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CREATION OF AN INTEGRATED OPEN COWORKING CENTER FOR INNOVATION ENTREPRENEURSHIP IN HIGHER EDUCATION INSTITUTIONS

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Introduction. The transition to an innovative development model requires a dramatic increase in the share of innovative products and services by activating innovative entrepreneurship, introducing organizational innovations. One of the effective ways of modernizing the economy is the implementation of the attractor of integrated development of innovation infrastructure at four levels: macro level (national innovation system, free economic zones, venture financing); meso-level (creation of business incubators, technoparks, hacking, coworkings); micro-level (funds attraction, outsourcing, intrapreneurship) and nano-level (freelancing; crowdsourcing).

The hypothesis of scientific research is based on the assumption that a new understanding of the priorities of educational and innovation policy and the creation of an appropriate institutional environment for the development of the ecosystem "education – science – business" will promote the establishment of equivalent relations between market actors in accordance with national priorities and world trends in scientific and technological development.

The purpose of the research is to provide a comprehensive substantiation of the theoretical and methodological foundations of the formation of a management system of cluster interaction of interactive tools of the innovation chain of knowledge on a new basis, providing the attractor of innovative development of innovation and technological centers of coworking as a platform for the development of educational clusters.

The methodology of the research is based on the general scientific methodology – philosophy and system approach, as well as on interdisciplinary methodological approaches – institutional, resource, network and cluster, used in socio-economic sciences.

Results. A new approach to the formation of institutional forms of the implementation of innovative entrepreneurship, as well as mechanisms for the formation and functioning of small cluster business structures on the basis (with participation) of university units, allows to provide an efficient transfer of knowledge from the system of education to entrepreneurship in order to provide innovative development as the most entrepreneurial institution of higher education, and cluster action zone.

Conclusions. An integrated combination of the proposed approaches to business organization provides introduction of innovative directions of economic activity, creation of additional workplaces, reduction of unemployment, poverty reduction and formation of a stratum of potentially innovative-active people who can create their own business for improving the quality and standard of living of the population.

Keywords: integrated open coworking center; innovative entrepreneurship; institutions of higher education; triangle of knowledge; traineeships; innovation training chain.

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СТВОРЕННЯ ІНТЕГРОВАНОГО ВІДКРИТОГО КОВОРКІНГ-ЦЕНТРУ ІННОВАЦІЙНОГО ПІДПРИЄМНИЦТВА У ЗАКЛАДАХ ВИЩОЇ ОСВІТИ

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Вступ. Перехід на інноваційну модель розвитку вимагає кардинального збільшення частки інноваційної продукції та послуг шляхом активізації інноваційного підприємництва, введення організаційних інновацій. Одним із ефективних шляхів модернізації економіки є реалізація атрактору комплексного розвитку інноваційної інфраструктури на чотирьох рівнях: макрорівні (національної інноваційної системи; вільних економічних зон, венчурного фінансування); мезорівні (створення бізнес-інкубаторів, технопарків, хакерспейсів, коворкінг); мікрорівнях (залучення коштів; аутсорсинг; інтрапренерство) та нанорівнях (фрілансінг; краудсорсінг).

Гіпотеза наукового дослідження ґрунтується на припущенні, що нове осмислення пріоритетів освітньо-інноваційної політики та створення відповідного інституціонального середовища розвитку екосистеми «освіта – наука – бізнес» сприятиме налагодженню еквівалентних відносин між суб'єктами ринку відповідно до національних пріоритетів та світових тенденцій науково-технічного розвитку.

Мета дослідження – комплексне обґрунтування теоретичних і методичних засад формування системи управління кластерною взаємодією інтерактивних інструментаріїв інноваційного ланцюжка знань на новій основі, забезпечення атрактору інноваційного розвитку інноваційно-технологічних центрів коворкінгу як платформи для розвитку освітніх кластерів.

Методологія дослідження базується на загальнонаукової методології – філософії і системному підході, а також на міждисциплінарних методологічних підходах – інституціональному, ресурсному, мережевому і кластерному, що використовуються в соціально-економічних науках.

Результати. Запропоновано новий підхід до формування інституційних форм реалізації інноваційного підприємництва, а також механізмів формування і функціонування малих кластерних підприємницьких структур на базі (за участю) підрозділів університетів дозволяє забезпечити ефективний трансфер знань від системи освіти в підприємництво для забезпечення інноваційного розвитку як самого підприємницького закладу вищої освіти, так і зоні дії кластеру.

Висновки. Комплексне поєднання запропонованих підходів до організації бізнесу забезпечує впровадження інноваційних напрямів економічної діяльності, створення додаткових робочих місць, скорочення безробіття, подолання бідності та формування прошарку потенційно інноваційно-активних людей, здатних створювати власний бізнес для покращення якості та рівня життя населення.

Ключові слова: інтегрований відкритий коворкінг-центр; інноваційне підприємництво; заклади вищої освіти; трикутник знань; стажерські майданчики; інноваційний ланцюжок навчання.

Problem statement and its connection with important scientific and practical tasks. Challenges of the 21st century require an interdisciplinary approach and coordinated action to address them. In the search for alternative sources of energy, environmental protection, green transport, sustainable consumption and development of energy, resource and ecologically efficient production, improvement of the health care system and education, improvement of living standards and employment, in most cases existing institutes are involved. and the systemic actions of individual states.

The current state of education in the countries of the Eastern region shows that most governments are gradually modernizing the existing systems of higher education in these countries, and higher education institutions take certain steps towards training highly skilled personnel, branching out scientific innovation activities, introducing a system of interactive relationships with enterprises in order to taking into account the requirements of the market regarding the new contemporary content of competences of the future graduate. In recent years, many conditions have been created in the countries of the Eastern region for the development of educational and innovation activities. The basis of the legal basis for the reform of higher education and the mechanism of innovation policy has been formed, the conditions for the development of the corresponding infrastructure have been created. But, despite the high innovation potential of these countries, which remained even in Soviet times, the innovative component of ensuring the development of higher education is almost not used. In addition, recent official statistics indicate a gradual decline in the innovation activity of universities in these countries.

The need to find fundamentally new methods for solving this problem has become an impetus for identifying new areas of modernization, reengineering and development of all components of higher education institutions. In addition, the analysis shows that in most cases the existing gaps in the training of future specialists are of a common nature. Namely: ineffective use of the synergistic possibilities of the "triangle of knowledge" taking into account local needs of the economy, dissatisfied with the use of the benefits of an interactive change management system in higher education, increasing the degree of openness, transparency, and dynamism of knowledge both in the EU and in the countries of the Eastern region.

Analysis of recent publications on the problem. In modern literature, in most cases, the issue of creating the necessary conditions for the generation and exploitation of knowledge in the field of creative industries, as well as the construction of mutually beneficial sustainable partnerships between academic and business partnerships through the offer of internships with the aim of employment of graduates. Thus, studies on the issues of training of competitive specialists in higher education institutions of Ukraine have been devoted to the

research of I. Babin [1], Ya. Bolyubash [1], A.A. Garmash [1], V. Kremin [1], D. Tabachnik [1], V. Ponomarenko [2] et al. In some works (A. Shiyan, L. Nikaforov [3, 4]) it is proposed to use the theory-game model for the introduction of innovations as a mechanism for the integration of science and economics.

Scientists (I. Gryshchenko, T. Vlasyuk, D. Macatyora, O. Ovcharuk [6]) believe that the problem of transformation of inefficient innovation institutes into a developed state at the level of changes in the functioning of universities can be solved not only due to their image appeal attractiveness at the expense of the introduction of a competent approach in the provision of educational services, but also mainly due to the creation of an educational-production cluster at the institutional level of a synergistic combination of a high school with production. T. Zhurko, Liu Lijian, and A. Shiyan [7] consider the methods of supporting innovation in the higher education system in countries such as the United States, Japan, China and India, but the most appropriate mechanisms for interaction between higher education and business, which can be implemented to the conditions of functioning native universities are not offered [8].

Some aspects of commercialization of innovative developments of universities are considered in the articles by N. Vanina [9], V. Shcherbak, L. Ganushchak-Efimenko, O. Nifatov [10, 11]. These authors believe that business will be motivated to collaborate with universities to design and implement an innovative product only if the university has its own intellectual and financial resources in the process. At the same time, in these works, the problem of the combination of education, science and business to stimulate the innovation process and the effective use of capital brand integration of universities with real business is not considered sufficiently widely. Thus, research in this area remains open and relevant.

Unresolved parts of the study. The analysis of literature has shown that in most cases, scientists are investigating either the question of the formation of innovation policy, innovation processes at the practical level (business), or features of innovation at the theoretical level (science), while there is a lack of holistic integrated approach to the search for a fundamentally new scenario of cluster development the interaction of science and business through the creation of a new integration essence of the innovation training chain, the formation of skills for conducting research and entrepreneurship vein activities to improve educational opportunities and innovative university post-socialist space.

The purpose of the research: to theoretically substantiate the situation and propose approaches to the formation of infrastructure support for the cluster interaction of science and business through the use of tools of an educational and innovative interactive platform for obtaining business knowledge - an integrated open coworking center for innovative entrepreneurship.

Presentation of the main results and their justification. In the integrated economy of the Soviet Union of the planned type, Ukrainian research institutes, research and development organizations and higher educational institutions played the role of locomotives of progress. The existence in large cities of powerful industrial complexes of a cluster type allowed to perform not only the integrative function of combining academic research institutes, universities, research and development bureaus and industrial enterprises in the educational and production chain, but also to provide students with the necessary professional skills for work at high-tech enterprises and in the field of research, to develop the material base of universities.

The current disgraceful state of the level of realization of the potential advantages of the functioning of the knowledge triangle is due to the collapse of the USSR, the decline of high-tech sectors of the economy, the destruction of the material base for scientific research. In part, this situation is smoothed out by the funding received by domestic universities for scientific research at the expense of international grants and infrastructure support in centers of collective use (business incubators, technopolises, technology parks). The third component of the triangle of knowledge (business) is also inadequate, since domestic enterprises are not interested in innovation development, and their efforts are aimed primarily at improving existing processes and products.

The statistics show that the financing of scientific research in Ukraine is now almost 20 times lower than the average in the European Union [9], and is mainly carried out at own expense (97.2% as of 2018), where the state budget funds and foreign investors make up a shallow part – almost less than 1% (Table 1).

Table 1

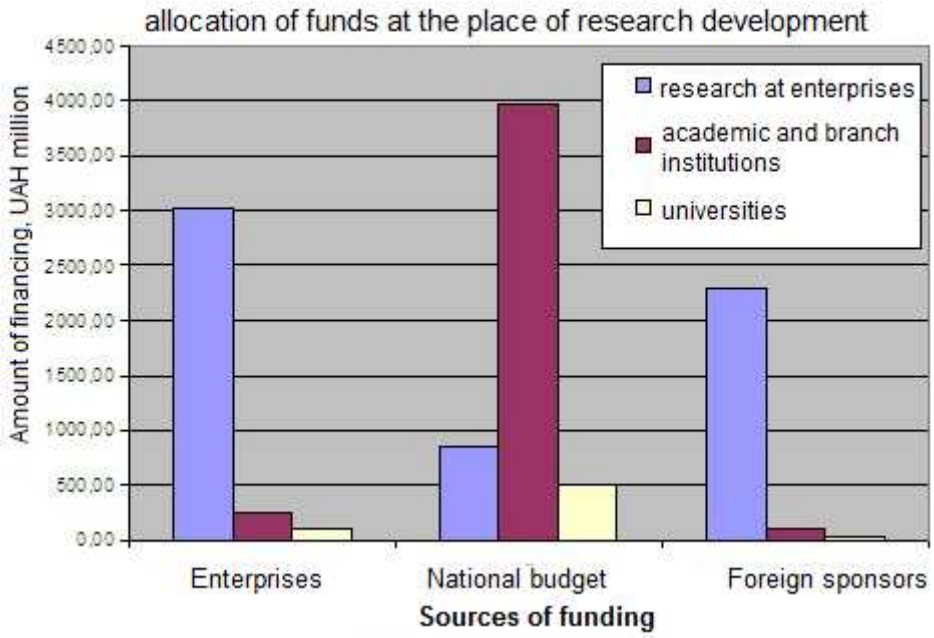
Sources of Innovation Financing

Years	Total costs	Including at the expense of funds			
		own	state budget	foreign investors	other sources
million UAH					
2014	14333,9	7585,6	149,2	56,9	6542,2
2015	11480,6	7335,9	224,3	994,8	2925,6
2016	9562,6	6973,4	24,7	1253,2	1311,3
2017	7695,9	6540,3	344,1	138,7	672,8
2018	13813,7	13427,0	55,1	58,6	273,0

It is compiled according to the data [12; 13].

In such conditions, strict regulation of the economy for universities remains virtually the only source: self-financing research, at the expense of local budgets or sponsoring enterprises and non-profit non-governmental organizations.

The unbalance of the knowledge triangle is also evidenced by an analysis of the distribution of finance for research by institutions (Figure 1). That receive them. In addition, the situation is exacerbated by the fact that the received state funds are not evenly distributed, which is carried out mainly in enterprises than in academic institutions. At the same time, every tenth Ukrainian company acquired external researches related to technological innovations (conclusion of agreements on implementation of research and development projects with other enterprises, research organizations). As a result of this situation – the low level of innovation (13% of domestic enterprises, implemented 3.3%, 1.5% – abroad).



It is compiled according to the data [12; 13].

Figure 1. **Distribution of research funding for recipient institutions in 2018**

The low activity of the research activity of the Ukrainian economy is explained, according to experts of the European Union, for four reasons:

1. Domination of traditional, non-scientific intensive industries (metallurgy, energy, basic chemistry, mining industry) in the national economy.
2. Banking support of traditional rather than innovation activity, enterprises, at a high level of inflation and fluctuation of the exchange rate.
3. Low technical level of resource support for innovation by such tools as technology parks, technology transfer centers, business incubators).
4. A shift of focus of financial support to other types of business activities (trade operations, construction, real estate transactions).

All these factors of the imperfection of the policy of intensifying the scientific research of the higher education system lead to practically complete

copying of the main mistakes in financing the research field of universities in EU countries [13]:

1. Insufficient funding of the scientific base of the system of higher education leads to a decrease in the level of scientific results on the criteria of the quality of publications, patent activity; washing of personnel intellectual and innovative composition of national universities; decrease the degree of attractiveness for entrants engineering and technical specialties; complication and inefficiency of cooperation with business in the sphere of introduction of academic innovations into production.

2. The ineffectiveness of state grant selective support for certain industries and types of enterprises, which creates the preconditions for corruption and the emergence of shadow schemes, leads to bureaucratization and the destruction of systemic influence on the development of the GDR.

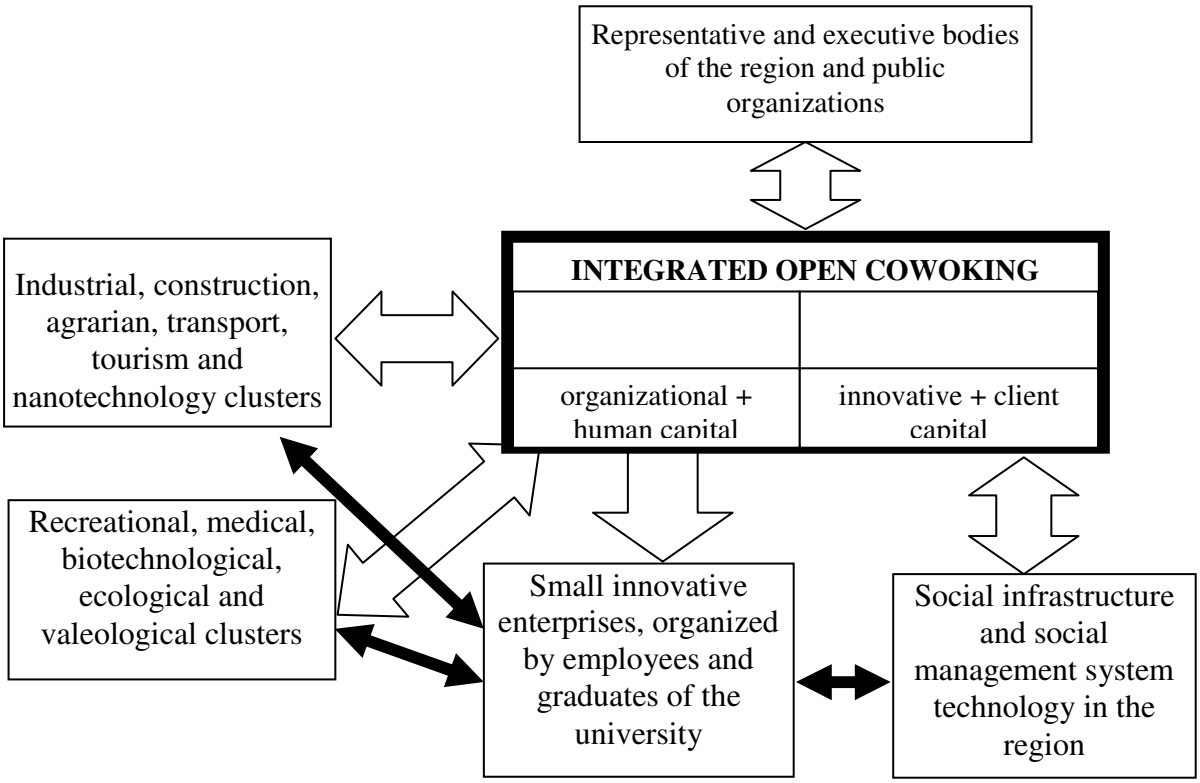
3. The weak correspondence between the state attempts to balance the proposal of university research with the demand from the enterprises of the innovation sector for scientific and technological achievements [13].

This situation reveals the need to find a new approach to the reorganization of the modern knowledge triangle, where the main criterion for development should be the ability of an educational institution to be the link between the university and the programs and projects of innovative development of the country at the macro level, the dissemination of new knowledge in society and serve as a regional realization scene. Academic innovations on meso-level (Figure 2).

The purpose of such platforms is to create a new integration essence of the innovation training chain, to develop skills for conducting research and entrepreneurship activities in order to enhance the educational and innovative capacities of post-socialist universities. This will allow interactive learning based on this center to find new, innovative ways to address global or social problems. Such an integrated approach can help to understand the nature and scale of regional and local challenges, identify possible means, technologies and processes necessary for their solution to the benefit of society, and, as a result of the emergence of new products and services demanded by the market, to identify specific problems for each individual a call; ways of their solution by increasing coordination between different levels of management.

The details of changes and refinement of the modern essence of all three components of the "knowledge triangle", their mutual influence on the educational process is as follows. A new look at the first component of the knowledge triangle represents an increase in the degree of openness, transparency, and dynamism of knowledge both in the EU and in the countries of the Eastern region, the acquisition of skills for effective independent learning using a fundamentally new approach: the use of the theory-applied approach to

knowledge acquisition, skills building creative thinking that increases the efficiency of youth employment and creates a knowledge base for opening a business. The technology of functioning of the integrated open coworking center is embodied in the possibility of using an innovative approach to the learning process, the formation of methods of creative thinking.



Offered by authors.

Figure 2. **Scheme of interaction of the integrated open coworking center of innovation entrepreneurship with leading clusters, management and social sphere on meso-level**

The synergy of the functioning of an integrated open coworking center is manifested in the use of opportunities for self-knowledge acquisition and the application of an innovative approach to supporting youth employment; in creating interactive conditions for the implementation of creative ideas in life: the search for entrepreneurial segments of the market for youth, taking into account local needs of the economy. The use of this approach will allow a new look at the modernization of the education system, where the new quality of the knowledge gained will form the youth leadership qualities, raise the level of intelligence and allow the realization of existing abilities.

An integrated open coworking center is an effective new tool for identifying areas of research and the development of priorities, timelines and action plans for a number of strategically important issues where achieving

future growth goals, competitiveness and sustainability of universities depends on how the new approach to the educational process allows for capacity development. a synergistic combination of the educational process, research achievements and their practical business implementation. They are potentially powerful tools for achieving better structuring of activities at the European level and will contribute to the achievement of the European Research Area.

To organize the activities of the integrated open coworking center, it is expedient to study and use the experience of European partner universities: holding open presentations, shop-shops, a fair of vacancies, open lectures with participation of representatives of enterprises, which, based on student presentations, select potential employees or advise students on practical realization of their projects. Using this experience will allow developing an interactive tool for implementing ideas in action through the development of entrepreneurship skills among young people: the creation of Centers of Startups, Spin-Offs as development points and promotion of student innovations.

Involvement in the formation and implementation of the integrated open coworking center of the universities of the countries that have already passed the higher education system according to the EU standards will allow the universities of the Eastern regions to adopt and implement the experience of the development of innovation and educational infrastructure of universities through the support of processes of dynamic interaction between large and small companies, universities, financial structures based on cluster strategies. It is realized, first of all, at the regional level. There is an opportunity to add dynamics of the country's economy as a whole; to introduce cluster approaches - new managerial technologies, to increase competitiveness as a separate region or industry, and the state in general.

The organization of an integrated open coworking center can be introduced in order to gain experience in reengineering the innovation and educational infrastructure of the universities of the EU by introducing a new quality; professional management of intangible assets; allocation of technological transfer into an autonomous organized educational process. Creating such an infrastructure in the form of an educational and innovative platform will enable the creation of an effective machine for transfer of ideas to society, increase the competitiveness of the university as a producer of scientific developments through the intensification of participation in various specialized training programs and projects. The participation of universities in such events offers many advantages and opportunities, among which are: to familiarize foreign and domestic investors, potential buyers, customers with scientific developments, which are conducted by scientists and students, commercialization of scientific developments; to get direct contacts with representatives of innovation centers of other universities, to promote the development of innovative projects,

products and technologies; gain experience from the leading universities in Europe, which can be used to address the issues facing the university at this stage.

Involvement in the organization of an integrated open coworking center of partners (enterprises and organizations engaged in practical innovation activities) is a necessary 3rd component of the knowledge triangle. Thanks to the functioning of innovative traineeships on the basis of these enterprises, the opportunity to improve access to new technologies that can be realized; co-ordination of efforts and financial resources for the creation of a new product and technologies and their entry into the market.

Conclusions and recommendations for further research. It was determined the characteristics and differences between modern interpretation of "knowledge triangle" for the EU and the Eastern region, how to implement the European experience, defined a new approach to the use of interactive learning tools innovation chain as innovative stazherski grounds. The synergetic content of all three components of the knowledge triangle as the basis of the proposed integrated open coworking center was specified as the use of opportunities for independent knowledge acquisition, the creation of interactive conditions for the implementation of creative ideas in life, which increases the efficiency of youth employment and allows a new look at the modernization of the education system of post-socialist countries.

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