A SUBSTANTIATION OF THE DEVELOPMENT STAGES OF THE OCCUPATIONAL TRAINING OF PHARMACEUTICAL INDUSTRY PROFESSIONALS IN UKRAINE IN THE 20TH TO EARLY 21ST CENTURIES

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Abstract. The basic development stages of the occupational training of pharmaceutical industry professionals in the 20th to early 21st centuries are considered in terms of their use in the system of occupational pharmaceutical education. The history of formation and development of the pharmaceutical industry is studied. The bottom chronological boundary of the study of the occupational training of pharmaceutical industry professionals in Ukraine (early 20th century) is due to the intensive ingress of foreign capital into the economy of the Russian Empire, which had a significant and not always positive impact on the development of economic life in general and the development of pharmacy. The top chronological boundary (early 21st century) is due to the significant social and economic transformations in Ukraine, the origin of the job market associated with them and the phenomenon of unemployment, the worldwide globalization processes, the informatization of society and the development of pharmaceutical education and science in the setting of independent Ukraine. Four stages are defined in the development of pharmaceutical education in Ukraine in the second half of the 20th to early 21st century based on the historic events that influenced educational processes. The first stage is the 1950s to 1960s, the post-war revival stage; the second one is the 1970s to 1980s, the stage of the spread of the idea of lifelong learning; the third one is the early 1990s to late 20th century, the stage of the society’s adaptation to the new living conditions in the post-Soviet society; the forth one is the early 21st century, the current stage of development of pharmaceutical education in the independent Ukraine.

Keywords: occupational training of pharmaceutical industry professionals; pharmacist; pharmaceutical education; pharmaceutics; pharmacy; development stages.

Introduction
The basic trends of the system of the occupational training of pharmaceutical industry professionals in Ukraine are driven by actual social and economic processes, namely the low direct health figures of the population of Ukraine; disproportions in the occupational training and application system of pharmaceutical industry professionals; the insufficient implementation of modern, effective occupational training systems for pharmaceutical industry professionals, the integration of Ukraine in the global community (Slipchuk, 2015). The issues of the development of pharmaceutical education, just like that of the development of education in general, are highly topical in the context of reforming and improving the organization of the training process in tertiary education as the objective analysis of past experience is important in the further development of science and education.

The development history of the occupational training of pharmaceutical industry professionals is associated not only with the history of pedagogy, the development history of higher education, but also with the history of Ukrainian and world pharmaceutical science, the history of pharmaceutics, the development of the healthcare system, the development of medical science and the general history of Ukraine. This is why works in the above fields are of interest to this study. Certain issues of the continuity of education in the pre-occupational and occupational training system of pharmaceutical industry professionals were covered by Cehmister in his works (2002).

The occupational training of pharmaceutical industry professionals in Ukraine as a component of public health is directly dependent on the actual situation in the state, as well as the level of the society’s economic and social development.
Results

The bottom chronological boundary of the study of the occupational training of pharmaceutical industry professionals in Ukraine (early 20th century) is due to the intensive ingress of foreign capital into the economy of the Russian Empire, which had a significant and not always positive impact on the development of economic life in general and the development of pharmacy. Russia failed to create its own pharmaceutical industry in the early 20th century due to economic backwardness. According to the decisions of the IX Pirogov Congress (Saint Petersburg, 1904), a petition had to be filed to the Ministry of the Interior of the Russian Empire concerning the urgent reform of the existent organization of pharmaceutics, since the right to produce medical supplies was granted to chemists’ shops solely, and chemists hindered the origin of the national pharmaceutical industry (Gubskyj, 1976). In order to avoid this monopoly barrier, foreign pharmacy firms would lease Russian chemists’ shops to create industrial laboratories affiliated with them for the production of Galenics and some other pharmaceutical products. Thus, almost 70% of medical supplies were additionally imported from abroad, and the chemical medicines produced in Russia could satisfy for as little as 9% of the actual need for them, the same figure for Galenics being 36%. As of 1910, 70% of the total of 4,536 chemists’ shops functioning in Russia belonged to pharmacy professionals, namely 51.5% to pharmacists, 16.5% to assistant chemists and 1.3% to Masters of Pharmacy. Only 199 chemists’ shops (4.4%) belonged to social institutions and private organizations (zemstvo and city administrative boards), namely 35 to city administrative boards and 12 to guberniya zemstvos, while county zemstvos had 152 chemists’ shops (Sjatynja, 2002).

A distinctive trend of the early 20th century was the significant saving on medicine procurement that let zemstvos switch to the practice of cheap or free dispatch of medical supplies to the population.

The network of chemists’ shops in the regions of Ukraine was gradually growing in the early 20th century despite unfavorable circumstances. Poltava region had the largest number of chemists’ shops, namely three chemists’ shops in Poltava and Kremenchuk and one in Reshetylivka and Yagotyn. Each county town had private chemists’ shops.

The best progress in the development of pharmacy in the early 20th century was achieved in the center of the Ukrainian lands belonging to the Russian Empire – in Kyiv, where three large chemists’ shops operated in Khreshchatyk, two in Volodymyrska street, on in Velyka Vasylkivska street and one in Velyka Pidvalna street (Kudryckyj, 1982).

Public organizations and societies were of great importance in the development of pharmacy of the early 20th century. The Southwest Pharmacist Union, the Kyiv Mutual Aid Pharmaceutical Society, the Kyiv Chemist Society were active in Kyiv then. Various chemical, chemical-medical and bacteriological analysis would be carried out by the Chemical and Pharmaceutical Institute and the Bacteriological Institute associated with the Kyiv Chemist Society. Besides that, the Chemical and Pharmaceutical Institute also held training courses, which furthered the development of the pharmaceutical industry of the era.

1,067 chemists’ shops were active in 1913 throughout the territory of Ukraine belonging to Russia, where 2,009 pharmacists worked, including 758 with higher pharmaceutical education and 1,251 with vocational pharmaceutical training.

The top chronological boundary (early 21st century) is due to the significant social and economic transformations in Ukraine, the origin of the job market associated with them and the phenomenon of unemployment, the worldwide globalization processes, the informatization of society and the development of pharmaceutical education and science in the setting of independent Ukraine.

Four stages are defined in the development of pharmaceutical education in Ukraine in the second half of the 20th to early 21st century based on the historic events that influenced educational processes. The scientific and technical revolution of the mid-20th century resulted in new qualifying requirements to the employee, the progress of science, rapid growth of new knowledge and the obsolescence of the existent ones, change in technology, the modern production organization; the spread of pharmaceutical education; the creation of international institutions and organizations; the extension of scientific research in this field. The first stage, the 1950s – 1960s, is the post-war revival stage; the second one, the 1970s – 1980s, is the stage of the spread of the idea of lifelong learning; the third one, the early 1990s to late 20th century, is the stage of the society’s adaptation to the new living conditions in the post-Soviet society; the forth one, the early 21st century, is the current stage of development of pharmaceutical education in the independent Ukraine.
The bottom boundary of the first stage, the 1950s, is due to the revival of pharmaceutical education after World War II, the rapid scientific and technological progress in the world and the development of pharmaceutical education abroad associated with it. 19,658 people worked in the system of the Head Pharmaceutical Department of the Ukrainian SSR, 9,558 of them (including 3,670 or 38.8% of chemists) being pharmacists. 2,746 of the total of 3,396 chemists worked in cities and 650 in raion centers and the countryside as of 01.10.1950. 250 specialists of Ukraine’s pharmaceutical industry were trained in the Extension Course Institute for Chemists in 1950. Research and practical conferences were held in oblast centers and other cities on a regular basis by the efforts of the Central Pharmaceutical Scientific Research Laboratory, pharmaceutical institutes and pharmaceutical communities. Work with the specialists of the pharmaceutical industry would also be conducted through the organization of republican and oblast meetings, audio teleconferences with the involvement of the employees of chemists’ shops in a great number of cities and regions.

The top boundary of the first stage, the 1960s, is due to the origination of the need for pharmaceutical industry professionals to work in the system of Kyiv Oblast Pharmaceutical Department and the insufficient medical supply provision of the population of Ukraine.

According to a letter of the MoH of the Ukrainian SSR to the Central Committee of the Communist Party of Ukraine, “…please be advised that 473 chemists graduate from the pharmaceutical institutes and faculties of the Ukrainian SSR this year, in 1961. 75 of these are assigned to other republics and agencies, 40 remain unassigned for family reasons. Thus, 358 chemists remain to be distributed among the 25 oblasts of the Ukrainian SSR. 40 chemists graduating in 1961 and staying in the Ukrainian SSR are assigned to the disposal of Kyiv Oblast Pharmaceutical Department. For instance, while there are 6.8 pharmacists per 10,000 of population in the city of Kyiv and 4.3 in Kyiv oblast, there are 2.7 of them in Vinnytsia, Volyn and Kherson oblasts, 3.2 in Lugansk oblast etc. However, significantly fewer pharmacists graduating in 1961 are also assigned to the above and other oblasts of the Ukrainian SSR than to the city of Kyiv and Kyiv oblast» (Sjatynja, 2002).

The bottom boundary of the second stage, the 1970s, is due to the global spread of the idea of lifelong learning and its influence on the development of pharmaceutical education in Ukraine and the occupational training of pharmaceutical industry professionals.

The top boundary of the second stage, the 1980s, is due to the reforming of pharmaceutical education and the events in the country that would be called perestroika later on.

The Republican Pharmaceutical Department and its oblast subdivisions were dissolved by the decision of the Ministry of Health of the Ukrainian SSR in 1988. The Exemplary Charter of the “Pharmacy” Oblast (City) Production Association was approved by the Minister of Health of the Ukrainian SSR on October 28, 1988, the local settlement of the issue delegated to the executive committees of the oblast (city) Councils of People’s Deputies. The development of decentralization trends in the Soviet Union during the ear also resulted in the separation and independence of the pharmaceutics of each USSR republic from the former USSR-wide pharmaceutical network. The Ukrainian SSR did not become an exception in this respect.

The bottom boundary of the third stage, the 1990s, is due to the society’s adaptation to the new living conditions in the post-Soviet society.

In the early 90s, the former USSR saw profound political, social and economic changes that not only resulted in a decline in the medical provision of the Ukrainian population, but also became a catalyst of a genuine crisis of the pharmaceutical industry (Klimov, 1994).

Before 1991, the occupational training of pharmacy specialists was performed with only one specialization, “Pharmacy”, but the collapse of the Soviet Union made the pharmaceutical industry of Ukraine face new, massive tasks that required a brand new approach to the occupational training of pharmaceutical industry professionals, a review of the active curricula and occupational training programs for professionals of all levels in order to be solved.

The improvement of the situation in terms of the population’s provision with medicine, all-round development and upgrade of the pharmacy was planned on the basis of an increase in the effectiveness of the pharmaceutical science, pharmaceutical education and occupational training of pharmaceutical industry professionals accompanied by further integration with production and the introduction of the achievements of science and technology into pharmacy institution operation practice.
The top boundary of the third stage, the late 20th century, ends a whole epoch of historic development and is due to the enactment of the Medicines Act of Ukraine (April 4, 1996) and the Resolution of the Verkhovna Rada of Ukraine On the Implementation Procedure of the Medicines Act of Ukraine (April 4, 1996). The Medicines Act of Ukraine is a fundamental legal instrument recording the changes in Ukrainian pharmaceutical industry taking place in the first five years of the independence of Ukraine. The pharmaceutical education of Ukraine has undergone significant changes since the late 20th century. The diversity of the occupational training of today’s pharmaceutical industry professionals is reflected by the new pharmaceutical specializations, namely Pharmaceutical Products Technology, Perfumes and Cosmetics Technology and Clinical Pharmacy.

The bottom boundary of the fourth stage, the early 21st century, is due to the development of pharmaceutical education in the independent Ukraine and the pharmaceutical industry on the whole, the country’s entry to the European educational space. This stage is characterized by the following: the foundation for the national education system is laid; the philosophic and methodological grounds of the higher education reform with a view to implementing the strategic course of the government towards EU integration, providing Ukraine’s entry to the European political, economic and legal space and creating the prerequisites for it to acquire EU membership are legally defined, the network of higher education institutions is expanded, net-type, European institutions, new faculties and institutes within the structures of universities are created, new ownership type institutions (private and commercial ones) and third-age universities have appeared. The course descriptions of a professional chemist of the Specialist academic level, as well as educational and professional programs, are created for the industry State Higher Pharmaceutical Education Standard of Ukraine and the general methodological principles providing the basis for the means of teaching diagnostics of the occupational training quality of professionals are defined.

Discussion

The occupational training of pharmaceutical industry professionals has its specific peculiarities, principles and features, since pharmacy is of significant social importance and aimed at human health preservation and promotion.

Within the context of development of the independent Ukrainian state striving for integration into the European and global community the pharmaceutical education reform implies searching for, developing and implementing new forms and methods of the occupational training of professionals for the pharmaceutical industry.

The study of the main stages of development of the occupational training of pharmaceutical industry professionals in Ukraine in the 20th to early 21st centuries and the study of the formation and development history of the pharmaceutical industry contributes to the objective analysis of the past experience, which is important for the further development of pharmaceutical science and education.

References