical University; Lviv State Medical University named after Danylo Halytskyi; National Pharmaceutical University of Ukraine: Institute for Advanced Training of Pharmacy Specialists.

The main function of the supporting departments is to generalize and disseminate the best experience in organizing educational and methodological work to improve theoretical and practical professional undergraduate preparation future specialists pharmaceutical industry and generalization experience increase qualifications and professional skills pharmacists – interns, masters, postgraduates and teaching staff of the VM(F)ZO on basis deepening their theoretical and practical knowledge on supporting departments institutes postgraduate education Ministries security health Ukraine.

To exchange experience between pharmaceutical faculties of Ukraine in order to improve the level of methodological work, generalize best practices in organizing the educational process, ensure its integrity and continuity, improve the theoretical, scientific and methodological levels and professional skills of teachers, fulfill the tasks of reforming higher education in higher educational institutions of the Ministry of Health of Ukraine in the specialty "Pharmacy" and involve the teaching staff, doctoral students, postgraduate students and future specialists in the pharmaceutical industry in solving scientific problems of teaching methods in educational disciplines in December 1999 In 2009, a scientific and methodological laboratory on pharmaceutical education was established pin the structure of the National Pharmaceutical University of Ukraine p the approval of the Ministry of Health of Ukraine [319].

The rapid growth of the number of pharmaceutical faculties in Ukraine in the conditions of independence created a problem p the provision of pharmaceutical faculties, especially recently organized ones, p textbooks, manuals published in the



state language, and those whose content meets modern requirements. Therefore, a state publishing house was organized at the National Pharmaceutical University of Ukraine. The publishing activity of the National Pharmaceutical University of Ukraine is 75 % of all pharmaceutical higher educational institutions in Ukraine. In creating a high-quality bank of scientific and methodological support for modern pharmaceutical education – educational and methodological complexes are attended by all pharmaceutical faculties of Ukraine, since new approaches to teaching educational material adapted to world practice in all pharmaceutical disciplines have become particularly relevant.

Thus, our study of the problem of professional training of pharmaceutical specialists in pedagogical theory and practice in higher education institutions shows that pharmaceutical education cannot be separated from the strategic tasks of reforming the content of the educational process in Ukraine, which concern the development of state standards for the formation of systems and the volume of knowledge, skills, creative activity skills, and other personal qualities at different educational and qualification levels; providing alternative opportunities for obtaining education in accordance p individual needs and abilities; organic combination of its general and professional components in the content of education in accordance p educational levels and characteristics of the regions of Ukraine [319]. In addition, pharmaceutical education in Ukraine, in accordance p international standards should answer priorities XXI century [18, p. 186–196]: formation and instilling in members of our society a respectful attitude towards professions, strengthening the authority of the pharmaceutical industry through the training of highly qualified personnel, opening new relevant specialties, continuous improvement of the content of pharmaceutical education in the context of the Bologna process, widespread introduction of new technologies, forms and methods of education, increasing scientific potential industries, software integration pharmaceutical

science and practice, improving postgraduate education, implementing personnel monitoring, creating a system of attestation and certification of pharmaceutical personnel at the state level.



Thus, the professional training of pharmaceutical specialists in Ukraine is one of those that is developing most dynamically in today's difficult conditions, which is largely facilitated by the development of pharmaceutical science and educational institutions where relevant specialists are trained. The system of professional training of pharmaceutical personnel in combination p the system of their use performs the functions of providing the population p effective and safe medicines, creates and develops the production of domestic medicines, controls their quality, and develops a modern system of professional training of pharmaceutical personnel in accordance p the needs of providing high-quality medical care to the population.

At a time of significant political, economic, and socio-cultural contradictions, Ukrainian pharmaceutical industry specialists are persistently seeking ways to further develop pharmaceutical education and science for a conscious, active, and purposeful movement toward integration into the global community.

The strategic goal of global transformations of the national system of pharmaceutical education in Ukraine is to create a fundamentally new system that would provide a real opportunity for every person to acquire and supplement their knowledge throughout their lives [70, pp. 44–90].

The rapidity and rapid changeability of global processes of social development, which caused comprehensive integration trends in the world, the emergence of information technologies, and significant socio-economic transformations have necessitated the modernization of the modern pharmaceutical industry and have placed professional training of specialists for the industry at one of the priorities in the country's state policy, giving it the status of a guarantor of Ukraine's independence and national security.

Because professional preparation specialists pharmaceutical industries there are system, which is constantly developing, its modernization is a natural historical process associated p the need to change the educational model, which was formed in the conditions of industrial culture and contradicts the cultural realities of post - industrial society. The process of improving the professional training of pharmaceutical specialists in the new conditions, like any system, begins p a new philosophy and



geoculture, which at the current stage of civilizational development are the philosophy and culture of postmodernity pharmaceutical education, precisely in the context of this philosophy and culture, is aimed at updating not only the content, forms and methods of educational activities, but also concerns the very understanding of modern professional training of specialists in the pharmaceutical industry as continuous, aimed at forming a creative personality of the global information society of the 21st century. century, capable of self-development and lifelong learning [31, p. 71].

As stated by V. G. Flint, the determining factors of the era of renewal of the global world, in which the interconnections and interdependence of individuals, states, nations are constantly expanding, the planetary information space is intensively formed, the transcontinental market of capital, goods, labor force is activated man-made influence on natural environment, are getting complicated ethnic and interfaith ties and relations, are intelligence and education that transform modern society into a knowledge society [114, 216 p.].

AND. P. Kalenyuk to global trends development education refers to:

- growth the importance of education as a factor public development (as a generator and conductor of knowledge and information);
- differentiation of funding sources (from predominantly state funding to broad spectrum sources income and increase efficiency their expenditure);
- internationalization education (necessity its unification, recognition diplomas);
- change requirements to content, methods and forms educational process (competent - bearing approach);
- change in organizational forms of educational activities (concentration, centralization, diversification, parallel education);
- globalization of the educational services market (growth in the number of foreign students, emergence of cross-border education) [97, pp. 5–11].

According to I. P. Kalenyuk, it is important for Ukraine to take these trends into account in the process of developing a modern strategy for the development of education in order to turn it into a real factor in increasing the competitiveness of the



economy [97, pp. 5–11].

One cannot but agree p T. IN. Andrushchenko, that the modernization of education in Ukraine is carried out against the background of European and world processes that pose unique challenges to it [6, p. 31–37]. National pharmaceutical education, in order to be on top of these challenges, as well as the entire Ukrainian civilization and culture, must carry out appropriate transformations. Their analysis appears as one of the main problems of the methodology for the development of professional training of specialists, the tasks of forming state educational policy in the pharmaceutical industry.

Today, one of the most powerful sources of development of professional training of pharmaceutical industry specialists in Ukraine is the accumulation of foreign pedagogical experience.

According to O. AND. Tymoshenko, in Europe and the world in general there is a wide variety of approaches to the organization, management of the educational process, and modernization of the content of education in the context of modern technologies [287, pp. 31–37].

According to V. IN. Molodychenko, an example of the positive impact of globalization innovations on educational processes is the increase in the openness of scientific and educational spaces of national states, which promotes the exchange of ideas [145, pp. 78–82].

Thus, globalization opens up interesting prospects for Ukraine, as it allows using the experience of proven solutions, democratic models of public life and modern technologies. Currently, democratization is the main factor in solving social, cultural and educational problems of humanity, despite their great diversity and contradictory nature [145, p. 74].

Trends in democratization in the professional training of pharmaceutical specialists can be observed in several areas: decentralization of management of pharmaceutical educational institutions; development of self-government in medical (pharmaceutical) institutions (processes expansion rights higher institutions education by everyone directions activities: educational, scientific, financial); increasing the



social status of the teaching staff; expanding student self-government; expanding the influence of the public on the higher school of pharmacy. Currently, in the course of establishing the principles of democratization in Ukraine, all institutions of society are increasingly acting as full-fledged subjects of management, since, according to the Canadian educator Michael Fullan, it is impossible for one person to manage absolutely all processes in education.

Globalization processes and the development of intensive knowledge-intensive technologies lead to an increase in demand for highly qualified specialists in the pharmaceutical industry, who have not only specialized professional training, but also successfully mastered the skills of entrepreneurial and managerial activities. To achieve this goal, it is necessary to invest in the professional training of specialists in the pharmaceutical industry, as well as to accelerate the solution of the fundamental task – modernization of the national system of higher pharmaceutical education.

Solving the problem of investing in the professional training of pharmaceutical industry specialists will allow us to achieve not only short-term economic success, but also lay the foundations for the formation of sustainable long-term trends in the development of the national economy.

It should be noted that the activities of specialists in the pharmaceutical education system on boundaries XX – XXI Art. usually was based on conceptual ambush

"lifelong education." However, the challenges of civilization create the need to acquire new knowledge in the pharmaceutical industry related to the latest techniques and technologies, that is, to obtain "lifelong education."

Us turn to the Memorandum on Lifelong Learning, prepared by By the Commission European cooperation and approved in Brussels October 30, 2000. It presents key ideas for continuing education. These ideas, which form the basis for continuing pharmaceutical education, are [102, pp. 11–19]:

– new basic skills (working p information and computing technology; foreign languages, technical culture, entrepreneurship and social skills, and

the ability to be more independent through such qualities as self-direction, self-confidence, risk-taking) for all whose goal is – ensure universal and continuous access



to training for the development and renewal of professional skills necessary for long-term participation in the knowledge society;

- more investment in human resources, the aim of which is to significantly increase the level of investment in human resources in order to make Ukraine's people a more priority asset;

- innovations in the professional training of pharmaceutical professionals, aimed at developing effective methods and conditions for teaching and learning throughout life;

- value professional preparation specialists pharmaceutical industries, goal to improve the criteria by which participation and outcomes of lifelong learning are assessed;

- a re-imagining of guidance and counselling, aiming to make it easier to provide useful information and advice on learning opportunities in Europe and throughout life;

- Bringing professional training for pharmaceutical professionals closer to home, the goal of which is to provide lifelong professional training opportunities as close to their own community as possible and p the support of information and computing technology.

In the context of globalization, the question B. is fair. G. Kremenya regarding the national higher education system education: or will not be lost Ukrainian freedom, from such efforts gained in historical struggle? Not will be individual national development has been sacrificed to the processes of merging peoples and nations into a single universal human community ? What values should become a priority for a person in the modern information society [116, pp. 5–12]?

Today, as notes IN. G. Flint, acquires special relevance axiological problem direction educational process in educational institutions [115, 519 p.].

The reason for this is that the content and focus of the academic disciplines in professional preparation specialists pharmaceutical industries, educational process depends spiritual, moral and psychological culture specialists pharmacy. The educational process in the state, taking into account the needs of the individual, should be aimed at the spiritual enrichment and creative activity of a specialist in the



pharmaceutical industry, revealing his abilities for self-realization, and creating conditions for self - disclosure of others. Higher pharmaceutical education, as scientists claim, is on the verge of important changes. This encourages changes in the organization of the educational process in the VM(F)ZO and its content parts. New paradigms professional preparation specialists pharmaceutical - noy industries include such elements [145, p. 74–82]:

- the gradual loss by the teacher of the role of leader of the educational process and the transition to the status of "support" of future specialists in the pharmaceutical industry;
- future specialists pharmaceutical industries more often are performing in roles « back - "living ";
- The use of information and communication technologies and systems in the professional training of pharmaceutical industry specialists leads to the loss of the intellectual nature of training.

As convincingly demonstrated by V. G. Kremen, one of the most important means of opposing globalism is national heritage. If previously confessional, social, state, party signs, then today, as notes V. G. Kremen, the national takes precedence. Nowadays, it is the "nation" – the definition of everything concrete that opposes what exists in the virtual heights of globalism [117, 576 p.].

Research on professional training of pharmaceutical industry specialists in Ukraine in XX – on beginning XXI Art. is based on such conceptual principles:

1. Professional training of pharmaceutical industry specialists in Ukraine becomes effective if promising directions of its further development are substantiated, which are based on the trends identified by historical and pedagogical analysis and analysis of modern requirements for the development of professional training of pharmaceutical industry specialists in Ukraine. 2. Consideration of the history of professional training of pharmaceutical industry specialists is carried out for all Ukrainian lands collectively in order to achieve integrity analysis in unity and conciliarity Ukrainian state. The criterion is the period-

In order to study the history of professional training of pharmaceutical specialists



in the Ukrainian lands under the conditions of their various subordination, changes in the internal organizational and institutional development of professional training of pharmaceutical specialists were selected, which were simultaneously correlated p socio-political shifts, p the conditions of economic development of education in general, and pharmaceutical education in particular. The isolation of the period of formation of professional training of pharmaceutical specialists is determined by the criterion of the internal state of this training, which was limited in substantive and in a professional sense: special courses and pharmaceutical departments at medical faculties of universities (both in the Russian-controlled Ukrainian lands and in the lands of Western Ukraine) trained workers for pharmacy p a limited amount of knowledge and skills. Only in the early 1920s were higher pharmaceutical education institutions organized in Ukraine (then the Ukrainian SSR) - in Kharkiv, Odessa, Dnipropetrovsk (now the city of Dnipro), Kyiv. Since the determination of trends (general, special, specific) is possible only on the basis of a comparison of the development of professional training of pharmaceutical industry specialists in different historical periods and their correlation p modern challenges in the educational field, the comparison is not only a method, but also the fundamental basis of our research.

The study of trends in professional training of pharmaceutical specialists in Ukraine was carried out in certain stages.

The first stage was the comprehension of a range of issues that could form the basis of a dissertation research; historical, pedagogical, psychological, and philosophical literature was studied, legislative and regulatory acts, and archival sources were analyzed; the results of the search stage of the research were initially processed.

The second stage is the development and justification of the periodization of the development of professional training of specialists in the pharmaceutical industry in Ukraine (XX - early XXI century), the definition of criteria for comparing the development of professional training of specialists in the pharmaceutical industry in Ukraine in the XX - early XXI century. According to the developed periodization development professional preparation specialists pharmaceutical industries and early



21st centuries, historical periods were formed for studying trends in professional training of pharmaceutical industry specialists: 1921–1941 1941–1945 1945 river – the first half of the 1960s, the second half of the 1960s – 1991, 1991 – until 2017.

The third stage is to determine the trends in professional training of pharmaceutical industry specialists in Ukraine (XX - early XXI century).

In the context of the study, the concept of "trend" is interpreted as a priority direction in which the development of professional training of specialists in the pharmaceutical industry is carried out. In each historical period, general, special, and specific trends are highlighted.

The fourth stage is a comparison of trends in the professional training of pharmaceutical industry specialists in Ukraine in each selected historical period and the identification of cross-cutting trends in the professional training of pharmaceutical industry specialists in Ukraine. After a historical and pedagogical analysis of the development of professional training, preparation specialists pharmaceutical industries in to each isolated In the historical period, cross-cutting trends have been identified that are characteristic of all periods pout exception. The identification of cross-cutting trends that are characteristic of the periods developed and substantiated by us is an important aspect of the analysis of the object of research (professional training of pharmaceutical industry specialists in Ukraine), which is constantly in a state of development.

Comparing the development of professional training of pharmaceutical specialists in Ukraine in the historical periods we have determined in order to identify general, special and specific trends in professional training of pharmaceutical specialists in Ukraine provides the opportunity to analyze the system of professional training of pharmaceutical specialists in Ukraine in general, and in each historical period in particular, to clarify common and distinctive features in the formation and development of professional training of pharmaceutical specialists in each historical period, to compare them in order to determine promising areas of professional training of pharmaceutical specialists in Ukraine, taking into account historical experience. Comparative analysis was carried out for determination and justification of criteria for



comparing professional training of pharmaceutical industry specialists in Ukraine in order to identify general, special and specific trends in professional training of pharmaceutical industry specialists in Ukraine in the 20th and early 21st centuries.

The essence of the modern era, particularly in the field of education, reveals a logical chain: globalization – national idea – human-centrism. The well-known contribution of the founders Ukrainian pedagogical thoughts K. D. Ushinsky, AND. P. Makarenko, V. AT. Sukhomlynsky, G. G. Vashchenko in world pedagogical science, their works are studied in to everything world, respecting traditions Ukrainian national pedagogy. Therefore, Ukraine's entry into the international space should be accompanied by taking into account the achievements of domestic pedagogical thought.

The study of professional training of pharmaceutical industry specialists in Ukraine involves studying the process of modernization and bringing pharmaceutical education (structure, content, forms, methods, terms of professional training and quality) into line p state and international standards and the country's health care needs in providing high-quality pharmaceutical assistance to the population, providing the nation p high-quality medicines in sufficient quantities, developing new technologies for the production of medicines, and preserving the health of the nation [365, pp. 41–44].

It is necessary to resolve the issue of ensuring the implementation of scientific support for the process of modernization of professional training of pharmaceutical industry specialists in Ukraine and the implementation of the National Program “Health 2020: Ukrainian Dimension” [188, p. 11]. Professional training of specialists for the pharmaceutical industry in Ukraine on undergraduate and postgraduate stages of quantities specialties and graduates and their qualifications of each historical period outlined by us met the requirements of the labor market for pharmaceutical industry specialists in Ukraine and international requirements [72].

It is determined that the modernization of professional training of pharmaceutical specialists as a component of the development system of the pharmaceutical sector of the healthcare industry of Ukraine is based on [139, pp. 216–217]:



- implemented systems preparation specialists pharmaceutical industries, which ensure the preservation and restoration of the health of the population by providing a guaranteed level of pharmaceutical care in accordance p state standards;
- transition to a clearly structured system of pharmaceutical sector organization of the healthcare system, increasing the need for pharmacists who provide pharmaceutical help in primary links systems organizations security health;
- harmonization of the terms of professional training, the list of specialties p the requirements of the labor market and EU Directives;
- the degree of professional training of pharmaceutical industry specialists at the undergraduate and postgraduate stages, which corresponds to the principles of continuous professional development;
- implementing postgraduate professional training for pharmaceutical industry specialists by combining pharmaceutical practice and education;
- improving the quality of professional training of pharmaceutical industry specialists who are competitive in the European and global labor markets;
- continuous professional development of pharmaceutical industry specialists and confirmation of their professional competence.

The study of trends in professional training of pharmaceutical industry specialists in Ukraine was carried out on the basis of systemic, activity-based, acmeological, socio-humanistic and personality-oriented approaches, which allows us to consider professional training of pharmaceutical industry specialists as a multifunctional system.

The systemic approach provided an effective structural and functional analysis of the professional training of pharmaceutical industry specialists in Ukraine in its historical development, made it possible to consider the professional training of pharmaceutical industry specialists as a socio -cultural phenomenon, which is characterized by multifunctionality, dynamism, flexibility, openness, adaptability and humanity. The systemic approach was used to substantiate the organizational structure of the professional training of pharmaceutical industry specialists in Ukraine, as well as to identify five periods its development in XX – on beginning XXI art., detection



factors, which affect its functioning and contribute to the development of promising areas of professional training of pharmaceutical industry specialists in Ukraine [58, 224 p.; 14, 406 p.; 64, 624 p.].

As a basis for a systematic study of the professional training of pharmaceutical industry specialists in Ukraine, we will use the pedagogical system approach methodology model developed by A. G. Kuznetsova: highlighting the object and presenting it as integrally interacting with the environment; defining a special research position in order to highlight the pedagogical system in the pedagogical object; forming a methodological program; defining the methodology of systemic research as a set of methods, techniques and means for studying the pedagogical object [121, pp. 73-78].

The activity approach was used to study the forms and methods of professional training of specialists in the pharmaceutical industry, in particular during lectures, practical and laboratory classes for future specialists in the pharmaceutical industry at the Faculty of Pharmacy of the VMZO, mainly so that future specialists in the pharmaceutical industry would realize the need for higher pharmaceutical education to improve their professional level, their own spirituality, and join educational activities. On the basis of the activity and system approaches justified using modern informational technologies in professional training of pharmaceutical industry specialists in Ukraine.

The acmeological approach in the course of the study allowed us to determine the features of the professional development of a specialist in the pharmaceutical industry; to study the psychological portrait of a specialist in the pharmaceutical industry; and his professional development throughout his life.

The social-humanistic approach provided consideration of the subjective relations between teachers and future specialists in the pharmaceutical industry, which should be characterized by harmonious interdependence. This approach made it possible to consider the professional training of specialists in the pharmaceutical industry as a vital necessity, when each stage of training is filled with new content, organizational and pedagogical forms, methods and unconventional approaches to integration individual, professional, and social aspects of the life of a future pharmaceutical specialist.

A personally oriented approach contributed to the study of professional training



of pharmaceutical industry specialists as an individualized process aimed at personal development.

The need for radical restructuring and reform, based on the positions of humanity, tolerance, understanding, the highest value of man and human life – the main thing that unites the educational systems of the world. This is confirmed by the opinion of P. Yu. Sauha: "The main thing that unites all educational systems is – is the awareness of the need for a radical restructuring and reform of education towards its humanization, trend movement from schools knowledge to schools understanding, from standard "a simple specialist" to a bright personality who knows how to search and is distinguished by critical thinking " [220, 284 p.].

In the scientific works of J. Monnet, O. M. Oleksiuk, O. IN. Sukhomlynska presented a study of pedagogical education taking into account the requirements of a cultural approach. As I. notes. AND. Zyazyun, the culturological approach and its methodology "are especially valuable in that they determine the main regulations for building the content of education, including the requirements for representation, reflecting in it the main achievements of the human mind and human activity, the entire wealth of human cultures, their interconnection and interaction. These representations should not be fragmentary, but systemic, complete, necessary and sufficient for the successful entry of the subject of education into the world of culture in all its manifestations - the scientific sphere, social production, everyday life, self-development, etc., its mastery and, if possible, development. That is, first of all, such a regulation as integrity is needed in the implementation of the culturological approach" [81, p. 21].

AT. IN. Oliynyk considers the culturological approach in the context of a general philosophical understanding of culture, analyzing pedagogical facts and phenomena taking into account social and cultural processes past, modern and future as "a set of theoretical and methodological provisions and organizational and pedagogical measures, directed on creating conditions for assimilation and broadcasts of pedagogical values and technologies that ensure the creative self-realization of the teacher's personality in professional activity" [176, p. 39].



According to T. IN. Ivanova, in the light of the cultural approach to education, its epicenter there are man as free individuality, capable to personal self - determination in culture” [82, p. 71].

Recent scientific developments suggest that economic growth must be stopped and transformed into the harmonious development of humanity, that is, into the process of improving man himself, his creative and spiritual nature, into the process of accumulating knowledge and improving technologies at a quasi-zero economic growth. The development of humanity has no limits [141, 460 p.].

The cultural approach in the study of trends in professional training of pharmaceutical specialists in Ukraine is used to analyze the problem of developing professional training of pharmaceutical specialists, taking into account cultural diversity and preserving the educational features and traditions of the Ukrainian nation; determining the promising goals of professional training of pharmaceutical specialists, taking into account national culture. Since the traditions of the Ukrainian nation are reflected in the field of education, in the cultural context, professional training of pharmaceutical specialists is considered as stimulating the development of national culture.

The study of the problem necessitates the need to resort to a holistic approach, the main feature of which is “the analysis of the integrity of the studied and projective phenomenon of the quality of the personality, the personality as a whole, the pedagogical process, its fragment, the ways of ensuring and increasing its integrity, which is provided by in case the methodology of a holistic approach is implemented in the process of implementing milestones of other approaches” [81, p. 22].

In the study of professional training of pharmaceutical industry specialists in Ukraine, a holistic approach was implemented to study the professional training of pharmaceutical industry specialists in Ukraine as an object of research from the position of a complex whole, and not in isolation from other related objects; identification of the main elements professional preparation specialists pharmaceutical industries as goals-

dream systems, specifics these elements, their features; detection those elements



that allow influencing the holistic system; studying essential connections that influence the phenomenon and development of the pedagogical process.

The implementation of a holistic approach allows us to determine the place and role of the phenomenon, the process under study, in macro- and micro-integrity; it helps to identify the degree of development, state that one or another problems in science and its solution on practice; allows a comprehensive study of the object of research, to penetrate the essence of the process, phenomenon, and to identify essential and non-essential connections [132, pp. 39-40].

system of professional training of specialists in the pharmaceutical industry in each historical period. The concept of a synergistic approach is considered in pedagogical science in the framework of systemic pedagogical research on improving and increasing the quality of training of pedagogical personnel. The synergistic approach allows “to consider the modern sphere of education as the interaction of complex subsystems capable of self-organization, self-development and self-management, as well as a means that ensures the integration of different ways of knowing the world around a person, increases his creative potential for free and meaningful actions, open perception and holistic awareness of the world” [118, p. 39].

Research into trends in the professional training of pharmaceutical industry specialists, taking into account the requirements of the synergistic approach, requires the realization that most of the functioning systems are open-type systems. The synergistic approach made it possible to show the multifaceted and complex nature of the professional training of pharmaceutical industry specialists, the diversity of manifestations of its theoretical foundations and practical implementation at different stages of development.

based on the principles of: objectivity, which combines historical, economic, political, social, cultural, and educational factors; unity of the historical and logical; integrity, continuity, and systematicity; understanding of the personality of a pharmaceutical specialist as a subject of the historical process and the process of self-development, recognition of the professional training of pharmaceutical specialists as a phenomenon that contributes to the development of the specialist's personality.



In accordance with the tasks of scientific research, a complex of interrelated and complementary methods of research into trends in professional training of pharmaceutical industry specialists was used, in particular: theoretical - historical - chronological, which made it possible in a historical retrospective to study socio-economic, socio-cultural, pedagogical facts and phenomena of the development of professional training of pharmaceutical industry specialists at different stages of the existence of the USSR, the Ukrainian SSR and independent Ukraine, to consider trends in professional training of pharmaceutical industry specialists in a logical sequence; structural-system analysis - in order to cover all structural components of professional training of pharmaceutical industry specialists in the systemic integrity and interdependence of its components; terminological analysis - determination of the main basic concepts of the study; method of scientific identification - analysis of archival and scientific sources in order to ensure the reliability of the results obtained; general scientific methods – analysis, synthesis and generalization of the main provisions of legislative, regulatory documents, scientific works and archival sources, which contributed to the objective coverage of historical circumstances under the influence of which the development of professional training of specialists in the pharmaceutical industry in Ukraine was carried out; component- structural, system-structural, system-functional methods, which made it possible to isolate the main components of the system of professional training of specialists in the pharmaceutical industry, substantiate regularities and identify the features of their development; a number of empirical methods (observation, conversations, interviews) made it possible to identify the current state of various aspects of the problem under study; the method of mathematical statistics to substantiate the results of comparing trends in different periods, their display in graphic forms and tables.

The competency-based approach contributed to identifying the features of the implementation of professional training of pharmaceutical industry specialists in Ukraine in the historical periods we have identified in the VM(F)ZO; determining the content, forms and methods of professional training of pharmaceutical industry specialists in Ukraine. The competency-based approach made it possible consideration



professional preparation specialists pharmaceutical industries as

one that ensures their ability to perform effectively professionally and lays the foundations for professional and personal development.

The anthropological approach was used in theoretical analysis to study a pharmaceutical specialist as a biosocial being who interacts p nature and society according to certain norms, values, traditions, rules, and develops in a cultural environment; to study the uniqueness and originality of an individual capable of self-development and self-improvement.

The hermeneutic approach contributed to understanding the content of documents and materials, which relate to development of professional training of pharmaceutical specialists industry in Ukraine in the 20th and early 21st centuries, determining the main principles of its scientific and practical development, which is especially important when working out the source base of the study.

The methodology of comparative research in the analysis of professional training of pharmaceutical industry specialists in Ukraine, which focuses on the study of the universal and the specific, made it possible to study the general, special and specific in the system of pharmaceutical education.

Since the professional training of specialists in the pharmaceutical industry at different stages of historical development was modernized in the conditions of the disunity of Ukrainian lands, in the context of the socio-political conditions of the states to which this or that part of Ukraine belonged, certain and quite significant differences were observed in the systems of professional training of specialists in the pharmaceutical industry, and accordingly their modernization. Therefore, the study examines the process of modernization of professional training of specialists in the pharmaceutical industry from the 20th century on the territory of Ukraine, which was initially part of the Russian Empire, later – to the Ukrainian People's Republic, and then joined in 1937 in the status of the Ukrainian SSR to the USSR. Changes in the professional training of specialists in the pharmaceutical industry on the territory of Western Ukrainian lands during their accession to Austria-Hungary until 1917 are considered. p, as well as in the 20s and 30s XX years Art. – during their accession to



Poland, Romania, Czechoslovakia. After the annexation of Western Ukrainian lands (since 1937 (year), when Ukraine was territorially the only one republic in warehouse USSR, is highlighted process professional training of specialists in the pharmaceutical industry of a unified pharmaceutical education system. The study concludes p the period of formation of national state policy in the field of education, a new nationally directed modernization of professional training of specialists in the pharmaceutical industry (since 1991) – the year of the proclamation of the sovereign Ukrainian State – until 2017).

Studying and understanding the trends in professional training of pharmaceutical industry specialists (achievements and successes, miscalculations and shortcomings), which is the content of our research, will make it possible to identify the patterns of professional training and the pedagogical foundations of the modern modernization of professional training of pharmaceutical industry specialists in Ukraine, as a priority industry in the state.

We believe that the harmonious combination of the acquired domestic experience in professional training of pharmaceutical industry specialists p the borrowed best examples of international trends is the integration of domestic pharmaceutical education into the international educational space and is based on the “priorities of national interests”, which is fully consistent p paragraph 36 of Chapter 15 of the "National Development Doctrine" education in Ukraine» [162, 24 p.]. Having yours national system, Ukraine is modernizing the Military-Electricity Service based on national traditions and culture.

Thus, the concept of studying trends in professional training of pharmaceutical industry specialists in Ukraine (XX - early XXI century) is based on the development of periodization of the development of professional training of pharmaceutical industry specialists in Ukraine and the priority of a separate (monographic) study of professional training of pharmaceutical industry specialists in Ukraine in each historical period.

The methodological basis for the study of professional training of pharmaceutical specialists in Ukraine in line p the trends associated p the transition from the classical



to the post-non-classical paradigm in education is a system of interrelated scientific approaches (comparative, systemic, activity-based, acmeological, socio-humanistic, personality-oriented, culturological, holistic, synergistic, competency -based, anthropological, hermeneutic approaches and the methodology of comparative studies).

Preservation of the past in the people's memory also involves following glorious traditions, educating people in a spirit of gratitude and honesty towards the past and the present. Knowledge and respect for the diversity of the history of professional training of specialists in the pharmaceutical industry and pharmacy, medicine and health care presupposes, first of all, love for Ukraine [60, 76 p.].

The history of the development of professional training of specialists in the pharmaceutical industry, as well as the history of the development of education in general, is extremely relevant in the context of reforming and improving the organization of the educational process in the Higher Educational Institutions of Medicine (PhD), since an objective analysis of past experience is important in the further development of science and education.

The issue of the development of professional training of specialists in the pharmaceutical industry is connected not only p the history of pedagogy, the history of the development of higher medical (pharmaceutical) education, but also p the history of medicine, domestic and world pharmaceutical science, the history of pharmacy, the development of the health care system, the development of medical and pharmaceutical science, and the general history of Ukraine. Therefore, works in these areas are of interest for this dissertation research [248, pp. 169–175].

The first historians of medicine are described in the article “History of Medicine as a Science and University Discipline in the World and in Ukraine” by Ya. Hanitkevych [124, 23 p.].

Certain issues of the development of medical science and education were covered in their works by S. Kovner, E. Ozarkevich, O. Korchak- Chepurkivsky, O. Puchkivskyi et al. [43, pp. 54–60].

Pharmacy, like medicine, belongs to an ancient specialty that arose from the vital



needs of everyday life at the dawn of humanity and, together p the entire human community, has gone through a long historical path of development.

Evolution domestic pharmacies illuminated in their own scientific works of M. L. Siatina. History pharmaceutical affairs – it history long-term and heroic

the efforts of mankind aimed at finding and improving medicinal and preventive means to combat diseases, the history of the formation, establishment, development and functioning of pharmacy [279, p. 3].

Formation and development scientific historical and pedagogical research in Ukraine in the XX century studied in the scientific work of O. Cherkasov. Researching the scientific works of outstanding scientists specified period, author notes, What "history education developed mainly in context general humanitarian, public knowledge" [317, p. 8]. Oh. Cherkasov analyzed the formation of the basic principles of historical and pedagogical research, isolation stories pedagogy as scientific direction [317, p. 1–16].

Pharmacy, as an integral part of public health care, is directly dependent on the real situation in the state, the level of economic and social development of society [279, p. 527].

When determining the periodization and chronological boundaries of the study of professional training of pharmaceutical specialists in Ukraine, it is worth noting that they are quite relative and schematic, since it is very difficult to find the starting points or completion of certain trends in the development of pharmaceutical education due to their multidimensionality, wave-like nature, dependence on socio-economic, socio-political, socio-pedagogical and cultural factors [359, pp. 54–57].

The chronological boundaries of the study cover the period of the 20th century. century - beginning of the 21st century century (until 2017). *The lower* chronological limit of the study of professional training of pharmaceutical industry specialists in Ukraine (XX century) is due to the low socio-economic development of the country, the organization of the pharmacy business and the related development of professional training of specialists in the pharmaceutical industry. *The upper* chronological limit of the study (the beginning of the 21st century) century) is due to significant socio-



economic transformations in Ukraine, the emergence of the related labor market and the phenomenon of unemployment, world globalization processes, informatization of society, development, integration and internationalization of professional training of pharmaceutical industry specialists in the conditions of independent Ukraine, the need to adapt a pharmaceutical industry specialist to modern realities of life.

It is worth noting that at the beginning of the twentieth century due to economic backwardness In the territory of the Russian Ukraine, its own pharmaceutical industry was not created. According to the decisions of the IX Pirogov Congress (St. Petersburg, 1904), it was necessary to file a petition p the Ministry of Internal Affairs of the Russian Empire regarding the urgent reform of the existing organization of the pharmacy business, since the right to manufacture medicines was granted exclusively to pharmacies, and pharmacists prevented the emergence of a national pharmaceutical industry [55, p. 13–14]. To avoid this monopoly barrier, foreign pharmaceutical companies rented pharmacies p the subsequent creation of industrial laboratories for the production of galenic and some other pharmaceutical preparations. Thus, almost 70 % of medicines were imported from abroad, and chemical medicines, What were produced on territories sub-Russian Ukraine could to satisfy only 9% of the real need for them, galenic preparations, respectively, 36% [279, p. 206].

As of 1910 of the total number of 4536 pharmacies operating in the territory sub-Russian Ukraine, 70 % (3151) belonged pharmacists, and exactly: 51.5 % – pharmacists, 16.5 % – pharmacy assistants and 1.3 % – Masters of Pharmacy. Public institutions and private organizations (provincial and city governments) owned only 199 pharmacies (4.4 %): city councils – 35, provincial zemstvos – 12, and county zemstvos had 152 pharmacies [279, p. 208].

To increase the volume of medical assistance to the population of the zemstvo, direct contacts were established p foreign pharmaceutical companies, which contributed to a reduction in expenses from local zemstvo budgets by 20-25%. %. The purchase of medicines by zemstvos from foreign companies led to the fact that that domestic druggists were forced to seriously study the world market of pharmaceutical materials and reduce drug prices [279, p. 209].



It should be noted that due to the fact that in 1912 In 1918, the government of Tsarist Russia, under pressure from the decisions of the Pirogov Congresses, granted the right to zemstvo and city self - governments to open “free” pharmacies on the basis of decisions of zemstvo assemblies and city councils, and this, in turn, contributed to the development of zemstvo medicine and the expansion of zemstvo pharmacy networks and as consequence development pharmaceutical market and professional preparation specialists pharmaceutical industry.

December 28, 1918 After the signing of the decree of the Council of People's Commissars of the RSFSR on the nationalization of pharmacies and other pharmaceutical institutions, all pharmacies were taken out of the hands of private owners and transferred to the People's Commissariat of Health, which also included a pharmaceutical department. In 1919 In 1921, work began on the consolidation of medicinal raw materials and their transfer to state institutions for processing and use. The Council of People's Commissars issues a special decree on the collection and cultivation of medicinal plants, and in 1931 The All - Union Research Institute of Medicinal Plants is established [156, p. 12].

A characteristic trend of the early twentieth century In the 19th century, there were significant savings on the purchase of medicines, which allowed the zemstvos to switch to the practice of providing medicines to the population at reduced prices or free of charge. For example, the population of 52 villages of the Dnipro district zemstvo, which suffered from crop failure, and other zemstvos, were exempted from paying for medicines [217, p. 62].

The development of the pharmaceutical industry and education was facilitated by the development of the pharmacy network in Ukrainian lands. Pharmacy network in the regions of Ukraine at the beginning of the 20th century century. despite adverse circumstances gradually increased. The largest number of pharmacies was in Poltava region, namely: three pharmacies in Poltava and Kremenchuk, one each in Reshetylivka and Yagotyn. There were private pharmacies in each county town [193, p. 33–34].

A major local industry for the peasants of the Lubensky district of the Lubensky



province was the cultivation, collection and sale of medicinal plants, which contributed to the development of the pharmaceutical industry of that time. From Luben abroad only in 1912 In 2011, over 14.5 thousand poods of medicinal herbs were sent [193, pp. 33–34].

In the development of the pharmaceutical industry at the beginning of the 20th century the greatest progress was achieved in the center of the Ukrainian lands of the Russian Empire – in Kyiv, where there were three large pharmacies on Khreshchatyk, two on Volodymyrska Street, and one each on Velyka Vasylykivska and Velyka Pidvalna Streets [103, p. 41].

At the beginning of World War I, 468,000 Kyiv residents were able to seek medical treatment. in case need to services 43 pharmacy, 146 pharmacy warehouses, pharmacy and perfume shops. Great importance in the development of professional training of specialists in the pharmaceutical industry early 20th century. had public organizations and societies. In Kyiv at that time there was the “Southwestern Union of Pharmacists” (1907) [690, sheet. 204], “Kyiv Pharmaceutical Society of Mutual Aid”, “Kyiv Society of Pharmacists” (chairman – Master of Pharmacy Jan Adolfovich Marcinchyk). Various chemical, chemical-medical and bacteriological analyses were carried out by the Chemical-Pharmaceutical Institute and the Bacteriological Institute, which operated under the " Kyiv Society of Pharmacists". In addition, the Chemical-Pharmaceutical Institute conducted training courses, which contributed to the development of professional training of pharmaceutical specialists. industries that time. IN Kyiv also appeared weekly in 1912–1913 "All-Russian pharmaceutical herald" [96, p. 356, 362, 547–548].

From archival documents, in particular from 05.12.1906 r., we learn about the formation of the "Professional Society of Pharmacists of the Kyiv Province" and its legalization in 1907 from the report of the senior factory inspector of the Kyiv province dated 13.03.1907 Archival sources indicate that the aforementioned professional union of pharmacists of the Kyiv province functioned in 1908. and resolved issues regarding the activities of the pharmacists' union [696, sheet. 143–144; 697, sheet. 63; 665, sheet. 279].



Also from the report to the Police Department dated 12/21/1906 regarding the meeting of the illegal Kharkiv Union of Pharmacists in the city. In Kharkiv, we have information about the formation of the Kharkiv Union of Pharmacists and Pharmacy Assistants and Assistants. pharmacist, which entered to warehouse specified union [666, arch. 204; 667, sheet. 205]. From the message to the city governor dated 05/16/1911 We also learn about the activities of the illegal union of pharmacists in Kharkiv (formed in 1907). year), to the composition whose entered master pharmacies L. AT. Resenfeld [683, 224 ark.; 682, sheet. 33; 681, sheet. 32; 701, sheet. 145].

In 1907 In Romny, Poltava province, the “Union of Pharmacists” operated, which was also of great importance for the development of professional training of specialists in the field of this period [680, sheet. 241]. In particular, the resolution of the general meeting of this union states: about: reform pharmacy order; increase pharmaceutical education to entry into pharmacy; preservation of apprenticeship and abolition of pharmacists' assistants; negative attitude towards trainees; abolition of local hospital departments p the separation of the pharmaceutical department (see Appendix D).

In Kherson 1907 In 1991, the society of pharmacists employed by the city operated. Kherson and the district [684, sheet 2].

About the intentions to establish a professional association of pharmacists of the Kyiv, Podolsk, Volyn, Poltava and Chernihiv provinces at the beginning of the 20th century from archival sources dated June 28, 1908 [694, pp. 255–256].

In 1908 In 1945, branches of the illegal “Southwestern Union of Pharmacists ” operated in Poltava [675, sheet. 1] and Kremenchug, which included pharmacists ' assistants. [668, sheet. 161; 669, sheet. 164; 670, sheet. 162; 671, sheet. 163; 676, sheet. 2]. Also in 1908 In 1991, a branch of the unlegalized “Southwestern Union of Pharmacists” operated in the city of Sumy, Kharkiv province [691, sheet 278].

In the newspaper "Poltava News" No. 207 for 1908 r., which was published daily, the local chronicle stated that the board of the professional union of pharmacists of the Kyiv, Podolsk, Volyn, Poltava and Chernihiv provinces under the name “South-Western Union of Pharmacists” opened branches of the society in Kremenchuk and Poltava. Authorized representatives of the branches in Kremenchuk – pharmacist ' s



assistant Kalman Gabai, and in Poltava – pharmacist's assistant Abram Shpolsky (see Addition D) [672, arch. 3; 673, arch. 10; 674, arch. 18 678, sheet. 1a;

679, sheet. 11; 711, sheet. 31; 712, 33 [archive sources also show that since 1907 the newspaper “Pivdennyi farmaztvvet” was published in Kremenchuk. From archival sources we learn that in 1908 In 1999, the charter of the professional society “Southwestern Union of Pharmacists” was changed [692, p. 269].

In the Charter of the Professional Society of Pharmacists of the Kyiv Province [688, sheet. 593; 689, sheet. 594] clearly states that for the professional training of specialists in the pharmaceutical industry, among the main goals of this society were: to promote the intellectual, professional and moral development of all members of the society; to organize meetings and congresses, both on general issues and on special issues, What concerned pharmacies; for assistance professional and moral development employees pharmacists were organized clubs, libraries, reading rooms, public lectures, excursions, readings, courses and interviews for general educational purposes and to clarify current issues of life that affected the professional interests of pharmacists, in addition, a periodical was published.

In the message of the board of the Professional Society of Pharmacists of the Kyiv Province dated 10.02.1908 r. indicated the election of officers of the board of directors of the company.

It was also opened on 11/24/1908 branches of the professional society "South - Western Union of Pharmacists" in Yelysavetgrad, Mykolaiv and Zhytomyr [693, sheet. 280], which contributed to the development of the pharmaceutical industry and professional training of specialists in the mentioned Ukrainian lands.

, namely from the report of the head of the Kyiv Security Department dated 26.02.1909 We have information about the functioning of the "Professional Union of Pharmacists" in the city. Kyiv and its management of the pharmacists' strike.

"Kyiv" pharmaceutical company" functioned and in 1912 List of pharmacists who were members of the "Kyiv Pharmaceutical Society " in 1912 The year is given in a clipping from the newspaper "Latest News" dated October 1, 1912, No. 18 in the section "Among Pharmacists" and there are archival documents from 03.10.1912 r.,



which indicate the existence of the charter and list of founders of the " Kyiv Pharmaceutical Society ".

Confirmation of the functioning of the "Kyiv Pharmaceutical Society " in 1913 There is a clipping from the newspaper "Kyivska Dumka" dated May 14, 1913. r. for number 132, which refers to the date and venue of the congress of pharmacists.

The Charter of the Kyiv Pharmaceutical Society states that for the professional training of specialists in the pharmaceutical industry:

– Funds are provided to young pharmacists who needed a position or funds to live on campus to take the exam;

– at increase capital to 1500 ruble are purchased necessary textbooks for preparing for the exam for the degree of assistant and pharmacist;

– if the funds of the pharmacists' society increased significantly, a library of special scientific and general educational books was established and all members of the society, pout exception, used the books free of charge according to established rules;

– if the reserve capital of the pharmacists' society increased significantly, then pharmacies, chemical laboratories, etc. were opened;

– In the event of the termination of the company, all capital was to be transferred to the Imperial University of St. Volodymyr, the faculty at which pharmacists attended lectures, to award a scholarship to one or more future pharmacists.

"Southwestern union pharmacists» functioned and 1914 r.

In 1913 In 1991, there were 1,067 pharmacies operating throughout the territory of Russian-occupied Ukraine, of which 1,024 belonged to private owners and 43 – zemstvos. Thus, there was one pharmacy for every 24 thousand inhabitants of Ukraine (in Kyiv the situation was much better, since there was one pharmacy for every 10.9 thousand citizens). As for the specialists in the pharmaceutical industry, 2009 pharmacists worked in these pharmacy establishments, among them 758 p higher and 1251 p secondary pharmaceutical education.

From the report of the pharmaceutical department of the medical department of the Ministry of Public Health and Welfare in 1918 It is known that rules were



established on the educational qualification required for entering pharmacies by pharmacy students, and a special circular was also issued (see Appendix I). Regarding the issue of professional training of specialists p higher pharmaceutical education, the Ministry of Public Health and Welfare fully agreed p the Ministry of Education on the establishment of a separate Interdepartmental Commission, due to the fact that the opinions expressed by the Ministry of Education not only did not reduce the importance of the Ministry of Public Health and Welfare's representation, but even increased it, because the Ministry of Public Health and Welfare introduced its own act on the basis of which amendments and changes could be made, so that this matter would not be left completely pout movement.

Analysis documents National archival fund Central State Historical Archive of Ukraine (city) Kyiv) indicates that in Zhytomyr in 1918 In 1991, six-month evening (preparatory) courses were created for professional training for the title of pharmacist apprentice.

According to archival sources, the period of activity of the People's Commissariat of Education of the Ukrainian SSR and its departments from 1918 until 1920 included the following list of medical, chemical and pharmaceutical educational institutions that contributed to the development of professional training of specialists in the pharmaceutical industry in the indicated years [413, sheet. 224]: 7 universities (Katerinoslav Medical Academy, Katerinoslav Medical Institute, Kyiv Medical Academy, Kyiv Medical Institute, Kyiv Institute of Health Care, Kharkiv Medical Academy, Kharkiv Medical Institute); 1 technical school (Vinnytsia Pharmaceutical Technical School); 1 school (Kremenchuk Obstetrics and Paramedics School).

In the development of professional training of pharmaceutical industry specialists in Ukraine since 1921 until 2017 *Five periods* have been identified. The division is based on the criteria of changes in the internal organizational and institutional development of professional training. specialists pharmaceutical industries, which simultaneously correlate from socio-political changes, p the conditions of economic development of education in general, and pharmaceutical education in particular. The isolation of the period of formation of professional training of specialists in the



pharmaceutical industry is due to the criterion of the internal state of this training, which was limited in content and professional sense. Only in 1921 in Ukraine (then the Ukrainian SSR) were institutions of higher pharmaceutical education organized. *The first period* – 1921–1941 – formation of the system of (secondary and higher) pharmaceutical education as a separate branch; *the second period* – 1941–1945 – curtailment of the development processes of the system of professional training of specialists in the pharmaceutical industry, its conservation in the conditions of the Second World War; *the third period* – 1945 - the first half of the 1960s - the restoration and expansion of the system of professional training of specialists in the pharmaceutical industry; *the fourth period* – second half of the 1960s. – 1991 - modernization and ideologization of professional training of specialists in the pharmaceutical industry; *fifth period* - 1991 - until 2017 r. – formation nationally directed professional preparation specialists pharmaceutical branches in conditions integration our states in world educational space [236, p. 89].

Lower limit of the first period – 1921–1941 years was due to the formation of a system of (secondary and higher) pharmaceutical education as a separate branch. There was no unity in resolving the issue of ways to develop professional training of specialists in the pharmaceutical industry in the conditions of the disunity of Ukrainian lands at that time, since professors and masters of pre-revolutionary Ukrainian schools insisted on training specialists of a single type p higher education, and the leaders of the union of pharmacy workers insisted on creating a single pharmaceutical education p a limited program pout training specialists p higher education.

There were also different positions on the issue of the duration of training, and projects for a four-year technical school, a three-year school, and a two-year school were proposed.

Pharmaceutical education not acquired necessary development. IN result constructive discussions was accepted name higher schools as pharmaceutical, and not chemical and pharmaceutical. Besides that was accepted decision about creation two-year-old schools p six trimesters, but p the caveat that this is the "first step of pharmaceutical education." AND question of creation higher pharmaceutical schools



for professional training specialists industries remained not resolved [8, p. 20–21].

The principles and foundations of pharmaceutical education and its prospects for differentiation were determined at the First All-Union Conference on Pharmaceutical Education, namely:

– To ensure the pharmaceutical industry, there must be a separate network of secondary and higher educational institutions; those that exist in some higher technical educational institutions, pharmaceutical cycles, cannot provide proper pharmaceutical training. preparation;

– secondary and higher schools of pharmacy – degrees of a unified system of pharmaceutical education and therefore programs must be coordinated;

– For the purpose of mutual support, scientific research and development of new production methods, pharmaceutical schools should be more closely linked p pharmaceutical laboratories, factories, and pharmacy enterprises;

– Due to the complete unity of the tasks facing the pharmaceutical industry throughout the territory of Ukraine and in order to eliminate discrepancies in the qualifications, rights and obligations of pharmaceutical workers, the system of pharmaceutical education should be unified [8, pp. 20–21].

Exactly 1921 river began institutionalization pharmaceutical education, What contributed to the development professional preparation specialists pharmaceutical industries p higher education. In the 20s of the 20th century, the pharmacy network of Ukraine increased by 637 pharmacies (excluding Za- walking Ukraine). Number pharmacy shops and shops sanitation and hygiene increased in over 2.6 times [216].

The main components of the dynamic development of professional training of pharmaceutical industry specialists in the 1920s XX years century: pharmaceutical education, continuous progress in the development of natural sciences and improvement of chemical analysis methods, pharmaceutical industry, pharmacy network and information field of pharmacy. Only under the condition of coordinated and effective work of all components was it possible to achieve the main goal of the pharmaceutical industry - ensuring the health of the nation.

An important event occurred in January 1926. in the Western Ukrainian lands



during their accession to Poland, when the Minister of Religion and Public Education of Poland by his orders legalized the creation of the first Faculty of Pharmacy at the University of Warsaw. The curriculum of the faculty was designed for a 4-year term, after three years of study, students received a Master of Pharmacy degree, another year, subject to the successful defense of a doctoral thesis and passing the relevant exams, led the candidate to be awarded the degree of Doctor of Philosophy. In the territory of the Polish state, the Faculty of Pharmacy of the University of Warsaw remained the only separate unit for the professional training of future specialists in the pharmaceutical industry p the same rights and privileges as other faculties until the beginning of World War II [211, 24 p.].

A characteristic feature of the professional training of pharmaceutical specialists in 1930–1939 years is the distribution of curriculum disciplines into professionally oriented and special cycles and the predominance of the specific share of practical classes compared to lectures.

Development professional preparation specialists for pharmaceutical industries and pharmacy as a whole was also facilitated by the fact that instead of branches of the All-Ukrainian Pharmacy Administration were organized p 1 March 1935 river regional pharmacy departments throughout the territory of Ukrainian lands, and this, in turn, contributed to the development of the pharmacy network and the growth of the number of specialists in the pharmaceutical industry [280, p. 123].

For example: by the end of 1934 In 1993, there were 73 pharmacies in the Chernihiv region [. 1936 river openly 8 new rural pharmacy and 2 – in regional center [38, p. 22–36]. During 1921 – 1940s is happening improve forms and teaching methods, educational plans and programs, increases subject scientific research, is growing chain pharmacy and number specialists pharmaceutical industry, begins preparation pharmacists by correspondence form teaching, approval of status pharmaceutical education in system higher education in general, What led in final result to its isolation as independent educational and scientific industry.

Upper limit of the first period – 1921–1941 years – caused by the cessation of the expansion of the pharmacy network and the growth of the number of specialists in the



pharmaceutical industry, the curtailment of the development of pharmaceutical science and, accordingly, the reduction in the number and contingent of secondary medical (pharmaceutical) schools and medical (pharmaceutical) colleges in Ukraine on the eve of World War II. For example, on the eve of World War II in Chernihiv region there were 98 pharmacies: city – 33, rural – 65, pharmacy points – 346, pharmacy warehouses – 2, pharmacy stores – 4 [38, pp. 22–36].

Lower limit of the second period – 1941 – 1945 – caused by the curtailment of the development processes of the system of professional training of specialists in the pharmaceutical industry, its conservation in the conditions of the Second World War. Among the main trends in the professional training of specialists in the pharmaceutical industry in 1941–1944 It is worth noting the unification of the curricula of pharmaceutical courses p the requirements for professional undergraduate training of future specialists in the pharmaceutical industry in universities of other countries, for example, Germany; the absence of general education disciplines in the curriculum; the widespread use of lectures and practical classes in the process of professional training of future specialists in the pharmaceutical industry.

Upper limit of the second period – 1941–1945 – was caused by the post-war revival of professional training of specialists in the pharmaceutical industry, the expansion of the pharmacy network. The trend towards the development of the pharmaceutical industry and professional training of specialists for the pharmaceutical industry took place practically throughout the territory of Ukraine. For example, in 1945 In 2011, 38 pharmacies, 4 specialized stores and a single regional pharmacy warehouse operated in Drohobych region. These data testify to the great activity of the Drohobych Regional Pharmacy Department in creating a powerful network of pharmacies, pharmacy kiosks and points, specialized medical stores and promoting the development of professional training of pharmaceutical industry specialists in Drohobych and Drohobych region. [224, p. 288].

Post-war restoration of professional training of pharmaceutical specialists starting in 1944 took place throughout the territory of Ukraine, namely – restoration of the structure of pharmaceutical faculties according to the pre-war model and involvement



of specialists from all regions of Ukraine and the USSR in the professional training of future specialists in the pharmaceutical industry, as well as the creation of a management system for medical (pharmaceutical) institutes of Ukraine.

Lower limit of the third period – 1945 – the first half of the 1960s – was due to the restoration and expansion of the system of professional training of pharmaceutical industry specialists, an increase in the number of pharmaceutical industry specialists p higher pharmaceutical education, necessary for the development of pharmaceutical science and pharmaceutical industries in whole and improvement software population Ukraine p medicines, as evidenced by a letter from the Ministry of Health of the Ukrainian SSR to the Ministry of Health of the USSR p a request to improve the republic's supply of medicines, January 7, 1950.

On October 1, 1951 In 2008, 19,658 people worked in the system of the Main Pharmacy Department of the Ukrainian SSR, including pharmacists. – 9558, including 3670 pharmacists (or 38.8 %). According to the order of the Minister of Health of the USSR No. 526 management staff of apparatuses, laboratories, warehouses and pharmacies p more than 15 thousand prescriptions per year belonged replacement pharmacists to 01.01.1954 river On Ukrainian SSR was replaced over 400 people for specialists p higher pharmaceutical education – for pharmacists. Including more than 70 employees of the apparatus were replaced. The composition of pharmaceutical inspectors was completely renewed, where out of 95 people, 92 had higher education, of which 48 people were graduates of pharmaceutical institutes in 1947–1950.

From general quantities 3396 pharmacists in Ukraine as of on 01.10.1950 river 2746 worked in cities and 650 – in district centers and rural localities.

For 1950 In order to improve the professional training of industry specialists, 250 pharmacists, including: pharmacy managers, passed through the Institute of Improvement. – 101, controller receptors – 101, pharmacy organizers (staff and reserve employees) – 17 people, analysts – 26, inspectors – 22.

On the ground, pharmaceutical institutes and the Central Scientific and Research Laboratory of Ukraine conducted courses to improve the education of 650 people under the program of the Department of Special Medical Care of the Health Department.



To develop the professional training of specialists in the pharmaceutical industry of Ukraine, scientific and practical conferences were systematically held in regional centers and other large cities of Ukraine by the Central Scientific and Research Pharmacy Laboratory, pharmaceutical institutes and pharmaceutical societies. For improvement professional training of specialists In the pharmaceutical industry of Ukraine during the specified period, republican and regional meetings and radio roll calls were organized p the involvement of pharmacy workers from a large number of cities and districts of Ukraine.

In addition, all young pharmaceutical professionals nominated in 1950 r. in devices pharmacy departments, p 01/05/1951 river were caused on courses at Institute for the Advancement of Pharmacists.

In an appeal from the State Administrative Service of the Ministry of Health of the Ukrainian SSR to the Central Committee of the Communist Party of Ukraine regarding the needs of the city. Kyiv in the cadres of pharmacists (August 1, 1957): “...at present there are 87 vacant positions in the city’s pharmacies, and if we take into account that 103 men over the age of 55, mostly women, and 101 men over the age of 60, work in the city’s pharmacies, then we should expect a further deterioration in the provision of pharmaceutical personnel, taking into account the retirement of a number of workers.”

The lower limit of the third period is also due to the continuation of the post -war revival of pharmaceutical education, rapid scientific and technological progress in the world and the associated development of pharmaceutical education abroad, and the adoption of the Law "On Strengthening the Connection between School and Life and on the Further Development of the Public Education System in the USSR" (1958).

Upper limit third period – 1945 river – first half 1960s years – due to the expansion of the system of professional training of specialists in the pharmaceutical industry, the emergence of a need for pharmacist specialists, who should work in the system of the Kyiv Regional Pharmacy Department and inadequate medical supply population Ukraine (Letter secretary Kharkiv regional committee CPU N. AND. Pernach to the Central Committee of the Communist Party of Ukraine regarding the inadequate



medical supply in the region, 28 March 1962 river [650, arch. 4]). According to p by letter Ministry of Health Ukrainian SSR to CC Communist Party Ukraine: "We inform you, What in this 1961 year pharmaceutical institutes and Faculty of Pharmacy - aunts Ukrainian SSR finishes 473 pharmacists. From this one quantities 75 is being sent in others republic - medicines and agencies, 40 – remains pout appointment due to family circumstances. Thus in a way, for distribution between 25 regions Ukrainian SSR left 358 pharmacists. From the number pharmacists – graduates 1961 r., which remain in Ukrainian SSR, in Order of the Kyiv Regional Pharmacy Department 40 people are sent. However, pharmacy institutions of other regions of the Ukrainian SSR staffed p pharmaceutical personnel worse than m. Kyiv. Yes, if in the city. In Kyiv, there are 6.8 pharmacists per 10,000 population, and in Kyiv Oblast region – 4.3, then in Vinnytsia, Volyn, Kherson – on 2.7, in Luhansk - staff – 3.2 and etc. But in specified and others areas Ukrainian SSR p release 1961 river "There are significantly fewer pharmacists sent than to Kyiv and the Kyiv region." For example, in 1963 river on Chernihiv region acted 139 pharmacy, 830 pharmacy points, their served 488 pharmacists, in particular 155 pharmacists [54, p. 23]. For comparison: in 1917 existed in the Chernihiv province 57 pharmacies, and in 1968 already acted 174 pharmacies and 827 pharmacy points [112, pp. 12–14].

A characteristic feature of the outlined period is the introduction of the honorary title "Honored Pharmacist of the Ukrainian SSR" (Letter of the Ministry of Health of the Ukrainian SSR to the Central Committee of the Communist Party of Ukraine p a proposal to introduce the honorary title "Honored Pharmacist of the Ukrainian SSR", August 4, 1962) and the developed draft regulations on the honorary title "Honored Pharmacist of the Ukrainian SSR", August 21, 1962. Among the main trends of the outlined period – introduction of new forms of organizing the educational process in the professional training of specialists in the pharmaceutical industry.

Lower limit of the fourth period – the second half of the 1960s – 1991 – was due to the modernization and ideologization of professional training of specialists in the pharmaceutical industry, the spread of the idea of continuous education. Certain steps were taken to increase the representation of Ukrainian scientists in the Academy of



Medical Sciences of the USSR, as evidenced by the Memorandum of the Deputy Chairman of the Council of Ministers of the Ukrainian SSR P. T. Tronko and the Minister of Health of the Ukrainian SSR P. L. Shupyk to the Presidium of the Central Committee of the Communist Party of Ukraine on the need to increase the representation of Ukrainian scientists in the USSR Academy of Medical Sciences, July 1, 1965. From the report of the Ministry of Health Ukrainian SSR to the Central Committee of the Communist Party of the Soviet Union, we learn about the rejection of the project to organize the Academy of Medical Sciences of the Ukrainian SSR, July 24, 1965.

In order to develop the professional training of pharmaceutical industry specialists in the specified period, scientific and practical conferences were held. In particular, in 1968 In 2009, a regional scientific and practical conference of pharmacists was held in Chernihiv, dedicated to the development of pharmacy in the USSR, at which topical issues of the development of pharmacy service were considered, some conclusions and ways of overcoming shortcomings and further development of the pharmaceutical industry were summarized [7, pp. 24–33].

Considerable attention was paid to the introduction of small-scale mechanization in pharmacies in Ukraine. – this led to a change in the pharmacist's work: its quality improved and efficiency increased [133, pp. 58–61].

A significant role in the development of professional training of pharmaceutical specialists of the specified period was played by scientific societies of pharmacists. For example, during the period of existence of the Chernihiv Regional Scientific Society of Pharmacists in 1959–1982, 76 printed works were published [160, 70 p.; 161, 68 p.].

P Memorandum of the Chairman of the Council of Ministers of the Ukrainian SSR V. IN. Shcherbytsky to the Central Committee of the Communist Party of Ukraine regarding the state of medical care for the population of the city. Kyiv dated March 14, 1968, we conclude that the provision of medicines to the population of Ukraine has improved compared to the beginning of the 50s of the 20th century.

The lower limit of the fourth period is associated p the continued spread of the



idea of continuing education in the world and its impact on the development of pharmaceutical education in Ukraine. A characteristic feature of the outlined period is changes in the curriculum and organization of the educational process in the professional training of specialists in the pharmaceutical industry in 1965, the introduction of a correspondence form of study, and the beginning of professional training of specialists for foreign countries.

The main trends of the lower limit of the fourth period are: strengthening the practical orientation of professional training and a gradual increase in the audit load of future specialists in the pharmaceutical industry; deepening special training courses; deepening the practical training of future specialists in the pharmaceutical industry by expanding the programs of propaedeutic, educational and production practices; introduction of education quality control systems; ideologizing the content of the educational process; introduction of socio-political practice of future specialists in the pharmaceutical industry; application of traditional forms of knowledge control of future specialists in the pharmaceutical industry; widespread use of traditional teaching aids, as well as the introduction of new technical means of training – educational films; the introduction of a classroom system of education; the dominance of seminar and practical classes in the study of general education subjects, laboratory – when mastering scientific and natural disciplines.

Upper limit of the fourth period – second half of the 1960s – 1991 – due adaptation of society to new conditions life in post-Soviet society and the development of centrist tendencies, which led to the separation from the former all-Union pharmaceutical network and the independence of the pharmacy business and the crisis of the pharmaceutical industry in general.

In 1988 In 1988, by decision of the Ministry of Health of the Ukrainian SSR, the Republican Pharmacy Department and its regional divisions were liquidated. Instead, on October 28, 1988 The Minister of Health of the Ukrainian SSR approved the "Model Statute of the Regional (City) Production Association "Pharmacy"" and transferred the decision of the case on places executive committees regional (urban) Council folk deputies.



In the Soviet Union, the development of centripetal tendencies also led to the separation from the former all-Union pharmaceutical network and the independence of the pharmacy business of each of the republics of the USSR. The Ukrainian SSR was no exception in this regard [279, p. 529].

The main trends of the outlined period are: expanding the content of professional training of future specialists in the pharmaceutical industry; forming a powerful scientific base and expanding the curriculum of professional undergraduate training of future specialists in the pharmaceutical industry; emphasizing on the integration of professionally oriented and special disciplines of professional undergraduate training of pharmaceutical industry specialists; the use of traditional organizational forms of training; reducing the classroom load of future pharmaceutical industry specialists; increasing the proportion of independent work of future pharmaceutical industry specialists; widespread use of problem-based and research teaching methods; increasing the importance of educational and production practices; introducing internships, etc.

The lower limit of the fifth period – 1991–2017 – is due to cardinal political, social and economic changes, reform of professional training of specialists in the pharmaceutical industry and reconfiguration of the existing system of drug supply management in Ukraine. The lower limit of the outlined period also completes an entire era of historical development of the pharmaceutical industry, due to acceptance Law Ukraine "About medicinal means» from 4 April 1996 year and By resolution Supreme Councils Ukraine "About order introduction in action Law of Ukraine "On Medicinal Products" of April 4, 1996 [194, p. 214].

On beginning 1990s years in the former USSR underwent radical changes political, social and economic changes that caused not only a deterioration in the medical care of the population of Ukraine, but also became a catalyst for a real crisis in the pharmaceutical industry [105, pp. 19–23].

Until 1991 In 2001, professional training of specialists for the pharmaceutical industry in Ukraine was carried out in only one specialty – “Pharmacy”, which fully satisfied the industry’s needs for specialists. The collapse of the Soviet Union posed



new large -scale tasks for the pharmaceutical industry of Ukraine, which required a qualitatively new approach to the professional training of specialists in the pharmaceutical industry, a revision of the existing curricula and programs for the professional training of specialists at all levels [21, pp. 16–17].

Implementing a real reconfiguration of the medical supply management system has become a priority and strategic task.

“The urgency of changes in the pharmaceutical industry of the state and the state of medical supply of the population was to some extent realized by the last party-Soviet (“perestroika”) leadership of the USSR, which at the same time acted in this area in a manner inherent in his method attempts and errors, not having in his arsenal scientifically sound, reasoned proposals, concepts for the further development of pharmacy ” [279, p. 528].

"...On early 1990s pharmaceutical market in Ukraine was in crisis. The main reasons for this situation include the destruction of the planned and centralized system of production and supply of medical products, which was characteristic of the economy of the Soviet Union; at the same time, the presence of remnants of the regulatory and distribution mechanism in the form of, first of all, artificially low prices for medicines, which led to an inflated demand for virtually the entire range of domestic and foreign medicines. The Ukrainian chemical and pharmaceutical industry in that situation was unable to satisfy the inflated public demands due to insufficient production power their own enterprises, loss many source of supply of raw materials and components under the conditions of the collapse of the Soviet Union. Thus, a significant part of medical preparations in Ukraine was not produced at all, and traditionally imported p others republics USSR or because of border" [279, p. 593]. Therefore, all the efforts of health care bodies and institutions were directed at finding a way out of the crisis in providing the population p medicines and supplying Ukraine p vital medicines.

"According to the order of the Ministry of Health of the Ukrainian SSR No. 43 of March 21, 1991 and by the founding agreement of April 22 of the same year, the Republican Scientific and Production Association "Ukrpharmacy" was established p the aim of " improving the system of drug supply management in the conditions of



transition to market relations" [279, p. 530].

Of medicines to the population, comprehensive development and improvement of the pharmacy service was planned by increasing the efficiency of pharmaceutical science, pharmaceutical education and professional training of specialists in the pharmaceutical industry p further integration p production and introduction of scientific and technical achievements into the practice of pharmacy institutions.

As of January 1, 1993 In 2011, 6,512 pharmacies, 1,533 first-category pharmacies, and 16,800 second-category pharmacies operated in the system of the Ministry of Health of Ukraine. One pharmacy served an average of 8,000 people.

During the years of independence, the pharmacy network was reorganized, some of them were privatized, creating separate limited liability companies or closed joint-stock companies [54, p. 27].

The Ukrainian Pharmaceutical Academy annually summarizes the scientific activities of the teaching staff and future specialists in the pharmaceutical industry [272, p. 2]. According to the rector V. P. Chernykha (1993), the Ukrainian Pharmaceutical Academy provides professional training of specialists in a wide range of specialties for the pharmaceutical industry, conducts fundamental and applied research in the field of search and development of medicinal products, and produces medicinal products based on scientific developments of the Academy's scientists. through network small enterprises. IN basis professional preparation specialists pharmaceutical industries lie fundamentality, wide outlook, high intellectuality of the teaching staff. Organization pin the structure of the academy of an institute for advanced training of specialists in the pharmaceutical industry and teaching staff of the faculty of "Industrial Pharmacy", planning the opening of an institute of experimental pharmacology, institute control qualities medicines and new faculties, the need to develop scientific schools requires an increase in the pace of professional training of scientific personnel. That is why the doctoral and postgraduate studies of the academy were expanded: since 1993 doctoral studies – 8 people, postgraduate study – 45 and over 30 researchers. The number of future specialists who are doing thesis work is increasing, and this is seen as a guarantee of future success of pharmaceutical science



and the industry in general [325, pp. 3–4].

Radical changes in pharmacy required state support and, above all, legislative support. P the adoption by the Verkhovna Rada of Ukraine of a number of market laws (“On Enterprise”, “On Entrepreneurship”, “On Economic Partnerships”, etc.) in the pharmaceutical industry, the long-awaited processes of demonopolization and denationalization began ” [279, p. 531].

Taking into account the achievements of domestic and foreign experience, as well as the specifics of the socio-economic development of our state, the Ministry of Health of Ukraine has made an attempt to organize its own structures for managing the pharmaceutical industry. At the state level, regulate the issues of testing, registration, implementation, standardization and quality assessment of medicines in the process of production, sale and consumption, approve regulatory and technical documentation for medicines and medical equipment, control the quality of these products, coordinate scientific research and other called were State Inspectorate for Quality Control of Medicines, Committee for New Medical Equipment, Pharmacopoeia Committee, Pharmacological Committee, which worked pin the structure of the Ministry of Health [279, p. 534].

Law Ukraine "About medicinal means» from 4 April 1996 river [73, p. 203–214] "regulates legal relations related to the creation, registration, production, control qualities and implementation medical means, determines rights and responsibilities enterprises, institutions, organizations and citizens, as well as the powers of state executive bodies and officials in this area" and is a fundamental legal document that records changes in the domestic pharmaceutical industry during the first five years of Ukraine's independence.

From the end of the 20th century century. pharmaceutical education in Ukraine has undergone significant changes. Its defining trend today is its multidisciplinary nature. New pharmaceutical specialties – “Technology of pharmaceutical preparations”, “Technology of perfumery and cosmetics” and “Clinical pharmacy”, which appeared in the period from 1992 to 1998, reflect the diversity of modern pharmacy [21, pp. 16–17].



The upper limit of the fifth period – 1991 – to 2025 – is determined by the development of professional training of pharmaceutical industry specialists in independent Ukraine and the pharmaceutical industry as a whole, the country's entry into the global educational space, one of the priority areas for the development of the Ukrainian pharmaceutical industry is “ integration of the production, commercial, financial and scientific potential of the industry” [277, p. 6]. From January 1, 2000 In 2011, the Law of Ukraine No. 1011/2012, signed by the President, came into force. 991 - XIV “On the special regime of investment and innovation activities of technological parks”, which provides an opportunity for Ukrainian enterprises to cooperate and is a real way for national manufacturers to get out of the difficult economic situation and enter the international market.

The main trends of this period: the foundations of the national education system were laid; at the legislative level, the philosophical and methodological foundations of reforming the higher school of pharmacy were defined in order to implement the state's strategic course for integration into the EU; the network of higher educational institutions was expanded; new faculties and institutes were created in the structure of universities; institutions of new forms of ownership (private and commercial) and universities of the third age appeared.

The system of pharmaceutical education, upbringing and formation of the personality of a pharmaceutical industry professional, whose vocation – helping people requires constant and consciously organized improvement of the system of professional training of specialists in the field of medical education.

Group pharmaceutical researchers and researchers-educators (IN. P. Chernykh, B. P. Zimenkovsky, AND. THERE ARE. Bulakh, AND. P. Vitenko, IN. M. Tolochko, T. G. Kalyniuk etc.) during 2000–2003 years worked on the development of methodological principles of State Standards in the system of higher pharmaceutical education. As a result of this work, educational and qualification characteristics of a pharmacist of the educational and qualification level “specialist” and educational and professional programs were created for the sectoral State Standard of Higher Pharmaceutical Education, and general methodological principles were formulated,



which formed the basis of the means of pedagogical diagnostics of the quality of specialist training.

The pharmaceutical industry's task has always been one – to ensure the healing process of people. The optimal way to solve this issue – choosing everything new, progressive, but necessarily taking into account the positive experience taken from the past [135, p. 131].

The daily expansion of the assortment and nomenclature of medicines and their dosage forms confirms the need to introduce new disciplines and supplement those that are traditional in the professional training of a specialist in the pharmaceutical industry. The current state of world pharmacy requires from specialists in the pharmaceutical industry, regardless of their specialization, the ability to work p a computer, in-depth knowledge of medical and biological disciplines, familiarity p the latest technologies for the production of medicines and the basics of pharmacoeconomics [199, 142 p.; 35, p. 4–6].

Further development pharmaceutical industries will require appearances new forms and teaching methods. The state of pharmaceutical education indicates its flexibility and readiness of the VM(P)ZO to provide the most diverse requirements and needs of its industry for professional training of specialists.

Of specialists in the pharmaceutical industry of Ukraine has its own specific features, principles and characteristics, since this profession is socially important and aimed at preserving and strengthening human health. Specialist pharmaceutical industries not directly treats sick, and provides him help, and this help must be of high quality. Medical care, which is provided by specialists in the pharmaceutical industry, actively affects human health and activity, contributes to the preservation of working capacity and labor productivity.



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