

STRATEGIC PLANNING OF HIGHER AND VOCATIONAL TECHNICAL EDUCATION SYSTEMS' DEVELOPMENT IN DNIPRO REGION

Mykola Kravchenko

Doctor of Economic Sciences, Professor, Dnipro State Agrarian
and Economic University of Dnipro, Ukraine
e-mail: kravchenkonik777@ukr.net, orcid.org/0000-0002-6942-0914

Yelyzaveta Kozyr

Assistant at the Department of English for Non-Philology Majors,
Oles Honchar Dnipro National University of Dnipro, Ukraine
e-mail: elizaveta28111998@gmail.com, orcid.org/0000-0002-6741-7148

Summary

Institutions of vocational (vocational and technical) and higher education are a basic component of the educational process of Ukraine, which in turn is a potential for the development of the national economy and a factor for ensuring food and environmental security, forming the socio-economic foundations of the development of the territories of the state, and improving the material well-being of the population.

In the new socio-economic conditions, the modern education management system is gradually acquiring features of public self-government and the state-public model of management, which should ensure Ukraine's transition to a post-information society. At the same time, the modern management system of professional (vocational and technical) education should ensure anticipatory innovative development, as well as create conditions for reproduction of the socio-cultural environment for the development, self-affirmation and self-realization of the individual throughout life. The fundamental factor of effective activity and sustainable development of professional (vocational and technical) education institutions in the conditions of the introduction of digitalization in the country is the strategic planning of the VET system.

Regarding vocational education, strategic planning is studied as the definition of strategic directions of transforming the content of vocational education, development of strategy for designing innovative educational process in vocational education, substantiation and disclosure of information and network transformation of vocational education, systematic justification of innovations in vocational education technical education as the main mechanism for implementation the strategic goals of sectoral development. Within the available scientific research, such important areas as generalization of the current state of public regulation of the vocational education system as a basis for strategic planning of its development, updating the system of evaluating the effectiveness of vocational education, optimizing the structure of the vocational education network in general and regional levels, mechanisms for financing the system of vocational education etc. Solving these problems is possible only through using of strategic planning to bring innovative changes in the public management of VET institutions in the region to address the external efficiency of this educational sector, based on the priority of achieving socio-economic results rather than sectoral goals.

The strategic planning of the development of the VET system at the national and regional levels is both an object and a mechanism of public management, in addition, it is institutionalized in the system of public management based on the formation of a complex of regulatory support for such management activities. Within the framework of the institutional approach,

strategic planning should be considered as a comprehensive mechanism of public management of the development of the regional VET system on the basis of ensuring consistency between the demand for workers of a market nature and the trends of socio-economic development, as well as the needs of individual and corporate consumers of educational services.

Key words: regional development, personnel potential, department of education and science, modeling, modernization, European integration, innovations.

DOI <https://doi.org/10.23856/5305>

1. Introduction

In the modern world, the functioning of educational institutions is extremely dependent on the system of financial and economic security, which causes great need and interest in the implementation of new approaches to its organization. Each educational institution, regardless of whether it is public or private, with its system of financial and economic security, if it wants to achieve its goals and objectives, must proceed from the need to confront dangers and threats. But this becomes impossible without a properly organized system and accounting and analytical provision of financial and economic security in a university, college or vocational school. (*Adrushchenko, 2011: 5-8*).

The purpose of the article. It consists in the study of theoretical and methodological approaches to the comprehensive analysis of strategic planning for the development of the regional system of vocational and technical education, public regulation of personnel training in the system of higher education of Ukraine, its role in ensuring the modernization of the industry and the mechanisms and directions of optimization in the context of reforming the domestic public administration system.

2. The state of education and science in higher education institutions of the Dnipropetrovsk region

As of January 2022, the network of higher education institutions in the Dnipropetrovsk region is represented by 20 institutions of higher education, of which 15 are universities, 4 academies and 1 institute, of which 16 are state-owned, 2 are private, and 2 are communal (*Ukaz Prezydenta Ukrainy «Pro Natsionalnu stratehiiu rozvytku osvity v Ukraini na period do 2021 roku» 344/2013*).

As of January 1, 2022, about 68,000 students are studying in higher education institutions of the region. The educational process in institutions of higher education is carried out by 5,746 scientific and pedagogical workers and 923 pedagogical workers, including: 991 doctors of science; 766 professors; 3,418 candidates of sciences; 2,507 associate professors.

In order to create favorable social, economic, legislative, financial and organizational prerequisites for life self-determination and self-realization of youth in the region, a number of regional events are held (*Adrushchenko, 2011: 13-17*).

Investing in science is an investment in new technologies and, accordingly, in the future economic well-being of the region. The combination of knowledge, technologies and research tools allows finding solutions to problems in any field of functioning of human society. Supporting young scientists is one of the priority tasks of the regional government, which

contributes to maintaining the status of the region. Priority directions for scientific projects are research in the field of technical sciences, economics, innovations, physics, mathematics, informatics, biology, medicine, chemistry, ecology. The annual regional competition of projects "Young scientists – Dnipropetrovsk region" to receive financial incentives – promotes the involvement and professional growth of young scientists. In 2019, 61 projects were submitted for consideration; in 2020 – 53 projects, in 2021 – 69 projects. The competition committee of the competition has determined 25 winners, who were awarded financial incentives in the amount of UAH 30,000 to 45,000 (*Yelnykova, 2003: 91-95*).

In order to identify talented young scientists, promote professional growth, stimulate the exchange of ideas between Councils of young scientists of higher education institutions, scientific and research institutions, cooperation of councils of young scientists, as well as stimulation of promising research aimed at solving the problems of the Dnipropetrovsk region, in accordance with the regional of the targeted social program "Youth of Dnipropetrovsk region" for 2012-2021, approved by the decision of the regional council dated 02.03.2012 No. 239-11/VI (with changes), the regional competitions "Best Council of Young Scientists" and "Best Young Scientist" are held every year, the annual regional competition of projects "Young scientists – Dnipropetrovsk region" to receive financial incentives" (*Klokar, 2016*).

Young scientists from higher education institutions and research institutions of the region under the age of 35 are invited to participate. In 2019, 79 participants took part in the "Best Young Scientist" competition, in 2020 – 83 participants, in 2021 – 64 participants. In 2019, the following participated in the "Best Council of Young Scientists" competition: 13 organizations, including 10 higher education institutions and 3 research institutions; in 2020 – 13 organizations, including 9 higher education institutions and 4 research institutions; in 2021 – 16 organizations, including 10 higher education institutions and 6 research institutions. According to the results of the competition, 12 winners were determined – young scientists (in 4 areas: technical, medical, economic and humanitarian), who are awarded with honors and valuable gifts every year, and 3 winners – councils of young scientists, who are also awarded with honors and valuable gifts (*Klokar, 2016*).

Recently, the creation of modern spaces for study and work, holding meetings, conferences and trainings has been very active in most institutions of higher education. Thus, in 2019 alone, 3 hubs were opened: at the National Technical University "Dniprovska Polytechnic" – the "Colibri" space, in December 2019 on the basis of the Kryvyi Rih Institute of Economics of the State Higher Educational Institution "Kyiv National University of Economics named after Vadym Hetman" (now – State University of Economics and Technology) IT hub koworkihg, on the basis of the State Higher Educational Institution "Prydniprovsk State Academy of Construction and Architecture" "Energy-innovation hub – a platform for training qualified specialists in the field of energy efficiency". Several hubs operate in some universities. For example, the Dnipro Polytechnic National Technical University currently has 4 spaces: the Colibri space, the Clever Space, the space for graduate students and young scientists, and the student space.

In the region, there are 2 incubators created at higher education institutions: the business incubator of the National Technical University "Dnipro Polytechnic" and the student incubator of the Dnipro State Agrarian and Economic University.

From the above, we can conclude that the system of higher education and science in the Dnipropetrovsk region is developing at a high level, has adequate support from the Dnipropetrovsk regional state administration and is coordinated by the department of education and science of the regional state administration.

3. Strategic planning of vocational education at the state level

Strategic planning of vocational education is the determination of strategic directions for the transformation of the content of vocational education, the development of a strategy for the design of an innovative educational process in vocational education, the justification and disclosure of the strategy of information and network transformation of vocational education, the systematic justification of innovations in vocational education education as the main mechanism for implementing strategic goals of industry development. In the available scientific research, such important directions as summarizing the current state of public regulation of the vocational education system as a basis for strategic planning of its development, updating the system for evaluating the effectiveness of vocational education, optimizing the structure of the vocational education network in general and at the regional level have not been sufficiently considered. , financing mechanisms of the vocational education system, etc. Solving these problems is possible only on the basis of the use of strategic planning to subordinate innovative changes in the system of public management of VET institutions in the region to solving the tasks of ensuring the external efficiency of this educational field, based on the priority of achieving socio-economic results, not industry goals. The research methodology is formed as a synthesis of innovative-synergistic and model-system approaches, which guarantees a comprehensive analysis of the strategic planning of the development of the regional VET system in the interrelationship of all factors and components both at the structural-functional and spatial level and taking into account the dynamism of the socio-cultural context. In the categorical-conceptual dimension, the studied phenomenon is interpreted primarily as a mechanism of public management, which ensures the implementation of the management strategy at the regional level in relation to the development of the VET system. Under the condition of such an approach, the priority is the research toolkit, which is related to the modeling and design of the development processes of the regional VET system (*Yelnykova, 2003: 10–11*).

The strategic planning of the development of the VET system at the national and regional levels is both an object and a mechanism of public management, in addition, it is institutionalized in the system of public management based on the formation of a complex of regulatory support for such management activities. Within the framework of the institutional approach, strategic planning should be considered as a comprehensive mechanism of public management of the development of the regional VET system on the basis of ensuring consistency between the demand for workers of a market nature and the trends of socio-economic development, as well as the needs of individual and corporate consumers of educational services.

Strategic planning should be considered as a mechanism for the transition of public management of the industry to a cluster model, which will form an integrated object of public management in the unity of the regional VET system itself and adjacent social spheres and factors influencing its development. Such a transformation into an institutional mechanism of public management leads to the integration of the researched phenomenon into the process of forming a model of public management with an increase in the public-society component of strategic planning. The directions of further institutionalization of the research object include the development of a new regional management structure of the VET system based on the integration of the public management system and the public management system; formation of institutionalized cooperation mechanisms of local self-government bodies and VET for formation and coordination of interests of all stakeholders; introduction of multi-channel financing of the VET system; definition of basic competencies for subjects of management of the regional VET system and mechanisms of their formation; development and implementation

of an effective toolkit for analyzing and forecasting the needs and demands of the regional labor market for qualified workers (*Ukaz Prezydenta Ukrainy «Pro Natsionalnu stratehiiu rozvytku osvity v Ukraini na period do 2021 roku» 344/2013*).

4. Analysis of the state of the regional system of professional (professional) technical education

The basis of the analysis of the state of the regional VET system is the understanding of the dependence between the stable development of the regional economy, the provision of quality services in various sectors, the economic activity of the population, on the one hand, and the staffing of the sectors of the economy and the professional skills of existing employees sufficient for the needs of its development, on the other. There are serious economic problems in the process of strategic planning of the development of the region, the source of which is the discrepancy of the available human capital in the field of labor specialties with the real and potential requirements of the labor market and employers. The basis of strategic planning for the development of the regional VET system, aimed at avoiding and minimizing imbalances in the labor market, should be its interpretation in market terms. The section analyzes the relationship between the labor market and the regional market of professional and technical education services with clarification of the definition of the latter. We define it as a system of relationships between subjects of vocational and technical education in the region, which aims to meet the needs of individual and corporate consumers in vocational training based on the mastery of professional competencies necessary for successful adaptation to the needs of the labor market and employers. The system-model approach ensures the complexity and integrity of strategic planning, as it allows defining a single model structure in the form of a set of interdependent models of activity, management and communication, integrated at several levels – goal setting, organization, instrumental support, etc. This makes it easier to present the strategic planning of the development of the VET system in the form of an idealized model using its various forms – structural-systemic, process-functional, programmatic-target. The systemic public-management determination of modeling the process of strategic planning for the development of the regional VET system lies in the influence on this process of state policy and strategy and its representation in the form of a regional public-management strategy for the development of education in general and vocational education in particular. The unifying basis of the components of the model should be considered the process of making a management decision, which combines structural, procedural-functional and content-target components. In our case, the implementation of a public-management decision regarding the implementation of the chosen strategy for the development of the regional VET system is simultaneously the process of implementing this strategy. The basis for determining the subject component of the strategic planning model for the development of the regional vocational training system should be the principles of decentralization and regionalization of the public management of the industry, the involvement of local self-government bodies, the public, social partners (employers) and other stakeholders in this process. Management decisions regarding the strategic planning of the development of the regional VET system are made by a specific public administration body, in this case, the department of education and science of the regional state administration. Accordingly, the process of modeling management decision-making should be specified to the level of organizational planning. Taking into account the growth of the personal factor in the system

of modern public administration, the modeling of strategic planning of the department of education and science of the regional state administration should reach the level of every public administrator (Klokar, 2016).

5. Conclusions

So, based on the information analyzed above in the article, the system of higher and professional (professional) technical education as an object of strategic planning is a complex of educational and regulatory-management processes that ensure mastery of consumers of educational services as potential subjects of the regional labor market by professional competences and cognitive-value components of personal development, necessary for further effective participation in industrial activity and socio-cultural life of the region. Within this approach, the educational and economic functions of the regional VET system are ensured, that is, the combination of socialization processes and professional development of consumers of educational services with the production of qualified labor resources for the regional economy. The analysis of the regional professional education system shows the main goals of strategic planning and the mechanisms of their achievement. On its basis, complex directions of strategic planning were determined, combining innovative goals and mechanisms of modernization of the regional system of professional education (Kravchenko M.V., Dovgal O.V., Demchuk N.I., Odnoshevnaya O.A., 2017: 231–232).

References

1. Adrushchenko V. (2011) *Derzhavno-hromadskyi kharakter upravlinnia osvitoiu, Vyscha osvita Ukrainy*, vol. 3, pp. 5–8.
2. Yelnykova H. V. (2003) *Teoretychni pidkhody do modeliuвання derzhavnohromadskoho upravlinnia, Dyrektor shkoly*, vol. 40, no. 280, pp.10–11.
3. Ukaz Prezidenta Ukrainy «Pro Natsionalnu stratehiiu rozvytku osvity v Ukraini na period do 2021 roku» 344/2013. [Elektronnyi resurs]. Dostupno: <https://zakon3.rada.gov.ua/laws/show/344/2013>.
4. Klokar N. (2016) *Rozvytok profesiinykh kompetentnosti kerivnykiv mistsevykh orhaniv upravlinnia osvitoiu v umovakh detsentralizatsii, PRACE NAUKOWE Akademii im. Jana Długosza w Częstochowie, Rocznik Polsko-Ukraiński, T. XVIII*, pp. 399–413.
5. Kravchenko M.V., Dovgal O.V., Demchuk N.I., Odnoshevnaya O.A. (2017) *Methods of competitiveness assessment of agricultural enterprise in eastern Europe Regional Science Inquiry. (EconLit, Scopus RSA I) Greece*, vol. IX, (2), pp. 231–242.